



# Embracing Inclusive Approaches for Children and Youth with Special Needs

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The voice and vision of special education

## Title

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## Organizers

**Susan O'Rourke** (*School of Education, Carlow University, USA*); **Ana Paula Loução Martins** (*Institute of Education, University of Minho, CIEd, Portugal*); **Thomas P. Gumpel** (*The Hebrew University of Jerusalem, Israel*); **Anabela Cruz-Santos** (*Institute of Education, University of Minho, CIEd, Portugal*); **Ana Paula da Silva Pereira** (*Institute of Education, University of Minho, CIEd, Portugal*); **Ana Maria Serrano** (*Institute of Education, University of Minho, CIEd, Portugal*); **Humberto Javier Rodríguez-Hernández** (*Escuela Normal de Especialización Humberto Ramos Lozano, Mexico*)

## Editor

Research Center on Education (CIEd)/Institute of Education  
University of Minho  
4170-057 Braga, Portugal

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Instituto de Educação  
Department of Educational Psychology  
and Special Education

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Yajing Feng & Mian Wang

## **Preface**

This e-book, which is published under the title *Braga 2014: Embracing Inclusive Approaches for Children and Youth with Special Education Needs* contains a set of papers submitted by the authors in an international conference during July 2014 with the same name. Practitioners, researchers, policy makers, and NGOs from around the world joined their international colleagues to engage in lively and informed discussions about the current state of the art in meeting the needs of children and youth with special educational needs. Topic areas included research, practice, policy, advocacy, and the arts in special education. The conference was co-hosted by The Division of International Special Education and Services (DISES) and the University of Minho in cooperation with the Council for Exceptional Children (CEC). As more and more countries around the world strive towards the goals of the Education for All initiative, education systems are turning to increasingly inclusive approaches in order to meet the needs of children and youth who have traditionally been excluded from mainstream education. Research and practice have shown abundant benefits, both academic and social, to all children and youth involved in inclusive education programs. However, simply placing children with special educational needs in mainstream classrooms without appropriate planning, commitment, and support does not guarantee positive outcomes. In this exciting and prestigious international event, participants will share and learn about evidenced-based practices with an emphasis on access, quality, and equity; creative, comprehensive inclusive education approaches; innovations in creating inclusive schools; and integrating research into practice to create stronger links with stakeholders. A special strand focusing on the Arts in Special Education provides a rich forum for special education professionals to build upon innovative practices that encourage creative thinking, draw upon diverse abilities expressed through the arts and develops the individual in ways that traditional academic instruction fails to do so. Finally, the organizers want to emphasize the commitment and systematic work of Paula Frapiccini Ferreira in preparing this e-book.

## **The Organizers**

Susan O'Rourke; Ana Paula Loução Martins; Thomas P. Gumpel; Anabela Cruz-Santos; Ana Paula da Silva Pereira; Ana Maria Serrano; Humberto Javier Rodríguez-Hernández

## **Expressive arts in education and therapy – A special encounter**

Graça Duarte Santos

Psychology Department, University of Évora  
[gracaduartesantos@gmail.com](mailto:gracaduartesantos@gmail.com)

### **Abstract**

In this paper we sustain the importance of Expressive Arts in Education and Therapy, and highlight its relevance in the context of Special Education and/or Inclusive Education.

As evidence we present two researches conducted in this field: The first study investigates the impact of a multimodal methodology of Expressive Therapies in children/adolescents with aggressive behavior (in a school context). Aggressive behavior, pro-social disposition and other emotional, cognitive and behavioral dimensions were evaluated.

The second study presents an intervention through expressive arts with children with Autism Spectrum Disorders. This work was developed in a Specialized Autism unit.

**Keywords:** Expressive Arts; Special Education; Therapy

### **Introduction**

Inclusive Education - base that ensures an Inclusive Society - understood as an education that adequately responds to the characteristics, needs and interests of each and every one (Ainscow, 2000; Ainscow, Booth & Dyson, 2006; Rodrigues, 2006) is based on valuing differences by reducing barriers to learning and promoting social cohesion, belonging, active participation in learning and school, the experience of positive interactions with peers and other members of the school community. These values and beliefs are necessarily shared by schools and communities so that they value diversity, stimulating the well-being and quality of learning of each of its members (Ainscow, Porter, Wang, 1997).

We know that consistent development of a true perspective of inclusion, requires reflection and deepening of new practices and intervention strategies that promote competence and autonomy in children with Special Educational Needs

During the 20th century and especially during the last decades, various socio-educational and psycho-pedagogical movements showed that expressive arts improve several characteristics such as, social-affective, cognitive and motor, as well as the global development of the individual. This was a basic element in the creation and expansion of the Art Education Movement, in its extension to educational and therapeutic practices in Special Education.

Special Education, although currently designed in a paradigm of Inclusive Education, emerges as a privileged context of Encounter between educational and therapeutic dimensions to support children with special needs.

And in a context of Encounter of the expressive arts (integrating various mediators in the process as dance/movement, painting, drawing, modeling, drama, poetry, music) emerge as privileged practices and strategies of intervention, who value the ludic character and contributing to greater adherence and involvement of the populations they are intended. This indicates that Expressive Arts are agents facilitators of School and Social Inclusion, through the possibility of expanding a therapeutic approach in a context of non-stigmatization or segregation, but on promoting the overall development of All (Santos, 2006).

The use of expressive arts as a way not only of expression but communication (conscious or unconscious), appears as an educational, transformative or even important therapeutic potential in children with special needs by coating particular importance in the acquisition and development of specific, personal and social skills. Simultaneously, through imagination and creative ability, children express themselves with greater ease and satisfaction.

Although currently in Portugal, artistic expressions appear in activities to enrich the scholar curriculum of most children in preschool and school age, and are recognized as important promoters of skills development and autonomy, acting as facilitators of the evolutionary process of personality in a global perspective, the truth is that the approaches with expressive arts mediators are not yet systematically used with children with special needs in an inclusive setting or in a therapeutic context specialized support.

We recall however the important distinction between the use of arts or creative activity as a therapy (eg dance / drama / music / art therapy) and provide the opportunity for children with 'special needs' or 'special educational needs' to have access to artistic, creative or educational experience! Both approaches are valid, but with different projects and goals (Santos, 2006, Payne, 1990).

This paper intends to present very briefly two different researches carried out from two well differentiated interventions with children with different special needs, but they all have in common presented difficulties of communication and expression of emotions, as well as the fact that the interventions have unwound both in schools. The first study discusses intervention with several children / young people with pronounced aggressive behavior. The second discusses an intervention with children with autism spectrum disorders.

## **Method**

### **First Study**

The first study investigates the impact of a multimodal program of Dance/Movement Therapy in children and adolescents with aggressive behaviour. Pointing the central aspects of the conceptual areas that support this investigation we highlight the follow: the expression of emotions, especially when aggressive, the Body and the Artistic Creativity are related. In this sense Aggression is perceived not only as an expression of the body, but also in the Body.

Besides, all forms of expression come through the body, showing up in Artistic Creation and in various acts such as in the gestural, vocal, dramatic, plastic, and dance acts. Therefore, Artistic Creation allows a triple inscription in the real, imaginary and symbolic levels and emerges as an alternative to the destructive act through cathartic and sublimation mechanisms thus enabling the move from real to symbolic act. This organized the bases that oriented our work: the resource to expressive arts mediators integrated through a holistic bodily approach is a modification vehicle from internal dimensions of the individual with impact on interpersonal relationship.

In this study we focus on an intervention program that was done in a school context (Casa Pia, Lisbon) with children and adolescents of the 2nd cycle of primary education (from 10 to 15 years old) who presented major aggressive behaviours. The aim is to structure, implement and evaluate a program of integrative Dance Therapy in groups of children and adolescents with aggressive behaviour. In this program we use a specific methodology - Integrative Dance/Movement Therapy. The intervention program has eleven objectives, namely reduction of impulsivity and aggressive behaviours and promotion of: positive emotional states, relaxation, self confidence and trust in others, empathy and perspective taking, rule-based behaviours, integration with pairs and pro-socials disposition.

Accordingly, the 25-session-program was structured around the following thematic areas: Acting and Body Awareness, Dual Synchrony, Expression and Identity, Emotion and Interpersonal Space, Relationship with Others and Creativity. From each one several sub themes were developed

sequentially. The multimodal sequence program was based on a transition from focusing on the individual with plastic or movement expression to the recognition of the group with the other mediators.

The participants that showed more aggressive behaviors were identified from the Scale of Aggression of Achenbach & Edelbrock filled by his professors. 281 children participated in the research, 90 of them directly and 51 on the intervention program. 40 finished the program and 11 interrupted it. Moreover, 24 teachers and 6 expressive therapists participated in the selection and evaluation processes.

The program was assessed at 2 levels: First, quantitatively through the observation of the results of intervention that were obtained from a quasi-experimental design with pre- and post- intervention assessments. Then, at the end of the program there was a qualitative evaluation of the program itself. The intervention process took place at school with mixed groups of 6 to 8 subjects along 25 sessions twice a week during 1h approximately.

The techniques and instruments used were organized based on an ecological framework. The assessment was triangulated among teachers, children, adolescents, and pairs in addition to on-going evaluation of therapists. The instruments used were the following: (1) for Teachers: Scale of Aggression Achenbach & Edelbrock; Parameters Scale developed in DT program; Evaluation Questionnaire of process; (2) for the Subject: Scale A2 - Buss & Perry; Colorcards- Emotions; BIQ (Bruchon-Schewitzer), and Evaluation Questionnaire of DT Program; (3) for Pairs: Sociometric Evaluation Scale; and (4) for Therapists: Integrative DT Scale, Evaluation Form of DT sessions and video recordings.

## Second Study

The second study investigates the impact of creative/expressive arts in intervention with Children with Autism Spectrum Disorder (A.S.D.). The central aspects of the conceptual areas that support this investigation are: Children and adolescents with Autism Spectrum Disorder reveal significant deficits in social interaction and regulation. In an inclusive perspective, there is a need to develop intervention strategies and practices that allow an individualized and appropriate response to their specific characteristics. Several studies with this population refer a particular receptivity and responsiveness to some expressive arts mediators (such as music and plastic expression) used in educational or therapeutic contexts (Elkis-Albuhoff,2008; Epp, 2008; Emery, 2004; Evans & DuBowski,2001).

In this study we focus on 4 psychological interventions that were developed in educational context (Specialized Autism Unit appended to mainstream school, in Évora) with 4 children with ASD. Each intervention (individual) occurred weekly during 20 sessions and emphasizes the expressive arts in the promotion of social interaction. The general purpose was the study of non- verbal behavior and the use of social interaction regulators (eye contact, facial expression, gesture, proxemics, the use of the voice) by children with ASD.

Data were obtained from a quasi-experimental design with pre- and post-intervention assessments. The research used a mixed design (pre-post intervention and longitudinal) and a quantitative and qualitative methodology using Childhood Autism Rating Scale, Autism Behavior Checklist and the Categorical grill and Child Behavior Scale (for the observation of nonverbal behavior manifest over the 20 sessions were recorded on video).

## Results and discussion

### First Study

The study design made possible an analysis from an ecological perspective. We evaluated occurred modifications on aggressive behaviour level, on pro-social disposition and other emotional, cognitive and behavioural dimensions that correlated with them.

Data analysis showed an ample development of all the objectives of the program. The most significant differences are, from the external perspective (teachers and pairs), a reduction of aggressive behaviours and from an internal perspective (child/adolescent) a promotion of empathy and self-confidence. We could say that from an external perspective it was the behaviour that changed, whereas from an internal perspective it was the internal dimension such as the pro-social perspectives. The results point to a route where it verifies a modification in an intra-individual affective dimension that seems to be in the origin of modifications in the pro- social disposition, with consequences in the reduction of aggressive behaviour.

Concerning the qualitative assessment of the program made by children and adolescents, it was found that almost all of them considered the program useful and interesting. The activities considered the most pleasant were dance/movement while the most difficult ones were mime/drama. Regarding the assessment made by expressive therapists, it was found that there were some aspects common to several processes, such as a high level of deficit attention, initial conflict in the groups and some difficulties with individual and group involvement. These difficulties led to the introduction of changes in the program, particularly in the length of the activities and in some proposals especially those more symbolic and without material support. These changes meant that the most employed methods were activities in circle and with support of objects such as pencils, brushes, balls, sticks, balloons, drums and cloths. The attitude of the therapist also changed becoming progressively less directive occurring first with groups, then pairs and at the end individually remaining, however, strongly controlling.

## Second Study

By analyzing 4 cases and their evolution through the observation of behavior (eye contact, physical contact, facial expression, voice, gesture and proxemics), it was found confluence points and similarities in the behaviors and reactions of children observing that the development skills needed for social interaction occurred in all cases. At the end of the intervention, all children used gesture less often stereotypically but more communicative and functional form (with the intention of expressing feelings of affection or feelings of anger). In terms of verbal communication (verbalizations / vocalizations) found an increase of communicative intent. In terms of the relationship with the therapist there was a slight increase in emotional and social reciprocity, observable by increased tolerance to physical proximity, tactile contact, presence of the psychologist, and the reduction of the space, avoidance and distancing. The facial expression became less apathetic and more responsive, noting an increase of smile and emotional expressions, though with individual variations. There have been developments in the integration and acceptance of sensory stimuli (visual, olfactory, tactile and auditory)

## Conclusions

The intention of this paper was to synthesize these two investigations to illustrate the important role of expressive arts in Special and Inclusive Education, as a point of Encounter between the educational and therapeutic. Of course there are particularities that we were not able to develop here. However, in both cases we found several important changes and also points in common. In the first study there was a clear development of internal meaning processes and those who experienced it felt a change of the self and a change of the way to be and look at the other. Through it was possible to demonstrate the potential of expressive arts as a transforming element and as an alternative to aggressive act in Childhood and Adolescence.



In the second study with children with severe development disabilities, the expressive arts enabled the facilitation of new forms of expression and communication, as well as the development of more appropriate behavioral and relational responses in social interaction.

This study enabled children and young people with special needs more diversified and appropriate interventions to their needs, respecting them in their individuality and assert their right to conduct an educational course with the necessary support to their development. The conclusions and reflections emanating from these studies support the approaches with expressive arts as practices sustained to develop in Portugal, for intervention and support to children with special needs. This could help them to develop true Encounters to support their inclusion in Life and Society.

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## **Expressive arts in training of teachers to inclusive education**

Graça D. Santos  
University of Évora  
[gdsantosster@gmail.com](mailto:gdsantosster@gmail.com)

Alexandra S. P. Carvalho  
Psychology Department - University of Évora  
[alexandrapcarvalho@gmail.com](mailto:alexandrapcarvalho@gmail.com)

### **Abstract**

Considering the importance given to creativity and to cooperative and active learning as facilitator methods of an Inclusive Education, on this paper we present a study that identifies the place given to active and expressive techniques in the initial training of educators/teachers. The Higher Education Institutions that provide training components within the inclusive education, active and expressive techniques were identified, characterizing those same components by analyzing the curricula of all courses of Initial Teacher Education in Portugal which qualify for teachers from pre-school education to the 2nd cycle of basic education. Data analysis will allow us to further reflect on the contribution of these areas to build positive models of Inclusive Education.

**Keywords:** Active methods, Expressive techniques, Inclusive Education, Initial Teacher Education

### **Introduction**

The Declaration of Salamanca (1994) introduced a paradigm shift in Education, allowing not only an increase of literature and investigation on Inclusive Education, but essentially a deep reformulation, in many countries, of their educational praxis. This reformulation had as a main goal to create an environment and culture where all students can enjoy learning, reflect, improve and grow in confidence, in a perspective of Inclusive Teaching and Education. In order to achieve the success of every student, Schaffner and Buswell (1999) mention that, among other factors, it is crucial that teachers acquire scientific and educational skills even beyond those transmitted in their initial training courses. The role of higher education institutions in training for an Inclusive Education is vital. To Costa, Leitão, Morgado e Pinto (2006) the initial and specialized teacher training must contemplate knowledge and skills inherent to the development of models and educational practices that promote inclusion and quality; the practical component of initial teacher training courses should be increased so that the future teachers are exposed to positive models of inclusive education.

Attending to the importance given to creativity, cooperative and active learning and the practical component in initial training course, we consider that active methods and expressive techniques can contribute to this positive model of inclusive education. For instance, Costa, Leitão, Morgado e Pinto (2006) describe some development strategies that could contribute to the improvement of the curriculum management in a school increasingly inclusive. Some of those are the cooperative and active learning and the diversification of specific and specialized teaching techniques, such as alternative forms of communications where, we add, expressive mediators could make a difference. In fact, the deep connection between Expressive Arts and Education involves aspects that, beyond those associated with aesthetic aspect, impact the full development of the child and the youngster, because it touches their cognitive, neuromotor and socio-affective development (Santos, 1999; Sousa, 2003). The

movement of Education through Art is founded on these assumptions (Santos, 2008; Read, 1982). This impact of Expressive Arts in promoting the development of the child and the youngster also contributes to fundament their intervention on both an educational and a therapeutic perspective. We address the therapeutic power of the expressive-creative act (Santos, 1999), echoed in approaches as music therapy, drama therapy, dance therapy, art therapy and others. As they are essentially non-verbal approaches, expressive mediators can, through them, be presented as a privileged or only mean of communication with special needs children, especially on the level of verbal expression (Santos & Simões, 2009). In many countries there is an increasing use of Special Education interventions through expressive arts, painting, music, dance, drama, etc., as promoters of several development areas and skills (personal and social). In this perspective the use of expressive arts is considered both as a uni-modal modality and as an integrative modality of the different expressions, respecting the perspective of the global development of every child and youngster (Santos, 2008). Beyond the educational and clinical practices, multiple investigations have been developed in this area, validating the enormous importance of expressive arts, especially with special needs children and Aldridge, 2008).

This study is centered in the analysis of teacher training for inclusive education and their formation and preparation on expressive techniques as active methods privileged in Inclusive Education. Previous studies (Oliveira, 2009) have concluded that only three of the thirteen public Higher Education Schools in Portugal contemplate a semi-annual curriculum unit related with inclusive education in their Basic Education course. Our issue/question is to understand if, in reality, these important areas are contemplated in different aspects of teacher training and, if so, how they are contemplated.

## **Method**

The main goal of this study is to discover if nowadays the concepts of Inclusive Education and Expressive techniques are a part of the curricular plans of Initial teacher training courses in higher education schools in Portugal. As specific goals we were interested in confronting data from Universities and Polytechnic Institutes, from public teaching, private teaching and concordat education. We were interested in describing the components in training as they are contemplated or not; if they are mandatory or optional; if they are theoretical, practical or both; as well as the analysis of their goals and contents. This study contemplated the curricula of all initial teacher training courses (bachelor and master degrees) in Portugal conferring qualifications for teaching pre-school, first and second cycles of Basic Education. All higher education schools in Portugal that give initial training to teachers were identified (continental Portugal and islands). Through their websites and/or “Diário da República”, their curricula were obtained; the goals and contents of the curricular units that contemplated the areas relevant for this study were analyzed. The data were inserted and treated with the programme PASW 18.

## **Results and discussion**

There are 51 institutions of higher education (69%) that offer 155 curricular units (C.U.) with training components in Inclusive Education (IE). The results from Instituto Superior de Ciências Educativas and Escola Superior de Educação de Bragança have the highest number of C.U. in Inclusive Education (10 and 9, respectively) in their several courses of initial teacher training. There are 38 institutions of higher education (51%) that offer 321 C.U. with training components in Expressive Techniques (ET). The results from Instituto Superior de Ciências Educativas de Felgueiras are the highest, with 18 C.U. in ET in their several courses of initial teacher training. Comparing the results from Universities and Polytechnic Institutes we verify that Polytechnic Institutes have a higher number in formation components in IE (61 in 97) as well in ET (128 in 188) (Carvalho, 2013, p. 67). Comparing the results from Private and Public teaching, we verify that the offer of IE and ET formation components is higher

in public institutions of higher education (97 in 155 for IE; 188 in 321 for ET) (Carvalho, 2013, p. 68). We also verify that in 123 of the 599 analyzed cases there are no formation components in IE or ET. As for this C.U. being mandatory or optional, we verify that the vast majority (426 in 476) are mandatory in the courses they are a part of. As for the nature of these C.U., in 155 curricular units in IE, 62 are theoretical and practical (93% of the units on which we have information) and none of them is exclusively practical. In 321 cases where there is formation component in ET, 126 are theoretical and practical in nature. In 275 of 476 cases, no information for this study was provided after being required. Analyzing the goals and contents of C.U., and those with formation components in Inclusive Education (IE), we verify that, generally, they appear in two situations, in courses linked to general education (Basic, Education, for instance) and educational sciences, or in courses related with sport and physical education. In the first case, courses linked to general education and educational sciences, the C.U. are called “Special Education”, “Special Educational Needs” or something similar. The goals and contents of these C.U. encompass, generally, the knowledge of concepts of inclusion and special educational needs; knowledge of its basis; the acquisition of competences in identifying different kinds of special educational needs, intervention strategies for these children and the acquisition of competences for an educational intervention orientated towards inclusion. The C.U. “Psycho-pedagogical Aspects of Inclusion”, from Escola Superior de Educação de Viana do Castelo, stands out as referring directly to IE.

The goals and contents of this C.U. include those mentioned above and also some related with the development of personal and ethical competences related with the defense of human rights and discussion of results from investigations in IE. There are also two C.U. where Portuguese Gestural Language is taught, in Escola Superior de Educação de Setúbal and Faculdade de Psicologia e de Ciências Sociais da Universidade do Porto, although they are optional in both cases. In the second case we have the C.U. with formation components in IE in courses related with sport and physical education. In this case, those units are called “Adapted physical education and special population” or “Sport for special population”. These units contemplate working with two kinds of people: seniors and people/children with special educational needs. The goals and contents for these units are generally the same in all schools, and they aim to develop skills in evaluating, defining and adjusting physical education programmes to these populations (according with their abilities and functional profile, enhancing or restoring possibilities for adaptation and development) and also analyzing sports and their therapeutic, recreational and social integration value in the process of rehabilitating them. Looking at goals and contents of curricular units with formation components in Expressive Techniques (ET), their names are very clear in their content: Expressions or Didacticism/ Pedagogy of them, including Musical Expression, Art, Physical-motor expression and Drama. As for their goals, they include acquiring skills in these areas and developing them in/with children from pre-school to second cycle of Basic Education. In some cases, concepts like Art and Education and Artistic Education are addressed, and in others the goals include knowledge of legislation for these areas.

Our results point to that both components are never covered by a single curricular unit, i.e., the use of expressive techniques as mediators with children with special educational needs or in IE in general. There are, however, two exceptions: the curricular unit “Music and Special Educational Needs”, from Escola Superior de Bragança in the masters of Ensino de Educação Musical no Ensino Básico has as a goal “Improve knowledge on light and significant special needs; apply music as an intervention in cognitive, affective and behavioural dimensions”; and the curricular unit “Initiation to Musictherapy”, from Universidade do Porto, that aims to bridge Music and its therapeutic use with special needs children. However, we can’t be completely sure because the information we required wasn’t totally provided to us.

## **Conclusions**

Since the initial training of teachers is fundamental for the development of their future praxis, it is important to know not only the basic skills necessary for new teachers, but also realize the best way to acquire them. This aspect becomes particularly important when referred to initial teacher training for inclusive education, where professional quality of teachers and other educators are the basis for their promotion. In the present study we found that 69% of higher education institutions responsible for initial teacher training have, indeed, curricular units (C.U.) with training components in Inclusive Education based mainly on the basic concepts of inclusion and special educational needs. This result meets the obligation of the existence of such training since 1987 in our country (Rodrigues, 2006). It was also found that the vast majority of C.U. are mandatory. To emphasize, however, that this last result comes only from the analysis of the C.U. curricula that were provided to us, and not its entirety. With regard to the practical component of initial training courses, we found that 93% of courses with training in Inclusive Education Component, whose program was provided to us, had a theoretical and practical character. We question, however, what kind of connection is made between theory and practice. Another aspect of this study was to verify the existence and characterize the curricular units with training components in Expressive Techniques. We found that 51% of the higher education establishments include them in their curricula, with 39% theoretical and practical character (result obtained from the analysis of the provided curricula). We noted, likewise, that the objectives and content of these curricular units contemplate only the scientific-technical side and the general didactic aspects of Expressions, not having in virtually no case the specification of the practice of expressive techniques as mediators in the work with students with SEN. Comparing the results obtained in Universities with those of Polytechnics, the latter have a greater number of training components both within the Inclusive Education scope as in the Expressive Techniques. This fact may have to do with the basic characteristics of the Polytechnic Education, in its origin with contents more linked to the formation of specific professions. We also noticed that the offer of training components of Inclusive Education and Expressive Techniques is higher in Public Higher Education Establishments.

Being the Musical Expressions, Drama, Physical and Plastic Motor present in the Basic Education curriculum, one would still expect a higher percentage of C. U. with this training component. We questioned the actual importance of those areas that seem not to be yet (or to be less and less) duly recognized in our schools, and we remember one of the conclusions of the World Conference on Arts Education (2006, Lisbon) which states that "programs of general training of teachers do not make a proper promotion of the role of arts in teaching and learning."

The present study aims to modestly contribute to the reflection and possible development modification of Study Plans in Initial Teacher Training, in what concerns the contents of these two areas there is still a long way to go on the roads of Inclusive Education and Expressive Techniques as tools for the work with pupils with SEN. We continue to seek the path to true inclusion, in the light of scientific research. This research was intended to be a small contribution to this light.

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## Encouraging Ability with Interactive Artistic Environments

Kátia Sá

University of Aveiro  
[sakatia@gmail.com](mailto:sakatia@gmail.com)

Ana Margarida Almeida

University of Aveiro,  
[marga@ua.pt](mailto:marga@ua.pt)

António Moreira

University of Aveiro, CIDTFF  
[moreira@ua.pt](mailto:moreira@ua.pt)

### Abstract

Encouraging the ability of special needs students, the intent of this project derives from the beauty of the field of arts and from interaction and immersion paradigms, which are today potentiated by multisensory and multimodal feedback of responsive multimedia environments. The study was carried out in a public education school with twelve special education needs students from individualized special curricula, following an exploratory methodological approach. Special INPUT was the concept for different types of environments and interaction methods that were implemented in individual sessions with the participants, which allowed observing and promoting their intellectual, emotional, personal, interpersonal, intrapersonal, psychomotor and artistic skills. We conceptualized, prototyped and implemented eight interactive environments, which emphasized the participants' immersion mediated by technology. Different environments emerged from here — Special SOUND, Special MOVEMENT and Special ME — to promote different contexts for self-exploration through sound, movement or video input. The visual and audio feedback aimed the "ludic engagement" and "aesthetic resonance" as a means of discovery and development of ability. We recognize the advantage of interactive artistic environments on special education needs students' inclusion, and we observed a positive impact derived from the authoring and control provided to the participants in these contexts.

**Keywords:** Interactive Artistic Environments; Special Educational Needs; “Aesthetic Resonance”; Ability; Participation; Inclusion.

### Introduction

This study emphasizes the importance of heterogeneity to promote richer and fertile scholar communities (Correia, 2003) and demarcates the importance of self-expression to the feeling of ability — increasing motivation, activity, creativity, imagination and responsibility (Damasio & Damasio, 2006) and emotional intelligence, as an important aspect on social education (Goleman, 2006; Punset, 2010). Creative processes are a right of all citizens: artistic participation promotes active communication, emotional and playful processes, which positively transform humans, contributing to very positive school inclusion environments, favouring different expression modes. The practice of sensitivity and development of creativity has a huge impact on individual's education, stimulating their positive emotions, increasing cognitive, affective and expressive capabilities. Artistic environments can encourage artistic expression, helping students with complex requirements to develop self-awareness of their abilities, incite their optimistic identity and feeling of inclusion. Technological mediation can

promote participation processes; indeed, the conceptualization and development of interactive artistic environments, usually confined to the territory of contemporary artistic installations, can support inclusive environments derived from the technological ludic interaction of the imaginary of contemporaneity and expand inclusion opportunities. We are interested in subjective, aesthetics and ludic contexts of technological mediation, to promote human skills and we explore the concept of technological experience, as the “ludic engagement” (Pettersson, 2006), “aesthetic resonance” (Azeredo, 2007; Ellis & Leeuwen, 1997; Brooks & Hasselblad, 2005; Pettersson, 2006) to enhance ability of special needs citizens. Finally, we are mindful to the emergence of a wide variety of authoring tools for ideation and implementation of interactive systems, fascinated by the plasticity of multimedia, confined to the code, which simplifies the systems customization. Technologic mediation is today a fertile ground for accessibility promoting, through play, physical and sensory abilities and the achievement of full personal potential (Brooks et al. 2002).

## **Method**

This study refers to an empirical exploratory qualitative investigation (Bogdan & Biklen, 1994), with technological mediation in which we used a naturalistic design where data emerged from the field allowing subsequent analysis (Erlandson, Harris, Skipper, & Allen, 1993). Twelve special needs students were involved, from special individualized curricula of a 3st Cycle Portuguese School in Coimbra, Portugal— three girls and nine boys, aged between 12 and 17, mostly 14 year-old. Most students came from dysfunctional social families with low socioeconomic level, with a complex development story, with distinctive and several physical, psychological and social difficulties. The sample included students with Attention deficit/ hyperactivity disorder, Mohr syndrome and Rubinstein-Taybi syndrome. These last two cases — P1 and P6 — were the deepest in permanent special needs. Most of the participants were referred as having cognitive delay on general development and moderate or serious difficulties on the following functions: intellectual; memory; attention; psychomotor; perception; behaviour regulation; concentration and learning. The participants’ characterization was based on data analysis of each Individualized Educational Plan, namely in what concerns relevant personal history and the characterization of functionality according to the International Classification of Functioning, Disability and Health — ICF indicators. Data was organized in extensive data tables with ICF codes — “Functions and Body Structures”; “Activities and Participation”; “Environmental Factors”; “Personal Factors”.



**Figure 1: Interaction of the participants with the environments.**

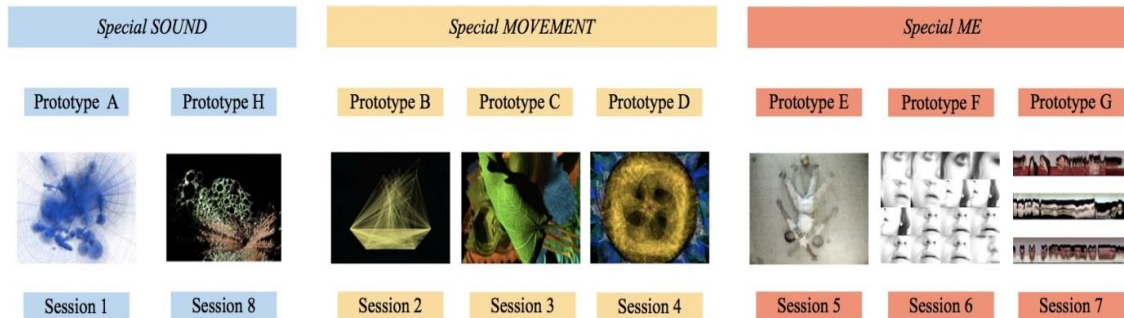
During different sessions (figure 1) participants had experiences with several prototypes of interactive artistic environments, aiming to promote immersion experiences based on real-time sound and image processing, as a strategy to develop, as much as possible, their skills, extending and enriching their sensory capabilities.

We aimed at implementing the multisensory approach of “ludic engagement” (Pettersson, 2006) and “aesthetic resonance” (Brooks & Hasselblad, 2004) mediated by technology.

During the sessions, we observed different behaviours, reactions and free exploration, witnessing the individual expression and personality of each participant. Special INPUT was the concept for the artistic design and technique ideation for the project. Special is about individuality and genuine



expression, INPUT refers to the process of discovery. We wanted to explore distinctive aesthetics with the poetics of interactive sound and image, creating different situations of immersive experiences, based on real time abstract sound and image compositions. Each prototype emphasized a single input, allowing different types of action for each participant, contemplating three areas: sound, movement, and visual inputs. From these approaches we created three main prototype concepts: Special SOUND, Special MOVEMENT and Special ME (figure 2).



**Figure 2: Special INPUT, interaction approaches, prototypes and observation sessions ‘correspondence.**

Special SOUND prototypes emphasized sound improvisation with visual response, Special MOVEMENT promoted body exploration with audio-visual translation, and Special ME aimed to metaphorically increase the experience of the self, exploring playful confrontation with self-portrait and self-representation.

In each individual observation session, the prototype concept was presented to the students, indicating its function mode and aesthetic possibilities — plasticity, dynamics, strength, lightness and visual rhythm or mass and temperature of sound, speech, intensity, harmony or disharmony. Out of 96 sessions we got 74 presences; all sessions were video recorded using two cameras — front and rear — and this was an extremely prolific method for data analysis: using qualitative data analysis software — Nvivo8 — we extracted very rich and precise descriptive narrative from videos, isolating data categories. We also used screen captures during the sessions to archive images produced by the participants. Those files were compiled and distributed to the students at the end of the sessions (available on <http://www.specialinput.blogspot.pt>). During the process we also used field notes, observation guidelines and analytical memos. We worked with post-data encoding method, anticipating initial observation dimensions, but, mainly, looking for emergent categories. Both initial and emerging categories were reorganized into new dimensions derived from the observation of different skills, registered during the observation of participants’ behaviours, which we connected to different “variables of aptitude” — term suggested by Tuckman (2005) referring the analysis variables to observation of different individual skills. Therefore, we obtained information about intellectual, emotional, personal, interpersonal, intrapersonal, psychomotor and artistic skills.

## Results and discussion

During the sessions we observed a general acceptance and enthusiasm on participants, but with sporadic situations of resistance or disinterest. In general, the participants revealed “ludic engagement”, considering the “aesthetic resonance” promoted by the environments, which involved participants in “optimal experiences”. Participants demonstrated enthusiasm with the proposals: clapping, beating their feet on the ground and singing loudly in Special SOUND setups; exploring their bodies in multiple ways, sitting, standing, running, jumping, spinning, in Special MOVEMENT setups; and interacting with their self-images and appearance in Special ME setups, working their identity through self-portrait, using a webcam to film themselves freely, in “deconstruction”, knowledge and receptivity

process of their own visual appearance. Besides this general results, we would like to highlight: the vigorous participation of P1, participant with greater difficulties in psychomotor functions, challenging himself and getting beyond sessions' time; the change of behaviour of P12 and the engagement of these girl on the exploration of Special ME prototypes, after a long period of denial, in previous sessions; more difficulty connecting to the students who, somehow, were going through a period of great emotional instability in their lives; progressive relaxation of P10, who only cooperated with us, making clear his enthusiasm and giving us their opinions, after the emotional engagement; finally, we consider positive the resonance of those experiences in students with Attention deficit/ hyperactivity disorder, as an exercise in self-observation and self-control.

In what concerns the “variables of aptitude” our main results are: in intellectual skills, we noted overall ease of understanding and intuition for interaction, facility in discrimination of sounds and images, positive training of maintenance, division and alternation of attention, and dexterity on development of own method; in emotional skills, we can refer a positive emotional connection — a lot of fun and laughs —, involvement and satisfaction and communication opportunities, occasionally, saturation and monotony by repetition of attitudes or uniformity of results; in personal skills we observed curiosity and cognitive flexibility for the different challenges of interaction and we noticed different personalities and different reactions, observing also that it was possible to promote the exuberance of each character; in interpersonal skills we feel a general approval of the project, a kind of fascination, with positive attitudes at the beginning and the end of sessions and it was very nice to observe the involvement of the participants on setups customization and archiving of visual data; in intrapersonal skills, the autonomous exploration and the great opportunities for positive reinforcement of self-confidence, self-esteem and self-concept became evident; in psychomotor skills body awareness and positive perception of expressive ability were observed as well as opportunities to demonstrate activity and physical abilities — mainly on Special MOVEMENT and Special ME contexts — which promoted the overcome of physical obstacles, in moments of "flow", when the subject immersed in the activity; finally, in artistic skills we emphasize the significant aesthetic experiences, on processes and results, as productivity feeling, the training of perception, and effective notion of control, derived from the interaction with multimedia events.

## **Conclusions**

Interactive artistic environments can promote special needs students inclusion in various levels and dimensions: amplifying expressive skills, at the level of representation and perception, valuing the impact of the “difference”, in aesthetic and playful ways, through sensory and cognitive dimensions of experience; increasing personal ability in different levels, enabling skills expression of individuals who, a priori, are stigmatized by their inability, reversing the way as society tries to normalize and mute the differences; contributing to positive self-esteem and self-concept through the iterative “feed-forward-to-feedback loop” (Pettersson, 2006), in experiments whose results positively reinforce the "self", guiding these students to feel that what they do is valued, including them by ability instead by inability or incapacity, promoting society confidence in special needs students; corroborating personal value a through social network of these students, sharing experiences, supporting emotional and aesthetic value and contributing to the quality of their lives.

The main limitations of this study are related to its exploratory nature and to the fact that this is a young hybrid research area. Nevertheless, we believe that these results can guide, in the future, similar projects. In the future, we would like to think about Special INPUT Projects as multimedia creative processes of transformation of the dynamics generated around the inclusion processes in schools, involving special needs students in artistic collaborative participation moments. Finally, we would like to involve students in these kind of creative processes, in a little differently way, helping them with

ideation and construction of their own prototypes, emphasizing the emotional link of the multimedia events — sound, video, picture images — to their increasing enthusiasm.

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## **Integrating special needs and the visual arts: Breaking down barriers**

Nancy Urban

Chappelow K-8 Arts Magnet School

[nurban@greeleyschools.org](mailto:nurban@greeleyschools.org)

### **Abstract**

“Students arrive from different environments and thought processes, yet they all come to learn, to stretch beyond where they are.”- Abstract artist Gwen Fox. For students with special needs, learning through the visual arts and stretching beyond where they are can be problematic. Barriers, innate and institutional, can prevent them from having uninhibited access to the general education arts curriculum. Students with disabilities need accommodations and modifications to participate in the general education curriculum. Art teachers are tasked with deconstructing and understanding what obstacles are embedded within both their classroom environment and in the art lesson or project. By definition, a barrier is something that impedes, blocks, prevents, and hinders. In the general education art class, these barriers may be the multiple steps needed to complete the project, or it may be accessing art materials deemed too dangerous for a special needs student (e.g., exact knives, hot glue guns, hammers and nails). Teaching a general education art class, providing a meaningful lesson for non-disabled students, while adapting for a student who may be visually impaired, deaf, physically disabled, or mentally challenged is a herculean feat if barriers are not examined and broken down pre-art lesson. When art teachers communicate with resource teachers and staff who know the special needs students well, when they are ‘front loaded’ with purposeful information re: the limitations of the student, they can provide an inclusive lesson. When special education students are included in general education arts classes, they have the opportunity to problem solve, make decisions, work on perception skills, and expand their cognitive thinking. Most significantly, students grow in their self-expression, creativity, self-awareness, confidence, and acceptance by non-disabled peers.

**Keywords:** accommodations, modifications, cooperative grouping, positive behavior support

### **Introduction**

Integrating Special Needs and the Visual Arts: Breaking Down Barriers

The science behind arts integration is solid. “Simply put, more of the brain is at work when the arts are part of the learning process, strengthening attentiveness, reaction time and comprehension” (Lynch, 2014). Research suggests that arts education methods improve long-term retention. When students are allowed academic expression through artistic means, such as drawing a picture, the information is “embedded in their minds” (Lynch, 2014). According to Harvard professor Rudolf Arnheim (1997), “Artistic activity is a form of reasoning, in which perceiving and thinking are indivisibly intertwined. A person, who paints, writes, composes, dances...thinks with his senses” (p.5). For students with special needs, learning through the visual arts can be problematic. Obstacles, both inherent and institutional, can thwart access to the general education visual arts curriculum.

Students with disabilities require adaptations to access and participate in the general education visual arts curriculum. Promoting access to the general curriculum has emerged as a central theme of the standards-based reform movement, challenging educators to identify effective strategies for supporting students with disabilities to access the numerous social and learning opportunities within general education (Carter, 2007).

## **Method**

### **Barriers in the Inclusive Classroom**

#### **Safety**

When breaking down barriers for disabled children in the visual arts classroom, first and foremost, the educator must have a safety plan for a fragile child in an active and industrious environment. Students with special needs are especially vulnerable to injury in classrooms with tools, hazardous compounds, and unfamiliar materials. Developmental delays, difficulties with perception, hearing, or mobility can threaten the personal safety of the disabled student in the general education art classroom.

In a typical art classroom, students may be expected to use hot glue guns, exacto knives, and wire, hammers, or aerosol paints to complete assigned projects. The art teacher must decide if the special education student is capable of using these materials with limited supports and reminders, or if the student simply will not be able to utilize them at all. Teachers can employ creative strategies to skirt these issues, for example, having the teacher do the gluing for the student while he/she completes the rest of the project, or providing student-friendly materials such as a ruler with an adaptive handle or safety scissors in place of classroom scissors.

Additionally, student safety can be compromised if the environment itself adds to the safety risk. Providing clear pathways, proper lighting, labeled bins, and posted rules may lessen the possibility of accidents occurring in the class. Students with physical concerns, students with visual disabilities, and students with limited cognitive abilities are more likely to struggle in a crowded, active environment. Scheduling these select students in a class with a smaller population should be considered at the beginning of the school year, or anytime the student changes schedules during the year.

#### **Cooperative Grouping**

The visual arts teacher should also consider cooperative groups, peer partners, or the buddy system for the disabled student in the general education art classroom. (“Instructional Adaptations”, 2010). General education art students who interact with their special education classmates are informally teaching, modeling, and providing visual examples for their disabled peers. Special education students have the opportunity to absorb the directions, see how the project is meant to progress, and eventually view an example of the completed assignment. Special education learners may be strategically partnered with one or more select students, who the teacher defines as good choices for seatmates, or they may be grouped together with other special needs students. Some educators believe that we should “avoid clustering students who have disabilities at the same table during the same time period.” (Bunch, n.d.). Rather, this can be an effective strategy if said students are capable, if they work well together as a group, or if a teacher’s assistant is available to offer support to a small group in class. When presented with art projects that are multi-step or skill-based, special education students may become frustrated, stressed, or sullen, and this can be diminished when they learn with a circle of friends in the class. Additionally, general education students who learn in an inclusive environment often report both progress and problems with their special needs classmates to the classroom art teacher. They sometimes offer their own solutions and insights into the current state of their special education friends.

## **Results**

### **Accommodations and Modifications**

In the United States, the Federal Individuals with Disabilities Education Act (IDEA) states that all American children have the right to receive a free and appropriate education (Furniss, 2008); this is accomplished through each child’s individual education plan (IEP). The IEP states what

accommodations and modifications are being implemented to meet the student's unique needs. Adaptations provide students with disabilities the opportunity to maximize their strengths and compensate for their learning differences ("Instructional Adaptations" 2010). While these documented adaptations may have been originally drafted for success in the academic environment, they are also valuable in the student's elective classes, which is where most art instruction in American schools occurs. These accommodations and modifications may include extended time, breaks, checks for understanding, simplification of multiple steps directions, and immediate feedback; all of these assist to level the playing field for the disabled student.

Providing preferential seating in the class can benefit the disabled student. Students may need to sit close to the board, they may listen better away from distracting noises, they may need to sit near an FM system within the room, or they may require sensory tools to stay focused for extended amounts of time. Art teachers must consider where in the classroom the student sits in comparison to where the art tools are located within the class. Students with compulsive tendencies and students with cognitive concerns should not be seated near or have access to potentially harmful tools or materials.

When an art teacher is provided with the accommodations from the student's IEP, the teacher can brainstorm how they may implement them in the art room and how they can make that class period an inclusive and valuable learning opportunity for the special education student.

"Disabled students have the opportunity to create equality art when the IEP accommodations are followed. Designing lessons for the typical student is tough enough for teachers; adapting them to children at wildly varied points on the skills spectrum is tougher still"(Gewertz, 2013). It is essential that the arts teacher understands the nature of the student's disability and that they can implement strategies and changes that make the learning experience germane.

## PBIS

Unfortunately, no magic wand single-handedly works to remove the barriers to learning that occur when behaviors are disrupting the learning community (Positive Behavior Intervention & Support, 2014). One of the foremost advances in school-wide discipline is the emphasis on school-wide systems of support that include proactive strategies for defining, teaching, and supporting appropriate student behaviors to create positive school environments. Positive Behavior Interventions and Supports (PBIS) is a proactive approach to establishing the behavioral supports and social culture needed for all students in a school to achieve social, emotional and academic success. Introducing, modeling, and reinforcing positive social behavior is an important part of a student's educational experience. Learning disabled students require lots of specific praise in each step of their visual arts experience. Individual student skills are particularly exposed in the visual arts environment, where their work is put on display in front of their peers and their abilities may be called into question. Case in point, a middle school special education student physically hides her completed project when her class participates in a final critique; she is embarrassed to have her work placed side-by-side with her classmates. By providing specific praise that link the activity directly with the recognition, the actions and behaviors of the special needs student are made relevant and connective. For example, when the teacher states "I am particularly pleased that you used the ruler to make sure your lines were straight", the intent is that the student will internalize the praise and then use a ruler the next time the opportunity presents itself.

## Technology

Technology can be a great equalizer in a classroom with diverse learners. "Whereas teachers can find it difficult to differentiate instruction for 30+ students in one class, all with different needs and abilities, assistive technology (devices and software to assist students with disabilities) can often help teachers personalize lessons and skills enhancement to each child" (Job and Zorigian, 2009). Students with

severe and profound disabilities can utilize technology and be included in a class of typical students. In the art classroom this may include sounding boards, adaptive key boards, enlarged computer screens, one button clickers and the touch pads.

In 2008, the Andrew W. Mellon Foundation commissioned a study of technology usage in the arts (Callahan, 2010). Their research results revealed that both lack of time and insufficient knowledge to make technological decisions were barriers to tech usage. For the special education student to be successful with technology in the arts classroom, the teacher must take the time and energy to understand the nuances of the technology being used. This may include consulting the school district's adaptive technology personnel or taking time to personally practice with the technology.

Professional development classes, continuing education courses, and teacher in-services are designed to foster the growth of teachers and to provide exposure to the most current teaching practices. Historically, teachers only participate in classes within their teaching realm. For example, an arts educator attends summer professional development classes designed around the arts curriculum or new techniques that can be used within the class. To provide continuing access to the general education visual art curriculum for the special education student, best practice would be for arts educators to attend classes focused on inclusion, adaptive technology, and accommodations for special populations.

## **Conclusion**

Meeting the Needs

Predetermination and Planning

Barriers are an inherent part of the education system, something that all students must navigate on their own. Certainly, socio-economic factors, language and communication, abilities, policies, and funding, can all impede and impact a child's access to their education. For students with disabilities they may have to face these hurdles with cognitive, communication, physical, sensory, and social/emotional concerns, necessitating adaptations to the general education program. When the special education student is scheduled in an inclusive arts class, where the stumbling blocks are pre-defined and the accommodations are foreseeable, the learning experience is made genuine and the social and academic growth in the student is obvious and certain. Noted educator, administrator, and child advocate Dr. Gene Carter once said "We must meet our students exactly where they are with exactly the brains they have right now. We must use all the tools we have available to use and not expect them to fit into a mold or all behave exactly the same" (Carter, 2013). Each pupil manifests his or her learning style, learning abilities, and learning preferences in their own original way. Special education students can be genuinely included and gain access to an arts education if we, as educators, continue to adapt, experiment, and try new approaches that break down the barriers placed before them.

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## **Intellectual disabilities in the movies: Reflections about inclusion**

Rogério de Almeida

Faculdade de Educação da Universidade de São Paulo

[rogerioa@usp.br](mailto:rogerioa@usp.br)

Mariana Tambara

Colégio Vital Brazil

[mariana.tambara@gmail.com](mailto:mariana.tambara@gmail.com)

### **Abstract**

How the movies that has educational special needs as a theme contribute to promote or dissolve the stereotypes and prejudices? Departing from this issue, this paper try to understand what are the main stereotypes, prejudices and attitudinal barriers related to deficiencies (Amaral, 1998) and how these assets are represented on specific movies. The presupposition is that the movies don't summarize to escapism or social criticism, but contribute to the thinking, by the aesthetic experience that may provide, reinforcing/repelling such concepts about the reality (liable of being) lived (Almeida, 2013). With its fictional constitution, the filmic narratives may both issue such discourses, in cases of deficiency, promoting different ways, alternatives, to treat the issue, as may also reinforce such stereotypes made and socially spread. To verify this hypothesis, we analysed movies like *Forrest Gump*, *Taare Zameen Par (Like Stars on Earth)*, *Colegas (Buddies)*, *Le huitième jour*, *Radio e Jeder für sich und Gott gegen alle (The Enigma of Kaspar Hauser)*. This movies, with different origins and genres, are from comedy to musical, from Hollywood to Bollywood, passing through french, german and brazilian cinema. What put these movies together is the fact of approaching the intellectual deficiency, a common base to the methodological path of hermeneutic analysis (Ricoeur, 2008) to be made.

**Keywords:** cinema, education, intellectual disability, inclusion

### **Introduction**

There are three metaphors related to the movies that together make a landscape of its possibilities for filmmakers, the public, theorists, critics and educators: the window, the screen and the mirror. Or respectively: representation, language and expression.

As a window, the movies are an opening to the world, i.e. the world of the film relates to the extra-movie world, because the work of the art is circumscribed in space-time. Every film is a window to the world. But as every window, needs someone to look through it, the audience, viewer, critic, theoretical... The reception, which will look at various aspects of the film, may lurk through this opening to the world by its degree of transparency (Xavier, 2005). In this perspective, the fictional narrative contained in a movie is a given reality that relates to the reality outside the film.

As a screen, the movies present images that have dual reality (Aumont, 1993). An image refers to a reality. But the image is only an image (Godard by Rosset, 2010). We know that we are staring at a screen; we're also inserted in game made by images. There is a language, a syntax coordinating these images and extracting its possible effects (montage, framing, soundtrack...).

As a mirror, the device mediates an expression of the filmmaker and the audience reception. The composition of a scene is the slicing of reality for the eye to fix what the scene elect. "The image is representative because it is recognizable, speaks to the eye memory" (Lyotard, 2005, p. 224). The filmmaker has no control over his work. The viewer does not know how to understand it. There will

always be a zone of indeterminacy, which may be higher or lower according to the work. Umberto Eco (2005) calls this open work. Gilbert Durand (1998, p.252) says that understanding is a translation. A symbolic translation, but that connotes pluralizing senses. Because the viewer is also co-author, he gives meaning to the image, to the story. Paul Ricoeur (2008) calls this understand oneself in front the work.

From this perspective, it is considered that the formation is not restricted to the transmission of a value (knowledge or behavior) because it is the process of stabilization/destabilization of worlds (Almeida, 2013a). In other words, the educational process occurs in the expansion of the gap between the representation (language, speech, image...) and the represented (diegetic world). To believe in the direct relation between representations/represented, result is the mechanisms of indoctrination disguised as good education. Educate itself presumes a long process of (self) formation (Ferreira-Santos and Almeida, 2012). Educating yourself is to problematize representations of the world (ideological, religious, artistic, etc.) (Almeida, 2013b).

## **Method**

The study was conducted in six movies on the issue of intellectual disability (delay or cognitive limitations). This limitation is understood differently from mental illness (or psychological, such as depression or schizophrenia). For the American Association on Intellectual and Developmental Disabilities (AAIDD - [www.aaidd.org](http://www.aaidd.org)) is below average, expressed by the limitation of at least two skill areas (communication, workplace, leisure, academic activities, self-care...). Thus, the person with intellectual disability can present a variable range of features. Therefore, it is considered the diversity and not the sick. The person with intellectual disability has a possibility of existing in the world differently.

For this paper, were selected movies about Down syndrome (*Le huitième jour* and *Buddies*); about cognitive disabilities (*Forrest Gump* and *Radio*); about dyslexia, which is not deficiency but reading disabilities (*Like Stars on Earth*). And a movie about Kaspar Hauser, a historical personage found in Nuremberg in 1828, after spending 15 years in a cell without contacting of society (*The Enigma of Kaspar Hauser*).

The selected films are very different: genre (comedy and drama), nationality (Belgian, Brazilian, two American, Indian and German), year of production (1974 to 2012), aesthetic treatment and historical significance... This diversity is on purpose because we seek to methodologically cover a variety of representations. The next step was to compare these representations with the stereotypes of hero, villain and victim. The aim is to see how the movies consider these stereotypes: in agreement, in conflict or in another meaning.

Ligia Amaral (1998, p. 13-15) believes that stereotypes are derived from prejudices and attitudinal barriers. Ana Taís Barros (2009, p. 2) refers to the stereotype as a "kind of anti-symbol". Mittell (2010, p.309) defines stereotype as "limited, oversimplified and inaccurate definitions of cultural identity". And, in a more negative way, Mazzara (1998, p.16) considers "the stereotype as a coherent set of negative beliefs that a certain group shares about another group or social category."

In general, person with disabilities can be seen as a hero, i.e. a good person with willpower, fighting to compensate, mitigate or bypass their disability. He can be seen as a victim, doomed by fate to the limitations imposed upon him. It can be seen as a villain, the personification of evil.

In relationship with the stereotypes, operate attitudinal barriers, which are ways of denying disability. The most common forms of denial are three: the compensation when it assigns a feature that compensates for the deficiency ("is paralyzed but he is so smart"); attenuation, when it reduces disability ("could be worse"); and the simulation, when the difference is denied ("he not seem blind") (Amaral, 1998, p. 20).

The description of these categories of analysis aims to stimulate reflection and overcoming prejudice. We want a social interaction guided by diversity and respect of differences.

### **Results and discussion**

The analyzes showed the same approach (comedy) and the same purpose (combating prejudices) for *Le huitième jour* and *Buddies*. The first is more elaborate, opaque and ambiguous. The final scene shows the protagonist's suicide, but mixing fantasy and reality, reducing pessimism. The film's message is that people with Down syndrome can teach us to live better.

*Buddies* explores a simple humor, a group of friends with Down syndrome traveling around Brazil. The road movie reinforces the naive, fun and affective aspect of the protagonists, minimizing their limitations. Both films are positive for the socio-cultural integration, but reiterate the stereotypical hero. *Radio* is also a surface film without ambiguities. Begins with the stereotype of the victim and ends with the stereotype of the hero: from exclusion to successful inclusion. The movie has doses of paternalism and ingredients to cause commotion. *Radio* has an obvious intellectual disability, but not defined. The tension of the film is established through social prejudice and grows to give vent to the ultimate relief when everything is solved and *Radio* is definitely integrated into local society.

*Forrest Gump* is a movie marked by ambiguity. While there are similarities in the intellectual disability with *Radio* (*Forrest* has an IQ of 75, below the average), is a more complex and provocative film. The movie tells the tale of an idiot who participates decisively major historical events in the United States. It may be understood as a critique of American values or as a stimulus to the American Dream because the protagonist wins in life acting honestly and in accordance with the prevailing social values. This interpretative possibility is reinforced by the punishment of the "bad" characters at the end of the movie.

Like *Stars on Earth* is a Bollywood production, with the typical industry conventions such as long and lush musical scenes. It is a melodramatic and didactic film, which shows how a sensitive teacher is able to save the life of a dyslexic boy. Inclusion is the keyword of the movie, which is very successful among teachers.

Finally, *The Enigma of Kaspar Hauser*, from the famous Werner Herzog, narrates a true event of a boy that have grow alone and was abandoned in the square of Nuremberg. With several difficulties to walk and talk, the enigma of their condition attracts the attention of the local community. This movie is different from the others because it strongly criticizes society's inability to deal with difference. The German title it is enlightening: *Every man for himself and God against all* because it represents a petty and oppressive society abandoned by God. *Kaspar Hauser* was killed, and nobody ever discovered who the killed him. It is the only movie without stereotypes. There are no hero or villain. *Kaspar Hauser* also does not appear as a victim, because refuses the society values.

### **Conclusions**

These analyses allows to assert that *The Enigma of Kaspar Hauser* problematizes an issue that the other movies ignore. The presuppositions of the other films were limited to noting the prejudice (negative force) and the ability to overcome it by the compensations that people with disabilities could provide by inclusion. The endings are happy, positive, elevated and educational. Thus, the naivety, kindness, gentleness of those characters with disabilities or intellectual limitations reinforces the stereotype of the hero. These personages are as a positive force capable of correcting the prejudiced social values and promote social inclusion. The narratives present the mythical triad mentioned by Joseph Campbell (1993): separation, initiation and return. There is an initial transgression that leads to a road of trials. In the end, the hero returns to society, which inherits the good that he conquered.

This is also the dominant ideological discourse on education in respect to the inclusion of persons with disabilities. It is believed that the explanation of the special status of these persons and the implementation of inclusion policies can erase the differences. The purpose of these policies is to make the deficient a worker and a consumer, i.e., an agent of progress. It is a modern and the Enlightenment vision that believes in historical progress and improvement of civilization.

With Kaspar Hauser, we realize that the problem is not the difference, but the basic values that condemn any manifestation of the difference (physical, intellectual, moral...) for the purpose of protect themselves from the threat of disruption. Such is the logic of conservatism. Therefore we exchange the question of prejudice to the values of society itself: are we able to change our way of being so that the concrete and the virtual pluralities can coexist?

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## **Developing the role of inclusive teachers through sociodrama**

Luzia Mara Lima-Rodrigues  
Piaget School of Education  
[luzialima-rodriques@hotmail.com](mailto:luzialima-rodriques@hotmail.com)

### **Abstract**

One of the main needs in continuing professional development is the use of innovative teaching strategies, where trainees can be aware of alternative methods of teaching and learning and to experience different ideas about their own way of learning. A key factor of training is that students are taught using the same strategies they will use in their professional life (Rodrigues & Lima-Rodrigues, 2011).

In this way, sociodrama can give an important contribution to the complex teacher education process. Understanding the culture and experience of students is the basis to promote a learning process rooted in diversity and respect for each student. Successful projects in inclusive schools have reinforced expressive methods with positive results (Henriques & Lima-Rodrigues, 2011, Lima-Rodrigues et al., 2007). Surely, it is needed to adopt into their training course those same strategies they will use as professionals (Udvari-Solner & Kluth, 2008, Rodrigues & Lima, 2011).

The experience shared here is about the sociodrama as methodology of teaching on Special Education master courses, with three main objectives: to enrich the personal experience of the future teacher, to stress aspects that can be better learned by expressive methods and to demonstrate how expressions can be used as alternative ways for learning.

As result, trainees refer that Sociodrama improves their personal experiences, which is crucial for their professional identity as inclusive teachers, and that sociodrama should be included in pre-service and lifelong teacher training as alternative strategies to traditional didactic methods (Lima-Rodrigues, 2011).

**Keywords:** Sociodrama, teacher training, methodology of teaching, inclusive education.

### **Introduction**

A major challenge in building the role of "inclusive teacher" is the attitude change. We may present several techniques of teaching for the future teachers, some of whom considered truly effective. However, the knowledge of a list of techniques cannot guarantee that the result of the teacher's action will promote the inclusion of each and every student. This is one of the reasons why the failure in teacher education is often perceived as one of the most obvious barriers to inclusive education, both in Portugal (Rodrigues - Lima et al. , 2007; Henriques & Lima , 2011) and internationally (Broomhead , 2013) . Not only the lack of training, but rare existence of a formation that is considered effective. In other words, the lack of training that promotes the modification of attitudes towards human diversity and the inclusion of pupils with Special Educational Needs (SEN) and that, simultaneously, emphasizes active, expressive and cooperative forms learning.

After 21 years of experience using active and expressive methods in teacher education, I consider the Sociodrama as one of the richest and most profound ways to teach and help people to understand and change reality. Created by Jacob Levy Moreno in middle of last century, sociodrama, as defined by Browne (2011, 12) is a "learning method that creates deep understanding of the social systems and that forces shape us individually and collectively." This author also emphasizes that sociodrama is concern with social roles and our collective identity as a group (or sub-group) in society or in an organization,

and with making sense of the way the group operates. Like all Moreninan action methods, sociodrama is a tool for social transformation and, in the aim of this study, is a tool for teachers and teacher education transformation.

## **Method**

This research intent to analyze the use of sociodrama as methodology of teaching, with the aim of to develop, in students, the role of inclusive teachers. Sociodrama, in this context, has three objectives:

To enrich the personal experience of the future teacher,

To stress aspects that can be better learned by expressive methods and

To demonstrate how expressions can be used as alternative ways for learning.

The experiment took place between October 2007 and January 2014, with around 650 students of the Curricular Unit (CU) "Active Pedagogies and Expressions in Special Education", in Special Education master courses of Piaget School of Education, in Almada, Portugal. As teacher of this CU, I could stress that sociodrama was a significant tool in many aspects:

- To relive professional and personal experience (since childhood), regarding SEN, emphasizing the changing concepts and practices that have occurred in society, at school and in the individuals themselves.

- To deepen the current design of Inclusion and Inclusive Education as a human right as access, participation and success of each and every student.

- To critically analyze the scenes that emerge from stories dramatized, in order to identify subtle mechanisms of exclusion, "hidden " or "disguised" in the form of inclusion.

- To allow students to role-reversal with agencies or social roles ("school" , "traditional teacher" , "inclusive teacher" , "exclusion" , "disability" etc. ), so that the fundamental concepts of Inclusive Education first be "incorporated" and then "studied" and defined by reviewing the literature, especially of scientific articles recently published.

- To teach students how to use the sociodrama in their professional practice, especially in contexts of inclusion of students with SEN.

- To encourage and motivate students to maintain an attitude of research and constant deepening of knowledge.

Data were collected through:

- The participant observation of the author, while a professor at CU "Active Pedagogies and Expressions in Special Education"

- The reports of more than 650 students of this CU, since 2007,

- A written report (which is part of the formal assessment of the CU) where students register:

a) The contributions of the methodology used in class for the development of their personal and professional role, and

b) Three aspects to value, three aspects to avoid and three aspects to include in this CU.

Part of the results have already been published as they were being evidenced (Rodrigues-Lima et al 2007; Lima-Rodrigues, 2011, 2013, 2014). The data collected through the written record is in phase of content analysis.

## **Results and discussion**

The results of this deep and long experience can be divided into several dimensions.

The most obvious result is linked to personal development and the immediate pleasure felt by students in class. Students say feel more motivated to participate in classes, have an enhanced active learning time and give better attention to their own feelings, emotions and experiences of life with and about exclusion and inclusion.

Another result is the increased enthusiasm of students to seek information and to deepen their theoretical knowledge about diversity, inclusion and intervention with people with SEN. They identify that their learning are more significant, and they are more able to keep these learning in memory for a longer time. Students specially appreciate the technique of role-reversal, when challenged to play the role of people with disabilities and/or their caregiver. They reinforcing, in particular, the experience of analyzing the accessibility of the old city center of Lisbon, in wheelchairs or blindfolded, under the project "Lisbon in wheelchair" (Lima-Rodrigues , 2013 ).

Invariably, student groups create innovative teaching proposals, significantly altering its educational action for more active, expressive and cooperative methodologies.

These students also share that they modify or improved how they appreciate and judge the artistic and body expressions. They begin to consider expressions as a possible way to better understand the children and even as a legitimate form of manifestation of knowledge within the school context.

Specifically on the subject of this investigation, trainees refer that sociodrama improves their personal experiences, which is crucial for their professional identity as inclusive teacher, and that sociodrama should be included in pre-service teacher training as alternative strategies to traditional didactic methods (Lima-Rodrigues, 2013).

### **Conclusions**

The experience findings have evident implications for the development of teacher education, regarding how sociodrama can be a method to encourage future teachers to face the diversity of their student and to change their own attitudes regarding inclusion.

### **Acknowledgements**

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## **A Music curriculum for individuals with autism spectrum disorder**

Stephen M. Shore, Ed. D.,  
Boston University, Boston, MA.  
[sshore@adelphi.edu](mailto:sshore@adelphi.edu)

Ann Roberts, Ph. D.,  
Boston University, Boston, MA.  
[aroberts@bostonhigashi.org](mailto:aroberts@bostonhigashi.org)

Deborah Donovan, CAGS,  
American International College, Springfield, MA.  
[ddonovan@bostonhigashi.org](mailto:ddonovan@bostonhigashi.org)

Kaname Ueno, MA,  
Lesley University, Cambridge, MA.  
[ueno@bostonhigashi.org](mailto:ueno@bostonhigashi.org)

### **Abstract**

Music benefits the spirit and activates the brain. Musical training is a brain-based method to enhance learning across domains including social skills, communication, emotional regulation, memory, motor planning and visual-motor integration. To gain such benefits, however, music must be taught as a skill, through mastery, either vocally or instrumentally. Youngsters with severe autism spectrum disorders, when properly taught, are capable of musicianship and performing with non-disabled peers in integrated settings and at community events.

**Keywords:** Music, Autism Spectrum Disorder (ASD), Teaching a Music Curriculum, Brain-based Learning, Daily Life Therapy ®

### **Introduction**

The aim of the current study is to show how music can be taught to students with Autism Spectrum Disorder (ASD) by means of a structured curriculum and inclusive approaches toward learning. This approach enables children to develop a variety of skills similar to those of their neuro-typical peers. It extends music education beyond therapeutic interventions by strengthening areas of brain connectivity. According to Eric Jensen, author of *Arts with the Brain in Mind*, (2001), music activates various areas of the brain. Learning music “helps you think by activating and synchronizing neural firing patterns that orchestrate and connect multiple brain sites” including “the frontal, parietal, and temporal lobes and the cerebellum.” (2001, p.20). The corpus callosum, a bundle of nerve fibers that connects the two brain hemispheres, is also noted as a particularly important area strengthened by music training (Hyde, Lerch, Norton, Foregard, Winner, Evans, & Schlaug, 2009; SchlaugJancke, Huang, Staiger, Steimetz, 1995). Neural integration in this area tends to be diminished in the brains of youngsters with ASD (Xiao, Qiu, Ke, Xiao, Xiao, Liang, Zou, Huang, Fang, Chu, Zhang & Liu, 2014). Music is effective because it stimulates neuron development and interconnections acting as an agent for the regulated flow of the cortical firing patterns ultimately responsible for higher brain function (Jausovec, Jausovec & Gerlic, 2006).

Multiple brain-based studies provide evidence that music benefits skill development in such varied domains as academic learning, social interaction, communication, emotional regulation, memory, motor skill acquisition and sensory integration (Jensen, 2001 & Hyde et al., 2009). All need strengthening in children and individuals with ASD. Attending, expressive language, decision-making, problem solving, symbol decoding, creativity, motivation and self-discipline are some of the specific functions enhanced. Jerome Kagan, in *The Human Spark* (2013), cites the work of Schlaug (1995) and others who note that early music training, beginning age 4 to 9, is most effective in promoting the brain growth that leads to greater success in other areas of functioning. Therefore, it is not only critical that music becomes a part of a child's daily life, but more so that this intervention happens early, is continuous and skill-based.

## **Methods**

The Boston Higashi School (BHS), a specialized school for children with Autism Spectrum Disorder (ASD), in the United States, emphasizes music education in its curriculum. Students enrolled at BHS range in severity and often exhibit particularly challenging behaviors that interfere with academic engagement and daily life activities. The framework for the music curriculum, as part of the overall methodology, consists of systematic step-by-step instruction in the skills of vocalization/singing training, rhythmic activities and music-making on several beginning instruments, followed by transitioning to orchestral/band instruments. Music appreciation of various genres accompanies practice. Teaching strategies are group-based but differentiated and customized for each student's capability. This collaborative learning style is highly motivating. Collaboration promotes imitation that scaffolds teaching of advanced rhythm patterns, melody lines, modulation, tempo, dynamics, and emotional expression.

Initially, an awareness of music in one's natural environment is provided and acknowledged. Classroom lessons include music. Music classes are activity-based to promote interest and teach that music is a fundamental part of life. Music is also used to stimulate intellectual development through areas such as pattern recognition, rhythm, rhyme, literacy, spatial reasoning and creativity. Memory training, listening, attention, concentration, language expression and recall are all fostered in music classes and then generalized to other academic areas.

The music curriculum exposes students to a variety of genres and moods, thus providing a window for emotional regulation and expression, areas of particular difficulty for individuals with ASD. Through lessons involving active music programs, students coordinate their movements from bilateral fingering to dancing to group participation, leading to a reduction in maladaptive and self-stimulatory behaviors. Language and motor skills are built and sustained at the same time. Singing and playing musical instruments teaches breath control and oral-motor skills. Repetitious practice of motor planning benefits coordination and dexterity. Such skills generalize and support communication, reading, math, handwriting, self-care and other executive function skills. The multi-sensory demands of music give practice in coordinating affect and sensory information with cognition. Using these skills and understanding for leisure and community activities allows opportunities for generalization and participation in integrated settings.

## **Results/Discussion**

The Boston Higashi School (BHS) has educated nearly five hundred students over the course of twenty-seven years. In that time, all students participated in the music program and progressed through the music education curriculum. Students have opportunities to perform and to be members of an appreciative audience. All students participate in two performances each year, showcasing their musical achievements. Furthermore, each year, about 30 students who have progressed sufficiently and

demonstrated interest, participate in extra-curricular groups such as Jazz Band, Chorus Group, Rock Band and Drumming Ensemble. The Jazz Band, composed of students aged 12 to 22, provides the opportunity to participate in a structured-group setting, develop skills in playing professional-grade instruments, and perform at formal events beyond the campus and local community. They have even traveled to venues such as Carnegie Hall and the music festival in Hokkaido, Japan, performing as part of an integrated orchestra with typical peers.

## **Conclusion**

The intrinsic value of music education for students with Autism Spectrum Disorder (ASD) has many benefits. A systematic approach that utilizes differential and group-based instruction to teach musical skills to students has functional benefits, mediated by brain-based development, in the areas of social interaction, communication, emotional regulation, memory, motor skill acquisition and sensory, spurring growth in executive function and academic achievement. Furthermore, it is reported by parents of children with ASD to be a key component for reducing anxiety and improving autonomy and self-esteem, thus enhancing quality of life beyond school years. Music is a tipping point for inclusive approaches for educating youngsters with ASD, independent of their setting in general or special education.

## **Acknowledgements**

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## **Experience in Painting and Drawing in Special Education**

Edilania Vivian Silva dos Santos  
Universidade Regional do Cariri  
[viviansanjos@gmail.com](mailto:viviansanjos@gmail.com)

Cicera Edvânia Silva dos Santos  
Universidade Regional do Cariri  
[edyletuar@gmail.com](mailto:edyletuar@gmail.com)

Raquel de Santana Santos  
Universidade Regional do Cariri  
[raquel\\_santana.av@hotmail.com](mailto:raquel_santana.av@hotmail.com)

Ana Cláudia Lopes Assunção  
Universidade Regional do Cariri  
[anaclaudia\\_pb@hotmail.com](mailto:anaclaudia_pb@hotmail.com)

### **Abstract**

This paper objective is to describe our first experience with the Deaf Special Education Elementary School and Middle José Bezerra de Menezes, the first school students to work with children, youth and adults with special needs. The workshop "Experience Painting and Drawing in Special Education " came from the live experiences in the Supervised Internship in Visual Arts , the subproject - Programa de Iniciação à Docência - PIBID the Department of Visual Arts Graduate Cariri Regional University – URCA. In these experiments mentioned above we note the absence of special needs students in extra school activities of institutions we teach. The project is born from the desire to work with this audience. The methodology adopted for the development of this workshop will be the triangular approach. The purpose of this workshop is to raise students' interest in the visual arts as a field of knowledge and contribute to personal, intellectual and social formation.

**Key words:** Education Special – Visual Arts – Experience – Drawing / Painting

### **Introduction**

The students of the course of graduation in Visual Art of Center for the Arts Reitora Violet Arraes de Alencar Gervaiseau, Pirajá campus, of the Regional University of Cariri-URCA located in the Cariri, we challenged ourselves to develop a project to make a workshop for Visual Arts working with the languages related to drawing and painting, with the audience of students have special need of public schools in our region.

The proposal appeared during the experiences in supervised traineeships in Visual Arts Teaching in and as scholarship of the subproject Visual Arts of the PIBID/URCA<sup>1</sup>, lived through of lessons in Non-Governmental Organizations - ONGs and schools of basic education in the cities of Juazeiro do Norte and Crato. In these classes we note the absence of special needs students in the workshops and because of this reason we decided to investigate the reason for this absence.

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<sup>1</sup> Initiation to Teaching Institutional Scholarship Program - PIBID/URCA

We pursued the proposal of the workshop José Bezerra de Menezes School, located in Juazeirodo Norte city. She is one of the first schools of this city, it was founded in 1966, and it was also the first primary school of the Cariri-CE to accept Children / Youth / Adults with special needs in the beginning 90s (the decade in which was sanctioned the Salamanca Declaration), working with the Segregation<sup>2</sup>, system which remain until 2009. Since segregation that school receives students: hearing disabled person, deaf, visual disabled person, persons with Down syndrome and mental disabled person.

Until 2009, the school used an inclusion system (segregation) of special education students in regular classes. In 2010 the school starts working with another teaching method deployed by MEC: system of Inclusive Education. Soon after its establishment, segregated rooms were disabled and special education students were headed to the regular classrooms. In 2008, Decree n°. 6.571 in establishing, scope of FUNDEB, the doable statement of enrollment of the students who are audience of special education, one common class of teaching public school and another in Educational Service Specialist (ESA). In the same year was opened the first Resources room<sup>3</sup> of Cariri in school José Bezerra de Menezes. The implantation of these rooms at schools aimed the end of segregation and strengthened the introduction of inclusive education system too.

In José Bezerra de Menezes School the Resource Room works to the present day, serving students of the same, the schools in other neighborhoods and other cities of Cariri. It is coordinated by teacher Ana Carmen Vieira Pereira with the help of the teacher / instructor Alex Cassimiro de Souza who is deaf, but he can speak<sup>4</sup>.

## **Method**

In the workshop we worked with three deaf students with the help of Teacher Alex who helped us get in touch. The workshop lasted 20 hours and the contents worked were: Visual materials for the provision of specialized education environments (MEC, p. 29). Elements, Drawing and Painting. Our proposal was to help the students to understand the Visual Arts, and as a methodology we adopted the approach Triangular of Ana Mae Barbosa. Costa (2010) says:

The Teaching Art in school guided through Triangular Approach intends to form the knower, the decoder of the work of art and the everyday images or visual culture. Among other words, this teaching will promote recognition, a reinvention of the subjects involved and they are going to socialize and they are going to humanize. (p. 133)

We showed during the Prezi program a small passage of the History of Visual Arts. The first content that we showed to the students was with Visual Components (point, line, texture and colors). After introducing and experimenting with Visual Components we began work with the languages of drawing and painting. We showed the works of artists from different periods who worked with two languages: Leonardo Da Vinci, Djanira Mota e Silva and Di Cavalcanti. After the presentation of the works of artists and historical contextualization, we asked students to do some experiments with paper and graphite pencil, paper and colored pencils and gouache on canvas.

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<sup>2</sup> The segregated education is the sharing of groups separated in classrooms according to their special need groups.

<sup>3</sup> The multi-functional resources are environments provided with equipment, furniture and learning and teaching

<sup>4</sup> Congenital or acquired deaf who use any oral language to communicate, orally, orally and facially, also called labial reading and/or writing and reading. [http://pt.wikipedia.org/wiki/Surdo\\_oralizado](http://pt.wikipedia.org/wiki/Surdo_oralizado) accessed at 25/03/2014.



**Figure 1: Pictures of children drawings.**

The last experiment was made with painting on canvas whose theme was free. For them it was not common this kind of work, because of this on the first day of the workshop there was some resistance by some students, but on the next class they were more comfortable to take part in process.

This experience was very rich for us, since it was an opportunity to understand in practice how they get in touch. It was the first time that we teach in Sigh Language<sup>5</sup>. Another important point was the exchange of knowledge that there was between deaf students and we, graduated in Visual Arts and learners in Sigh Language, because as Freire says, "who teaches learns to teach and who learn teaches learns to learn" (2007, p. 23 ). During the dialogues in Sigh Language we were delighted, because the language in Sigh Language is a language completely visual, communication was a series of drawings done by hand, using facial and body expressions. Like this, the classroom became a visual field of ephemeral drawings.

### **Results and discussion**

In the Primary Schools Regular Teaching there is not a specific discipline of Visual Arts, but the discipline of Arts which is Multipurpose, comprising four languages: Visual Arts, Theatre, Music and Dance.

According to the Law n. 9.394/96, they were repealed the provisions preceding and Arts and considered compulsory in basic education: "Teaching of Art will constitute compulsory curricular component, the various levels of basic education to promote cultural development of the students" (art. 26, § 2º). But there is another issue in relation to the teaching of Arts, which is the lack of specific training in the Arts for teachers of Basic Education. As example we cite the teachers of Arts of the active students in our workshop, which had no graduation in Visual Arts and in any other language of Arts. However, this problem is not particular of the School José Bezerra. The versatility of Arts discipline and lack of trained teachers in specific languages affect the cultural, personal and professional development of the students with or without special needs.

How art/educators we believe in the potential that the Visual Arts have. A well-done pedagogical project in Visual Arts provides a better cognitive cultural development, and a greater social integration. But unfortunately, because of the lack of this education, students and even teachers do not recognize the Arts as a field of knowledge and discipline Arts is understood only as a distraction activity.

### **Conclusions**

We observed that after segregation there was a significant decrease in the number of students enrolled in school José Bezerra de Menezes. For comparison, when we analyzed some data provided by the Resource Room, in 2009, last year of Special Education, there were 20 deaf students in segregated classroom. In 2010, period that begins the implementation of Inclusive Education, there were only 5 students enrolled in this school. Finally, in 2014, we there were only four students enrolled, there were in elementary school II and one was in high school. We concluded that the circle that forms during the

integration of family, student, performer, teacher, instructor and coordinator of the Resource Room is crucial for the learning and personal progress for the deaf student.

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## **The continuous benefits in education: The inclusion in question**

Celeste Azulay Kelman  
Federal University of Rio de Janeiro  
[celeste@kelman.com.br](mailto:celeste@kelman.com.br)

Rafael Teixeira do Nascimento  
Federal University of Rio de Janeiro  
[rafaelprofesor@yahoo.com.br](mailto:rafaelprofesor@yahoo.com.br)

### **Abstract**

This research reflects on the Continuous Cash Benefit (CCB) in Brazil, from the analysis of the criteria for granting the children and adolescents of a particular institution, philanthropic education, based on per capita income of the families involved. A bibliographic study was conducted on the first moment about the topic in question and then an empirical research in order to show the range of per capita income of families whose benefit does not meet the criteria for granting the BPC. The central hypothesis of the research is that the welfare program, although contextualized as social inclusion, turns out to have an ineffective role. In fact, it does the opposite, because this is not a cumulative benefit as other benefits paid by the Brazilian Social Security. Therefore, this program discriminates and limits the right of the citizen with less than eighteen years old to have access to the benefit. In order to gain the benefit, beyond the child's own exclusion it is necessary that her family is excluded as well. Thus, two exclusions are done and the individual is doubly victimized.

**Key words:** social exclusion, BPC, people with disabilities.

### **Introduction**

The welfare state, as a historical phenomenon in capitalism, is a mechanism to legitimize social rights. However, in the last decades the Brazilian political scenario changes, the society gradually suffered the impact of the consolidation of Financial Capitalism in the 80s.

The economy suffered severe concussions and high inflation rates and rights began to dismantle, which has greatly contributed to the aggravation of poverty and exclusion in the country. The culture of crisis (MOTA, 2010) has resulted in a confrontation of political expressions linked to neo-conservatism that came to dominate the state in its political and economic spheres. The Federal Constitution of 1988 provided care for people with disabilities and seniors. The regulation was made by Law, 8.742/1993 (Organic Law of Social Assistance - Invalidity) and BPC was established on January 2, 1996, in a context of economic restructuring misrepresenting the universal spirit of the law.

In the case of people with disabilities, it is characterized by being temporary, conditional on disability for independent life and work, due to anomalies or irreversible lesions of hereditary, congenital or acquired nature that prevent the development of activities of daily living (ADLs) and labor.

There is a problem here, because some disabilities do not prevent a person to accomplish what experts call ADL (feeding, dressing, small household jobs), but have a certain degree of autonomy does not mean that she is prepared to enter the job market. The elderly and people with disabilities to have access to the benefit, must certify per capita income less than one fourth of the minimum wage, initial requirement for entitlement to receive a monthly minimum wage for the time they demand it. Since it is temporary, every two years it has to be reviewed, in order to grant benefice.



Every other year the Ministry of Social Development reevaluates the benefit (CCB) through professionals of health: social worker and a medical doctor. They evaluate socioeconomical conditions, way of living of the beneficiaries and their families, stating that they are being "protected", and socially "included". Data from Ministry of Social Development (2012) show that currently the number of beneficiaries exceeds three million people, including older people, over 65 years old (1,3 million) and people with disabilities and other handicaps (1,7 million).

Social workers deal straight with low-income families who, for a survival strategy, decide to work informally, without receiving the welfare rights but receiving the social benefits of CCB, since wage and social benefit such as CCB are mutually exclusives. Thus, there is no coherence with beneficiaries because those who cheat the law are the successful ones.

The condition for both handicapped and older people to survive on an income per capita less than ¼ of the minimum wage indicates that this family is living in extreme poverty and without access to other public policies, such as health, housing and security. We may conclude that the system excludes undocumented persons.

Therefore we can see a mixed picture launched: access to social assistance should be regarded as a fundamental right, providing real participation of the poor in the political and social process characteristic of a democratic regime.

To discuss public social policies is necessary to have a look at how social relationships are being intertwined in Brazil. CCB aims to analyze the criteria for granting the disabled people ordinary lives but at the same time excludes part of these people. To achieve our object of study we made this research in the Association of Parents and Friends of the Exceptional children in Peabiru, located in a southern state of Brazil, Parana. This association is the Maintainer of Special School "Father Cristiano".

## **Method**

We used a qualitative methodology for field research, considering as a case study. We made an interview with open questions for the families of 15 students with disabilities. Of the fifteen respondents four were mothers and eleven were fathers. The small group of mothers is explained due to either they were the only adult in the house and then had to work outside or had to stay at home with their kids, giving support. In this case, fathers attended the interview.

Seventy-four students attend special school Father Cristiano. Only three of the fifteen interviewees said that are able to keep their child with disabilities without the help of CCD. Twelve other live in extreme poverty, without access to housing, food, and leisure.

The Father Cristiano School meets the following Sectors of Education, with their ages: Infant / Essential Stimulation (0-3 years), Children (4-6 years), Elementary (7-16 years) and professional, over 16 years.

In July 2006, the school was able to provide assistance in the area of health, the support of a multidisciplinary team aiming at the promotion, restoration and maintenance of health of students with disabilities and their families.

This team consists of one social worker, one psychologist, one speech therapist, one occupational therapist, one physiotherapist, one pediatrician and one psychiatrist. This team operates in full compliance of students with disabilities.

Main activities of Special School Father Cristiano

Give input to the processes of CCB;

Family and student counseling;

Scheduling medical care for the students;

A socio- educational work with families;

Mothers' Club, once a month, when various topics are worked;  
Prepare older students to get a job;  
Enable mothers to deal in daily life activities such as: home organization, personal hygiene;  
Promote family interaction with the school in partnership with other entities.

The main objective of Social Services is to act in the promotion and inclusion of people with disabilities and their families, when made vulnerable by poverty. The public social assistance attends people with monthly income of up to  $\frac{1}{2}$  a minimum wage or people temporarily in situation of economic deprivation, personal risk and / or social needs. This is the profile of the majority of families who are assisted by the entity. The Social Care acts to emancipation and empowerment of families, both financially and through the social inclusion process.

Technical support followed these families by providing mediation in the relationship between the family / school, enabling, ensuring and expanding access to existing social services in the community, as well as referral to the CCB.

Moreover, 59 of the 74 students duly enrolled, 80 % are receiving CCB, thereby providing the increased purchasing power of families and a better life. About 15 students do not receive this benefit because their families do not fit the criterion of per capita family income. Considering the number of students who have not benefited the CCB, because they do not fit the criteria income, we need to analyze the impact on families.

### **Results and Discussion**

There were three criteria involved to receive the CBB: have a disability, being assessed by a health service and per capita income. The fifteen families did not accomplish the last criteria.

The interviewees also reported that part of the family (a parent) is impeded from any work activity because the disabled child is dependent and needs constant care in personal hygiene, feeding, clothing and, above all, in health. There is no social support.

It is also worth mentioning that the purchasing power of these families is low and is insufficient to meet the basic needs of those in relation to clothing, footwear, adequate food, water, electricity, rent and medication, making the majority of these families live in debt.

Many live in a rural area, in favor, with no conditions to pay a rent. According to the interviewed families, CCB could contribute to improving the quality of life of the disabled person and her family.

### **Conclusions**

Families with low income and without CCB end living in the indigence line and reducing the human food needs. Based on this assumption we find the criterion of choosing who the ones that will benefit of CCB perverse are. Not all people with disabilities unable to work have access to the benefit due to the criteria for granting the per capita income is less than  $\frac{1}{4}$  of the minimum wage, which excludes a part of low-income people.

They also reported that are being prevented from exercising any kind of work activity due to the fact that a disabled person is dependent and require constant care in personal hygiene, to be nourished, dressed and other daily life activities.

It is also worth mentioning that the purchasing power of these families is low and is insufficient to meet the basic needs of those in relation to clothing, food, utilities, rent and medication, making the most of these and many indebted families living in the countryside favor by not having to pay rent.

### **Acknowledgement**

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## **Intellectual disability and literacy in Brazil**

Maria Marta Lopes Flores  
Federal University of São Carlos  
[mmlopesflores@brturbo.com.br](mailto:mmlopesflores@brturbo.com.br)

Maria Amelia Almeida  
Federal University of São Carlos  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

The question that guides this research is: children with intellectual disability enrolled in a multifunctional resource can improve standards of learning how to read and write? What are the difficulties to improve the level of literacy of these children? The overall objective is to understand from the perspective of resource rooms teachers which are practices of reading and writing developed with students with intellectual disabilities. The activities involved monthly meetings with multifunction resource room teachers and students attended in this space with reading and writing difficulties. All those meetings were taped and transcribed later. The data was analyzed in the bases of teacher's perceptions about children's literacy. The results demonstrated teacher's preoccupations about the acquisition of reading and writing skills in children with intellectual disability.

### **Introduction**

The question guiding this research is: may intellectual disabled children enrolled in Multifunction Resource Rooms improve learning standards in reading and writing? What are the difficulties to improve the literacy level of these children? The overall objective is to understand from the perspective of the speech of a resource room teacher which practices of reading and writing are developed with students with intellectual disabilities.

In Brazil, as in the world, we glimpse various measures being taken to put in o the principles of education for all. In the state of Goiás the model established to implement the policies of inclusive education is through the Multifunction Resource Rooms.

The question that guides this research is whether disabled children seen at the Multifunction Resource Rooms may improve learning standards in reading and writing. Is it possible to create a literacy space in these Multifunction Resource Rooms?

The overall objective of this study was to analyze, through teachers of multifunction resource rooms the teaching / learning about reading and writing skills in children with intellectual disabilities. Also, to investigate through the resource room's teacher's speech how they perceive / treat the issue of reading and writing skills of children with intellectual disabilities.

#### **Theoretical Framework**

The first and most important function of education is reading and writing (words and numbers). Reading is what drives families to bring their children to school. Today with the writing standard advancement, we have a world in which no mastery of reading and writing precludes the individual inclusion in society. Reading and writing is essential. Simple tasks like taking a bus, make a bank transaction, use a medicine properly are impractical if there is no reading domain.

A person who literates or have already being literated knows, that in the space devoted to building this knowledge, methods that can promote language acquisition are used. The fact of enhancing the sound

of the words associated with the letters opens to the literacy the possibility of using the child's speech as a function of reading and writing. Writing is still a difficult process even if we consider that the child needs to approach the logical thinking, making use of motor skills and then the written record of his memory standard. Thus writing requires concentration to perform an exercise to spell in the white pages, thoughts. These thoughts to be forgotten, helpless, left behind in a corner of memory, if not registered.

The two cases, in fact, are not exclusive: literacy requires the active participation of children in the written language world, dealing with very different text genres, so that you can gain experiences related to written culture of society; in the literacy process, the written code is systematically studied, so that the child can acquire the ability to recognize relationships between speech sounds and the letters that represent those sounds, in addition to acquiring phonological awareness, distinguishing units that form the words; this will allow him to decode (read) and encode (write). Which means, to develop the ability to transpose the oral language to writing (text author) (ANDRADE, 2010, p.6).

If on one hand the words spelling require a lot of who gets to join the letters world, the other is this exercise that gives importance (deserved or not) to a particular thought. Discard or take advantage of the thinking record at that exact moment, is a function of the own writer. But to "enjoy" the thought is necessary that the individual holds the codes and records knowledge of which can and should be considered important. And record what goes through the minds and that is named thinking/ knowledge. Reading is the ability to extract the pronunciation and meaning of a word from graphic signs. [...] Read implies, above all, the ability to identify a word. The reading purpose is the comprehension. The literacy purpose is to help children understand what they read and develop strategies to continue reading independently. [...] We read to understand. The reading purpose is comprehension. But reading is not the same as understanding. We can read without understanding. We can understand without reading. (BRAZIL, 2003, p. 22-23).

Thus the value of writing exceeds when recording and copying materials in school, performing tests, demonstrating studies and knowledge. The writing is first a record of events, thoughts and ways of seeing the world around us. To pass the values and notions of nation writing is essential. The more literate a nation is its culture must be richer and spread its values, ethical, moral and racial, because it's in the written record, in the writing reading that best propagates the "modus vivendi" of a nation.

## **Methodology**

The research was held within the Special Education National Observatory. The methodology proposed in this research is the collaborative research. This research was developed at ONESP, Goiás Special Education Observatory, which is coordinated nationally by the Professor Enicéia Mendes and regionally by Professor Dulceria Tartuci. The ONESP main objective is to study Multifunction Resource Rooms functionality in Brazilian 18 states. The year of 2013 was the 3rd year that the research is being developed.

We began the activities in a monthly meetings basis with teachers who worked with the inclusion in state regional education of Catalan city. In Goiás, two specific actions marked the inclusive education policies: The Multifunction Resource Rooms creation and the placement of support teachers to work/stay with children with disabilities.

The people involved in the research are the multifunction resource room teachers and students attended in this space with reading and writing difficulties.

## **Results and Discussion**

To the Multifunction Resource Rooms teachers were tasked to write about literacy.

It is clear in their speeches a simplification of the literacy concept, as if any initiative consisted in literacy. This speech shows the lack of knowledge / training of the teacher in relation to the Portuguese language processes.

Except 1 "Literacy is ... I think the people in the resource room is to take the child to learn how to read and to write within the possibilities she has because each one are different, each one ill learn one way, then we have to respect their limits "

We realize that in this speech the teacher considers the possibility of teaching students how to read and to write. Also considers the issue of different learning rates for children with intellectual disabilities.

There is among teachers a conceptual confusion in distinguishing between what is alphabetization and literacy. To Magda Soares, an alphabetized person is one who can read and write. The literate person not only knows how to read and write, but socially uses reading and writing, and the practices and responds to social needs of reading and writing. Thus, we consider ideal the fact that the children to be literate, but we understand that if the child decodes letters and sounds, then this is essential to become a literate being.

But there are those teachers that tell about a hard work dedicated to literacy activities. They feel very uncomfortable when students are just copyists. This is because they have knowledge that is not enough to copy. You must read and understand what you are reading.

Except 2 I have a student that he is now eighteen years old. He went to a job interview and was frustrating for him because he did not pass. The student should not stay only at school. He wants to work ... he is not different from the others; they want to have their own money ...they want to work... they want to live this experience too. So my student went to this interview and it was so frustrating for him because the person who interviewed him told he did not pass because he couldn't read and write.

The issue of not retaining students that cannot read and write is still one of the nodes of inclusive education in Brazil. There is a resistance by teachers to approve the student without being able to read and to write. On one hand they recognize that there is no contribution to leave the student in the same grade without advancing and with the same teacher. On the other hand, just let him go without learning also does not contribute to his life. The fact of young man or woman be interested in the labor market, further complicates this teachers dilemma. After all if he is already 18 years old should know how to read and write...

Another issue that arouses is that it's not enough creating an acceptance pattern of a disabled child in school only. Society as a whole must be inclusive. And being inclusive means that this society should suit the disabled needs and not the reverse. Deficiency exists, it is in society, we cannot ignore it and neither "fix", "cure". It is not the disabled that should suit society, but rather the reverse. The labor market must perceive the work of the disabled as an important gain for society. After all they do not want to be "dead weight" neither to their families and nor to the government.

Except 3 what happens when that student is in the back of the classroom? I ever went there and asked the student to be closer to the teacher... right? And it doesn't work ... the next day, he is back there again.

This is a frequent complaint among teachers that work with students with disabilities at school. Both teachers of resource rooms and support teachers are always saying that the ruling class teachers do not consider important to teach disabled children. In the classroom with the other students he/she gets the invisibility standard. Especially if the disability is not visible, mainly if he is a student who does not bother and does not cause disorder. Being put aside as incapable, as the one that does not learn is a common attitude by the classroom teacher who often does not know "how to deal" with that child.

But it also needs to be said that this occurs with other children who do not have any disability diagnosed. The Brazilian public school system allows this to occur since we have overcrowded classrooms, teachers underpaid and often quite tired, and know a little about their students on a daily basis.

The fact of resource teachers consider that students with intellectual disabilities are able to learn how to read and to write should be considered a gain for inclusive education. Without this premise little or nothing can be done at school. Believe in that potential is the first step towards the inclusion actually to

happen at school. The fact of seeking alternatives forms, re-plan, and insist that children learn is very important for success in literacy of children with intellectual disability.

### **Final Considerations**

When considering that children with intellectual disabilities should be included also considers that they are able to read and write since school exists from the literate culture. Then, including the child is to offer her reading and writing mastery. And in this endeavor the teacher and his look is essential. It is him the classroom teacher... the resource teacher and multifunction resources room teacher who actually makes the difference in the school life of a disabled person, although the whole school need to think about inclusion.

By contrast, the fact that the student learns how to read or to write makes the difference in the child's life whether disabled or not. Literacy must be the goal for teachers who try to make school inclusion. Equip them for this is just the task beginning so the importance of literacy. But the task does not end there... it's necessary to enter to the letters world so that the child can actually be included at school and in the society! And it is also a task of the multifunctional resource rooms' teachers.

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## **The neoliberalism and the specialized educational service in Goiás**

Maria Marta Lopes Flores  
Universidade Federal de Goiás/Campus Catalão  
[mmlopesflores@brturbo.com.br](mailto:mmlopesflores@brturbo.com.br)

Dulcéria Tartuci  
Universidade Federal de Goiás/Campus Catalão  
[dutartuci@brturbo.com.br](mailto:dutartuci@brturbo.com.br)

### **Introduction**

Mercantilization and globalization were ways that capitalism found as possible solutions for the production model crisis moments. Oliveira (1995) indicates the end of the 1980s as the landmark to solve the paradigms crisis. The Social Welfare model collapses and gives rise to the most competitive model based on marketing and competition laws. In this model of society education is understood as merchandise, supplies, something that can and should be sold and currency valued. Developing countries are at a disadvantage place if we consider the global geography. International bodies such as Bird, BID, World Bank, "call the shots" for the changes in education and thus also dictate what should be done about inclusive education (GENTILI, 1999).

The people with disabilities social inclusion, comes as a possible entry into the capital world. The business operates in two distinct possibility lines on disability, on one hand, this guy is a potential consumer of goods and services; on the other hand is the possibility of entering as an active citizen, works, produces and no longer is "dead weight" to the society. Thus there is incentive for disabled people to enter the labor market and become productive citizens.

The education of people with disabilities appears, in this capitalist globalized world, as the possibility of leveling the relationships between people. Education in this context becomes an element able to reduce or make the difference invisible. The equality and diversity discourse affects the population as something natural, normal, human. In this perspective, to consider that we are all different, is to disregard the disabilities in their various forms, they need attention and care, to receive resources and attitudes that actually make a difference in the wheelchair life, the blind, the deaf or the intellectual disabled. However, put them in the same bracket is to deny them opportunities for differentiated services that would enable them to better living conditions.

In this sense the policies proposed by the World Bank meet the guidelines for special education, as the mercantilization and globalization seek a flexible decentralized model for education in developing countries. "This new school organization reflects a model of educational regulation produced by the new articulation between global demands and local responses" (OLIVEIRA, 2007, p.356).

If on one hand the funding and services decentralization can benefit the committed districts by the cause, do their "homework", mostly state and local governments are more concerned with maintaining the status quo, theirs and of their parties, in their national political agenda. Especially because there is a commitment of these characters with the various business segments that finance their political campaigns, to receive favoritism in moments after the elections. This political movement affects investment sectors, which certainly will not be the beneficiaries by the social action policies included in this block, the health, the education and the social assistance. If education can be understood as a mainspring for equivalence and improvement of the individuals social status, on the



other hand we have a flurry of interest facing the front of it, since it does not have the same bargaining power in the political game.

Thus, this work brings in its genesis in the following question: What is the relationship between the globalization and internationalization process of the national capital and the centrality that the specialized education treatment in multifunctional feature rooms has assumed as Special Education service? To attempt answering this question we intend, in this work, to make some discussions on the relationship between financial resources and inclusion, as well as discussing the elements that characterize the mercantilization of inclusive actions through the difficulties pointed out by the teachers in relation on the feature rooms functioning.

### **Method**

This work was born from the reflections in the inclusion educational policy field and focus the collective interviews analysis done at the Catalan Special Education Observatory (Oceesp) / Goiás Special Education Observatory (Ogeesp), linked to the National Special Education Observatory (Oneesp) nationally coordinated by Professor. Enicéia Gonçalves Mendes. The Oneesp research aims to evaluate the multifunction feature rooms implementation in Brazil and have as operation axle of these rooms, teachers training and assessment of their students.

Selected excerpts are those that have direct relationship with government actions, mercantilization, lack of human and material resources. Anyway, subjects that establish a direct relationship between inclusion, financing and neoliberal policies.

### **Results and Discussion**

Goiás government has been putting itself as a neoliberal government, since taking over the state direction in 1992. Conduct a decentralized management in the school actions and focused on resources rationalization and labor economy has been a common practice in the actions of this governor. We can verify the following statements governmental actions that aim the resources reduction of inclusive education policies, especially in reducing workload of teachers from multifunction feature rooms, decreasing their recovery and inferiority of their workforce.

Except 1: But it was... all life was very hard work because it was a work from ... from our interest, understand? From our resources. Because actually it came around and stopped. Because when INES found out that the material was not being used ... so what happened? It did not send the remaining resources to the room (Teacher Isabela).

The funding issue reaches the direct operation of special education services within the regular school through the lack of teaching materials and Assistive Technology resources. Another restriction form is coming through the work conditions of teachers who work with the special education students. The lack of instability in the teaching career of teachers working with this type of education has been a problem that affects the work and life of these professionals.

In addition to the payment conditions affecting teachers, another issue that has been pointed out frequently is the role changing of these multifunction feature rooms teachers, which initially had a larger work in school with professionals from common classes, coordinators and school community, and shall direct their action to the exclusive service for target students of special education in these rooms. What is pointed out by several teachers, or as according one of them say "Resources teacher made... And he was heard and was respected". The teachers feel the mercantilization effect and investments reduction and in the everyday life actions of students with development global disorders, disabilities and high ability or giftedness.

Except 2: So ... with great difficulty ... it is a case I think it's tricky because he does not have a teacher to stay with him, right ... He has passed the screening... all that was necessary was done ... we didn't get that person to stay with this child. And the teacher that is there ... is a contract teacher ... will only stay for one year. The service there with me in the feature room is also so little ... it's not a lot (Teacher Erica).

The teacher in her report highlights the fact that the common classroom teacher of regular network is not an effective teacher, suggesting the absence of training and she will also be overridden later. Moreover, points out that the target students of special education don't have under the common classroom the inclusion support teacher. This support is a service designed by a special education teacher for every classroom that have enrollment of these students, which adds to the lack of proper care these needs, especially those with more severe motor and intellectual disabilities. The fact that the teacher does not have an effective contract to act generates professional turnover and this fact undermines the student's attendance.

However, for the inclusion happens in a satisfactorily way a team responsible for many needed assistances to provide conditions of schooling for students with development global disorders and high ability or giftedness, is required. The teacher is a key part of that inclusion, which does not mean that there is no need for other professionals from other areas, a multifunctional team with psychiatrists, psychologists, speech therapists, physical therapists, which can enlarge the possibilities of including these students. However, the responsibility for inclusion has been directed to the teachers, whether the support teacher, the classroom teacher or multifunction feature rooms teacher.

On the other hand there is also the fact that many parents "make use" of their children disability to get an extra income at home. This can be confirmed by the teacher's report.

Except 3: I had a mother ... the father worked in mining ... and she just went to a doctor here in our city ... that ... is ... for ethical reasons I will not be giving more details ... and this doctor provided and she did everything... and this doctor gave a report on behalf of her husband receiving one more... and the boy ... the boy should... at S [special school name] he could not be at regular school... and so she took the boy and put him there, inside the S [special school name] ... it was a fuss at the time ... was ... you must see what horrible thing ... because she took and stayed, and she receives ... the father receives a salary more because of this child... all this if... the father ... the parents explore what they have ... (Teacher Isabela).

It is noteworthy that there are several issues that have been discussed in relation to policies that assist people with disabilities, such as quota laws in companies that encourage hiring these people, the benefits received by parents, among others. However, this is still a field that requires a lot of study, but it is clear that in many cases, parents preferred to take their children away from the labor market afraid of losing their benefits, since these could lose their jobs and consider that put them in the labor market would be a way to expose their children to the others prejudice. This condition should have been overcome by amending legislation, but parents keep afraid of that. It should be emphasized that it is through work that the employee may earn a salary, although it is not worthy. However this is a complex discussion involving many aspects, but we could not help but point out that this is an element of today market relations involving people with disabilities.

In a world controlled by the capital power what makes things happen is the payment for goods and services. No payment no autonomy. And this fact invariably leads governments to a lot of speech and very little action, since the action does not lead to the investments needed to make the actions happen.

### **Final Considerations**

Inclusive education in Goiás has sought to meet the economic neoliberalism principles proposed worldwide. If education as a whole has been suffering with the teaching market mercantilization, inclusive education suffers doubly. As minorities education and as equal treatment for those who are obviously different.

It is also important to note that Goiás government has acted to remove the stimuli for the special education teacher's permanence in their locus of work. By reducing the payment through the amendments made in the working hours, reducing the time dedicated to the development and not encourage them to qualify themselves the government realizes resources economy and worked hours optimization, and does not worry with the inclusion of global development disorders students, disabilities and high ability or giftedness.

Apart from the issues relating to relationships funding and mercantilization at the macro level, we also have internal organization issues within the school. I dare say that attitudinal accessibility is one of the most complicated barriers to be "broken". Teachers, school professionals and governments need to believe in the possibility of this child learn school knowledge. The school plays an important role, and seeks alternatives and resolve adversity have been a constant exercise in the teachers lives.

There is urgent need for the creation of social movements able to oversee government action to ensure disabled people or not of a quality education. Quality understood here as skilled and well-paid teachers, school satisfactory physical structure for teachers / students and autonomy in the school works conduction.

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## **From law to practice: Support measures in São Paulo public schools**

Renata Flores Tibyriçá  
Universidade Presbiteriana Mackenzie  
[rtibyric@gmail.com](mailto:rtibyric@gmail.com)

Maria Eloísa Famá D'Antino  
Universidade Presbiteriana Mackenzie

### **Abstract**

The Convention on the Rights of Persons with Disabilities, which in Brazil has the same status of constitutional law, and Brazilian laws stipulate that public authorities must ensure support measures to provided full inclusion to students with disabilities. In practice, complaints of violations of the right to education received by Public Defender's Office of the State of Sao Paulo demonstrate effective individualized support measures are not provided properly to students with disabilities, preventing inclusion in public schools

**Keywords:** support measures, special education service, public schools

### **Introduction**

Convention on the Rights of Persons with Disabilities (Article 24, 2, e) stipulates that States Parties shall ensure effective individualized support measures are provided in environments that maximize academic and social development, consistent with the goal of full inclusion. Brazil ratified Convention by legislative procedure and gives it status of constitutional law.

Brazilian Federal Constitution (article 208, III) stipulates that is duty of the State to ensure "special educational service to persons with disabilities preferably at regular schools". According to Federal Constitution the rule is persons with disabilities must receive special educational service preferably at regular school and only exceptionally at special education schools.

For implementation of goal of full inclusion were published Decrees and Regulations at the local, state and federal levels with the purpose to ensure essential supports to persons with disabilities.

Presidential Decree number 7611/2011 was issued to deal specifically with the right to education and special educational service and provides, among its principal guidelines, the same which is provided at the Convention, or in order words, individualized and effective support measures in environments that maximize academic and social development, consistent with the goal of full inclusion.

In this Decree was provided technical and financial support from Union to States, Municipalities and Federal District to implement guideline about individualized and effective support measures. This technical and financial support is to improve special educational service, establish classes with multifunctional resources, ensure continued education for teachers, ensure training for managers, educators and other professionals to inclusive education view, adequate school buildings architecture to accessibility, produce and distribute educational resources to accessibility; and structure accessibility cores at federal institutions of higher education.

In São Paulo State there is a resolution number 11, adopted on January 31,2008 by Secretariat for Education which provides Specialized Education Support Service to improve the quality of special education at state schools. The implementation of this Service will occur in a class with particular resources and with a specialized teacher in a different period that occur regular classes.

In São Paulo City there is a Mayor Decree number 51.778, adopted on September 14, 2010 which deals with the policy of special education service. This policy aims to ensure the education of persons with disabilities at local schools. The Decree establishes the identification of persons with disabilities by local authorities, the increase of actions of specialized education support, the offer of continued and specialized education for teachers to work with special education services, the remove of architectonic, physical, communication, school curriculum and transportation barriers that prevent persons with disabilities to take part in school activities on an equal basis with orders and the the offer to persons with disabilities intensive support of locomotion, food and hygiene to take part at school activities.

But, between law and practice there is a moat.

Complaints of violations received by Public Defender's Office of the State of Sao Paulo allow reflecting about support measures that are provided to students with disabilities and how lack of support or inappropriate provision contributed to insuccess of inclusion in São Paulo public schools.

The chart below shows the reasons that take people to Public Defender's Office and allow to identify complaints of violations of education right that were received. It was created from a sample of 50 subjects with autism spectrum disorder whose parents went to Public Defender's Office from July 2010 to December 2013.

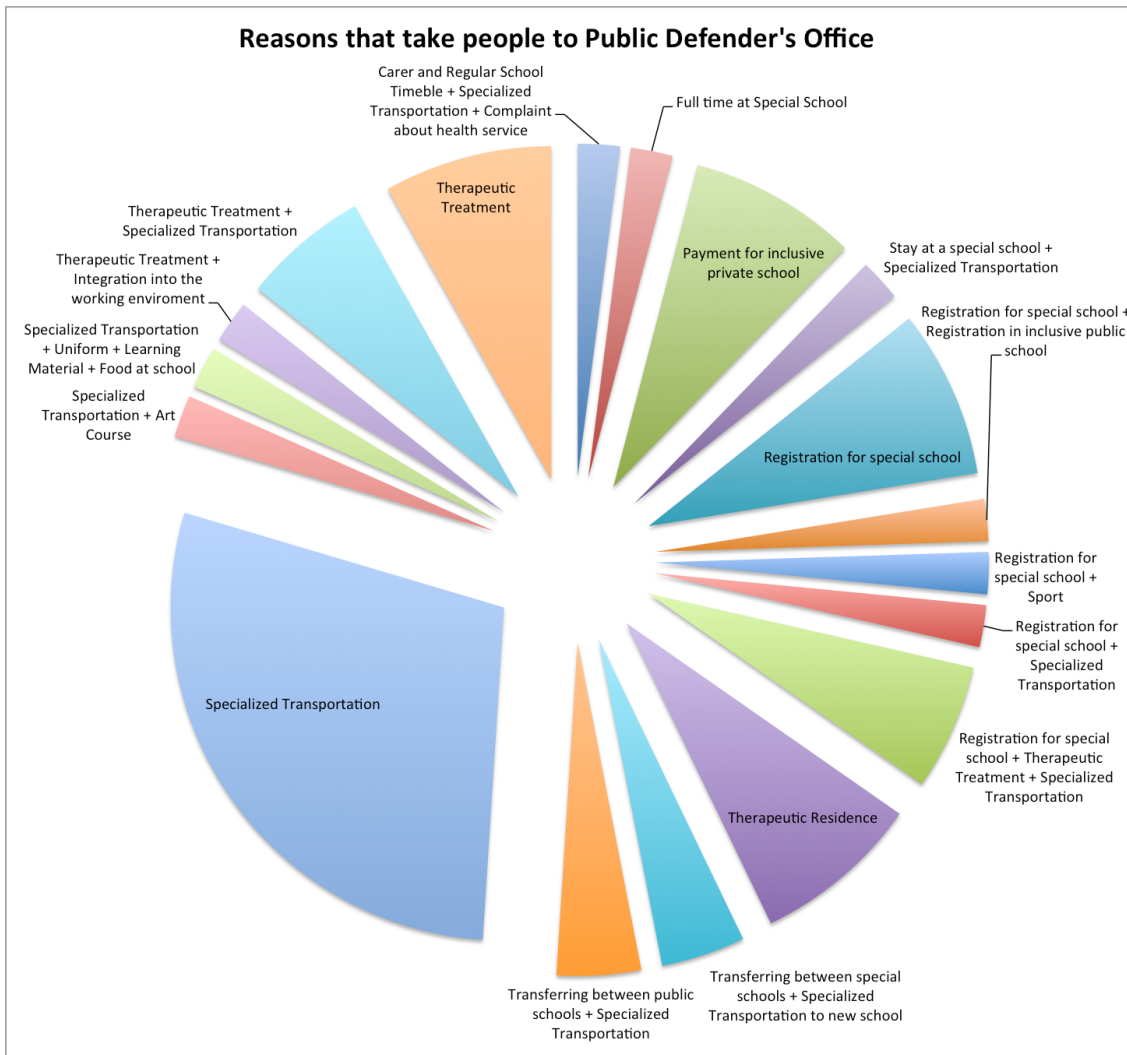
The chart shows almost 30% of people came to Public Defender's Office because there is no specialized transportation to schools which indicates dissatisfaction with support measures available to persons with autism spectrum disorder.

A parent came to Public Defender's Office to request specialized transportation together with art course (2%) e other parent request specialized transportation, uniform, learning material and food at school (2%).

Around 20% came to ask for registration for special schools alone or together with support measures like specialized transportation or together with therapeutic treatment or together with sport. There is a case (2%) that parent ask for registration for special school together with registration for a public inclusive school. In this case the double registration, which is possible in Brazil, but does not happen frequently, would ensure specialized school service for the child.

8% of parents came to Public Defender's Office to request payment for inclusive private school because public schools do not have support measures.

Apart from that requests of persons with autism spectrum disorder, there are parents of persons with disabilities that came to Public Defender's Office because of physical injuries and death of their children. These injuries and death were caused because there are no support measures; especially there is no career for every persons with disabilities in local and state schools in São Paulo.



**Figure 1: Reasons that take people to Public Defender's Office.**

In the case of child death because there is no career at school, father came to Public Defender's Office to ask for a compensation for moral damages against São Paulo State. In the cases of physical injuries, parents came to ask for payment for inclusive private school or transfer between special schools. Several complaints received by Public Defender's Office of the State of Sao Paulo demonstrate many public schools, which have students with disabilities in their classes, are not providing effective individualized support measures and students cannot bear their difficulties in general education system. In fact, teachers have no appropriated training to work with special needs of students with disabilities; there is no career at school to help them with daily life activities, no support to parents to contribute to education of their children, no specialized transportation and many others.

Although there are several laws and regulations to ensure inclusive education, parents are forced to implement right to education and contributing with the goal of full inclusion, constantly to consult organs of justice system to notify Public Authorities to provide effective individualized support measures which must be available at schools. Sometimes it works, but in many cases it is necessary to file a lawsuit in Brazilian Courts to ensure right to education of students with disabilities.

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## **Students with giftedness and disability: The Brazilian educational policies**

Rosemeire de Araújo Rangni  
Universidade Federal de São Carlos – UFSCar  
[rose.rangni@uol.com.br](mailto:rose.rangni@uol.com.br)

Maria da Piedade Resende da Costa  
Universidade Federal de São Carlos – UFSCar  
[piedade@ufscar.br](mailto:piedade@ufscar.br)

### **Abstract**

In recent years, specifically after 2001, the legislation has been emphatic to provide special educational services for gifted students. However it's noticed that the legal recommendations don't reach the students. The students who have indicators of giftedness and disability (Twice Special Educational Needs – TSEN) find more difficulties to be provided in their special needs. Among the barriers to provide the educational services are: the public policies contemplate the disable students instead of gifted; there are few programs for gifted students in Brazil and they practically don't have disable students; there is scarce of educator's formation to identify the students. So, This paper aims to show the Brazilian educational policies about the services for the students with TSEN - giftedness and disability based on the Brazilian educational legislation as “Política Nacional de Educação Especial” (1994), “Lei de Diretrizes e bases da Educação Nacional” (1996), “Diretrizes Nacionais de Educação Especial para a Educação Básica” (2001), “Política Nacional de Educação Especial na Perspetiva da Educação Inclusiva” (2008), and “Atendimento Educação Especializado” (2011). Also, This paper was based on the field literature. The method was bibliographical and documental. The results were: The legislation is enough to provide special services but there are few programs for the gifted students with TSEN.

**Key words:** Special Education, Twice special educational needs, Policies

### **Introduction**

Many discussions are made in the Brazilian educational system about de inclusion of students since the Salamanca Declaration, in 1994. We realize that the aptitudes or actions from the public policies only occurred in 2001 with the outstanding legislation called “Diretrizes Nacionais de Educação Especial para a Educação Básica” when started an effort to include those students. But it was noticed also the major interest from de Special Education service centered in students with disabilities practically forgetting the gifted ones.

In those terms, it began the provisions in categories of needs, exception for multiple disabilities as considered a category in the Brazilian policies. With the advances of the laws, the orientation for the provisions for gifted maintained without significant results. In case of twice special education needs – TSEN –, giftedness and disability the situation, is more complicated because the system focuses or in disabilities or in giftedness and not for both possibilities.

So this paper intends to show the Brazilian educational policies about the services for the students with TSEN - giftedness and disability based on the Brazilian educational legislation as “Política Nacional de Educação Especial (1994), “Lei de Diretrizes e Bases da Educação Nacional” (1996) “Diretrizes



Nacionais de Educação Especial para a Educação Básica” (2001), “Política Nacional de Educação Especial na Perspectiva da Educação Inclusiva” (2008), and “Atendimento Educação Especializado” (2011).

### **Method**

The method performed in this paper limited in the documental research in the Brazilian legislation of Special Education since 1994 to 2011. It was named five documents that are considered significant to analysis. Also it was bibliographical researched in the field literature to base on it.

### **Results and discussion**

The researched time, 1994 to 2011, was released five important laws which influenced the provision for the special students. The first one is about the orientation of national policy in 1994 called “Política Nacional de Educação Especial”. This document came in the year of Salamanca Declaration that Brazil took part in it. Spite of inclusion orientations at Salamanca, the named law privileged the concept of integration that the students should adjust the system; not the contrary (Carvalho, 2004). It’s important to point out that the special needs were divided in categories, however the orientation are explicated the possibilities of the TSEN (p. 53).

The second law was the “Lei de Diretrizes e Bases da Educação Nacional”, in 1996. This law guided all the education. For the first time, that legal document showed a chapter (V) about the special education. The gifted were contemplated in the article 59º that say the education system will provide special education who presents superior potential and acceleration to finish the studies.

The other legislation was “Diretrizes Nacionais de Educação Especial para a Educação Básica” (2001). This one is considered the outstanding orientation because presented the concept of inclusion after seven years of Salamanca Declaration, in 1994. In terms of orientation for the services for gifted students was emphatic bringing de definition for them and using the terminology “high abilities/giftedness”. It’s important to say that the terminology and concepts and definitions for those students are very polemical and Alencar & Fleith (2001), Sabatella (2005); Rangni & Costa (2011) considers that there won’t have consensus in a short time.

Based on the law with inclusion orientation named before, after fourteen years, Brazil have other National Policy, “Política Nacional de Educação Especial na Perspectiva da Educação Inclusiva”, in 2008. It gives the understanding about inclusion however only points out the groups to receive the services as students with disabilities, development disturbs, and giftedness. It doesn’t mention for TSEN.

The last one researched for this paper was the Decree 7.611, in 2011 “Atendimento Educacional Especializado” which treats de service for special students. This document shows the obligation for the provision and maintains the target of the three groups as the National Policies indicated in 2008. Still, it mentions the double enrollment for the students who present special needs. This means the public money passes for the school systems to provide services. The document doesn’t guide for the students to be in the TSEN in other words it should reveal the possibility of thrice enrollment.

### **Conclusion**

When we discuss and reflect about the gifted students in Brazil immediately we go to the policies of special education that haven’t guaranteed the service for that group of students. Observing the legal documents, it’s possible to note that we have consistent law but the results aren’t positive. That is explained when we verify only 13.000 enrollments in 2012 in all the schools. The enrollments are low if they are compared with the total of students about 50 million in Brazil.

In this context, we verify that there is indifference from the special education service for the gifted students and there is a limited perception for the students with disabilities and other special needs because those students aren't seen and recognized in their potential causing the exclusion. This way it required better educator's formation to indicate those students.

It's important to say that the most few programs and service for gifted students in Brazil are by private initiatives.

So, we expect this paper contributes to call the attention for the possibility of TSEN, giftedness and disability.

### **Acknowledgements**

We acknowledge the existence of the gifted individuals with and without disability, recognized or not by the school system in Brazil because they are the reason of this reflection.

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## **Advancing postsecondary inclusive practices by examining identity**

Yeana W. Lam

University of California, Santa Barbara  
[ywong@education.ucsb.edu](mailto:ywong@education.ucsb.edu)

Mian Wang

University of California, Santa Barbara

### **Abstract**

Although services are typically available to college students with invisible disabilities in the United States, some students choose not to access supports or to reveal their disability status due to disability-related identity properties. Semi-structured interviews were conducted with 10 students with learning disability and AD/HD. Findings indicated that disability identity dimensions (i.e., significance and meaning of disability) affect disclosure and support-seeking behaviors. Implications and recommendations for more inclusive disability service policies and practices are discussed.

**Keywords:** identity, disclosure, accommodations, invisible disabilities, postsecondary

### **Introduction**

The number of students with “invisible” disabilities, such as learning disability (LD) or attention deficit/hyperactivity (AD/HD) is increasing in postsecondary education settings in the United States (Cooperative Institutional Research Program, 2011; Wolf, 1999). Many of these students are eligible for accommodations and services (Cawthon & Cole, 2010), but postsecondary institutions are not legally mandated to identify students with disabilities who need additional academic support. Students are put in a position to make the decision to either withhold their disability status or to reveal that information. College, therefore, presents an opportunity for identity formation and negotiation for students with invisible disabilities (Olney & Brockelman, 2003; Taub, McLorg, & Fanflik, 2003).

Although there is evidence that these types of supports are associated with better test scores (Lewandowski, Cohen, & Lovett, 2013; Runyan, 1991), better grades, and higher graduation rates (Troiano, Liefeld, & Trachtenberg, 2010), only about 35% of students with disabilities in the U.S. report their disability to their college, and only 24% of college-going youth access accommodations, modifications, or services (Newman & Madaus, 2014). Researchers believe that helping students become more self-determined and more aware of their own strengths, needs, and legal rights will lead to more accommodation requests (Newman & Madaus, 2014). They also conjecture that the students’ disability-related self-perceptions may affect their choice to seek support (Newman & Madaus, 2014), yet there is limited research in this area. The study presented in this paper addresses the major research question of how factors associated with the identity of college students with invisible disabilities influence students’ disclosure and support-seeking behaviors.

In this paper, the Multidimensional Model of Racial Identity (MMRI; Sellers, Smith, Shelton, Rowley, & Chavous, 1998) is adapted and employed as a framework for understanding the significance and meaning that individuals attribute to their disability identity. Although the model was created to explore racial identity for African Americans, some dimensions of the MMRI were derived from models pertaining to identities non-exclusive to race (e.g., gender, occupation, ethnicity, etc.; see Luhtanen & Crocker, 1992; Phinney, 1992). The strength of this model is that it addresses universal

aspects of group identity and also allows for modification to suit the historical and social realities of specific groups.

The first two dimensions of the MMRI, centrality and salience, speak to the significance of the group identity to the individual, with centrality referring to the degree that the individual typically defines oneself as a member of the group and salience indicating the centrality of the identity in response to situational cues. The dimensions of regard and ideology explore the meaning of being a member of the group. Regard tells how positively the individual feels about his or her racial identity and also how positively he or she thinks others feel about the group.

The last dimension of MMRI is ideology, or the beliefs the individual holds about the group. Sellers et al. (1998) warned that the qualitative meaning of group membership is particular to the social and historical experiences of that group. As a result, the MMRI model must be adapted to describe the philosophies associated with disability.

Two major schools of thought about the definition of disability have emerged over the decades: the medical model and the social model of disability. The medical model that dominates the field of special education emphasizes the functional limitations and deficits within the individual. In contrast, the field of disabilities studies promotes the social model of disability. Against the tenet of the medical model that locates the impairment in an individual, the social model probes the cause of an individual's limitations in the environment (Oliver, 1996; Rembis, 2010). According to the social model, discriminatory social arrangements and physical barriers restrict the freedom and capability of people with disabilities. These two definitions of disability serve as opposing philosophies within the dimension of ideology in this adapted framework of the MMRI.

Sellers and colleagues (1998) also found that different combinations of these dimensions can produce vastly different ways African Americans act and behave. These dimensions could also play a role in whether postsecondary students with invisible disabilities disclose their disability and gain access to resources and accommodations.

## **Method**

We conducted a semi-structured interview study with 10 college students, ages 18 to 25, with LD, AD/HD, or comorbid LD and AD/HD. All participants had identified themselves as students with disabilities to their campus disability services office. Participants were of diverse ethnic backgrounds (two African American, one Latino, one Middle Eastern, and two multiracial students). The interview protocol included general, open-ended questions that relate to the topics of identity, disability identity, and disability disclosure and services. During the interview, we asked additional follow-up questions to elicit more in-depth responses from interviewees. Once the interviews were transcribed verbatim, these type-written transcripts were sent to participants to provide them the opportunity to clarify any mischaracterizations.

Using Attride-Stirling's (2001) thematic networks analysis approach, we first identified lower-ordered, basic themes in the interviews based on recurrent topics in the text of the transcribed interviews. These basic themes (e.g., happens casually, discussing AD/HD in class) represent discrete ideas from the transcriptions. Then, organizing themes were generated to find relationships and to make sense of basic themes (e.g., casual disclosure, "straight up" disclosure). Finally, super-ordinate global themes were formed to group the organizing themes (e.g., disclosure) and to address the major research questions. This paper will focus on one of the global themes: the influence of disability identity on disclosure and support-seeking behaviors.

## **Results**

Students' self-perceptions in relation to their disability can be described by several dimensions relating to the following organizing themes: the influence of salience, regard, and perspective. From participants' responses, these aspects of disability identity appear to have consequences for their behaviors concerning their disability.

Most interviewees did not find disability to be a central part of their identity, but they did, at times, find their disability salient. Six students conveyed that they were more likely to disclose to others if the situation made their disability pertinent. Some students described the delicate balancing act of managing their identity and their work, preferring to keep their disability status to themselves until they felt their class or their job was too difficult to handle without the use of available accommodations. Students also described contexts that enabled them to share their disability with peers. For example, students were more apt to reveal their disability status when others disclose that they have a similar disability.

To participants, disclosure is mostly dependent on their perceptions of others' regard for their disability, particularly whether their peers will think poorly of them. Eight of ten participants mentioned this aspect of disability identity as crucial for deciding whether to reveal their disability. For instance, one informant feared that misinformed peers would think that he is "retarded or something" after disclosure. However, two participants admitted that there may be some advantages to disclosing their disability to certain peers or instructors based on how they think others feel about their disability on a case-by-case basis. One mentioned that telling his professors about his disability can have a positive effect: "They kind of become more, oh, nicer to you." In both cases, the participants perceived that their relationship with their instructor would improve because their professors understand them or empathize more with them after knowing about their disability. The informants' beliefs and perspective about their disability were another important factor in whether they disclosed. The starkest example was the contrast in one student's description of his AD/HD versus LD. He viewed his AD/HD as "common" and functional ("good awareness of your surroundings"), whereas LD was a "handicap," something that "inhibits." These ideologies translated to whether he discussed his disabilities with others. He could tell peers "straight up" that he has AD/HD, and yet he tended to hide his LD.

Since disclosure is a necessary intermediate step in accessing formal and informal types of support, much of what students mentioned for disclosure also applied to accessing resources and accommodations. There were a couple ways that the dimension of regard was directly associated with support-seeking behaviors. Five of the interviewees spoke about their initial negative feelings about being identified with having a disability and how those feelings related to their views on getting accommodations, services, and help. Often, these perceptions of their own disability were motivated by the attitudes and actions of others. One student found that when others viewed her disability negatively, her attitude about her disability echoed that negativity, whereas when she perceived a more positive climate concerning her disability, she became more comfortable with her disability and with getting assistance. Additionally, some students found that they independently developed a more accepting attitude toward their disability and toward accessing support over time. A few participants shared stories of feeling embarrassed about getting help for their disability in their younger years and then later, learning to welcome the help, which suggests that emotional growth may have played a role.

### **Discussion and Conclusion**

Services, accommodations, and psychosocial support can make a difference in the academic success of students with invisible disabilities, but there are insufficient research findings that suggest what self-concept structures bolster willingness to reveal disability status and to seek help. This study takes the first step in addressing this gap by collecting qualitative evidence about the dimensions of disability

identity. We found that the significance of disability to the student, the students' own philosophies and feelings about disability, and their perceptions of others' beliefs about disability help shape disclosure and support-seeking behaviors.

While this investigation is exploratory, its implications may direct practitioners and policymakers to develop more effective strategies to facilitate the inclusion of college students with invisible disabilities. Given our results, it behooves decision-makers to continue creating policies and implementing practices that enhance campus climate for students with disabilities, especially for those with invisible disabilities who may not readily seek help. Postsecondary institutions could be responsible for implementing practices that motivate students, who may have yet to disclose their disability, to take the steps to claim the services they need. Furthermore, colleges and universities could offer courses on disability awareness as part of the general education. Disability as part of college life could be more openly discussed as a result. Lastly, the evidences from this study point to the continued importance of disability counseling, not only at the college level but throughout the education pipeline, to encourage positive disability identity formation and to prepare students for disclosure and access to support.

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## **World academy for the future of women: Promoting educational equality**

Suzanne M. Martin,  
Professor University of Central Florida  
[suzanne.martin@ucf.edu](mailto:suzanne.martin@ucf.edu)

### **Abstract**

United Nations Education, Scientific and Cultural Organization estimates over 40 million girls worldwide not being given the same opportunity as boys to attend primary school. The World Academy for the Future of Women (WAFW) leadership preparation program for young women is working to change that statistic and many others regarded inclusion of women in global society. Its mission is to empower women to discover their passion and purpose through a global leadership development program. A survey was conducted to ascertain the knowledge, perceptions and opinions about the WAFW. Preliminary results and discussion are included in this paper

**Keywords:** educating young women; education equality; leadership education

### **Introduction**

“Women's empowerment and the promotion of gender equality are key to achieving sustainable development. Greater gender equality can enhance economic efficiency and improve other development outcomes by removing barriers that prevent women from having the same access as men to human resource endowments, rights, and economic opportunities. Giving women access to equal opportunities allows them to emerge as social and economic actors, influencing and shaping more inclusive policies. Improving women's status also leads to more investment in their children's education, health, and overall wellbeing” (2012, see <http://data.worldbank.org/topic/gender>; p. 1).

As a society, and in some countries by law, we are obligated to provide equal opportunity to education for all students. Yet in many parts of the world the opportunities for education for female students are not available and certainly not at an equal level to the opportunities provide male students. The United Nations Education, Scientific and Cultural Organization reports that over 40 million girls worldwide are not being given the same opportunity as boys to attend primary school (2007). The circumstances of women and girls wield dire consequences for women's access to opportunities and services, marginalizing their ability to gain equality and improve the overall quality of life for their families and communities. In light of the devastating information reported concerning women and girls and the opportunities provided them, the World Academy for the Future of Women (WAFW) was created.

The purpose of the WAFW is to advance and accelerate women's leadership worldwide. It is the mission of the WAFW to empower women through the discovery of their passion, purpose and path to success, calling forth the full expression of human possibilities through collaborative and inclusive partnerships. The WAFW was conceived and begun in 2009. The program has been built on the concept of partnership and volunteerism (<http://wafw.org>). The main components of the program are the facilitators who deliver the leadership content, the mentors who support the members in the program and universities that partner to provide the room and board for the facilitators. Currently, the WAFW is working in partnership with the SIAS International University for its fifth year and has grown to include the first year Academy, the second year Advanced academy, the third year Academy in Action and the Men's Academy for the Future of Women. The key components of the Academy which seek to



meet the goals of achieving universal primary education and promote gender equality and empower women are eight modules of study. The eight modules are: Module 1: Creating Possibilities; Module 2: Your Leadership: Discovering and Exploration; Module 3: Embracing Passion and Purpose; 4: Community Building; Module 5: Capacity Building; Module 6: Project Development; Module 7: Project Implementation; and, Module 8: Legacy of Your Leadership. The modules are presented by volunteer facilitators who have served in leadership roles in business, industry, medicine and education. In order to get baseline data on the value of the Academy, the evaluation component of WAFW undertaken to determine, through survey research, the members knowledge, perceptions and opinions about the WAFW.

## **Methods**

The method of this study was survey research. According to Ary, RJacobs, Razavieh & Sorenson (2006), "In survey research investigators ask questions about peoples' beliefs, opinions characteristics and behavior. The survey questionnaire is widely used as a source of data in studies in sociology, business, psychology, political science and education" (p. 400) Being in its fifth year of implementation the board members decided to survey the participants to determine the knowledge they held about the WAFW, as well as their perceptions and opinions they held about the leadership curriculum modules in which they participated. The first six survey questions asked for demographic data; questions seven through twelve asked university status questions; questions thirteen through nineteen asked graduate school status; question twenty and twenty one asked why members choose the Academy and how long they participated; question 22 asked members to describe most significant moment in their program; and, questions twenty three to forty seven used a Likert scale to determine members perceptions and knowledge about the WAFW. The survey was conducted using an online survey software product.

The WAFW is working in partnership with SIAS University in China for its fifth year. The WAFW selects university students from various schools of study at the university who demonstrate leadership qualities. The application process involves an application, letters of recommendation and documentation of commitment to the program by promising to give at least 8-10 hours a week to the WAFW in addition to their undergraduate studies.

The survey was conducted in Fall of 2013 through the use of online software and email. The participants for the survey were all the members of the WAFW either as completers or as individuals still in the program. Participants range in age from 18 - 25 years. Currently, there are 320 individuals in various levels of the WAFW with 100 completers who are now program alumni. Each year, WAFW selects an additional 100 first year students to participate in the Academy. A total number of members in the WAFW since its inception is 420. With a team of five current WAFW members, email addresses for all members were combed from university data sources. One challenge was having current email addresses for group of member average age 21 or 22 years old. A second challenge was working with a team who spoke Mandarin when the research did not. English was used as the language of the project. All members were contacted by the researcher through the email addresses given from the university. A second email was sent reminding members to please complete the survey. A follow-up phone call from the team members to the WAFW members whose telephone numbers were available was conducted. The survey remained open for six weeks. The survey had been developed over an eight week period with the WAFW Board of Directors and was based upon the mission, vision, oath and module content. After making three attempts at contacting all members, 335 of the 420 contacts made (80%) entered the survey at the link provided them. Of the 335 who began the survey, 221 completed the surveys showing a 66% completion rate.

## **Research and discussion**

The survey closed in the last month of 2013 and findings are still being mined for meaning. With a 66% completion rate and respondents being typical of the population in age, gender, education and ethnicity (Ary et al, 2006), the response rate is deemed acceptable.

Even during the initial analyses the data present some interesting preliminary findings. The average age of the respondents was 21 years old with 87% being female. When asked about graduation from the university 49% had graduated and 50% had not graduated. The distribution across freshman, sophomore, junior and senior years of study was almost even with a slight majority of members being in their sophomore year. These responses make sense to the researcher when compared to program data on enrollment. What had not been systematically reported was the different programs of study in which academy members were involved. When grouped by programs the majority of the students reported being in a business program (35%); language study included 13% of the respondents; technology programs were reported by 8% of the respondents with 7% respondents being from nursing and 6% being from education. Twenty-eight percent of the responses were left blank. The researcher believes that part of the limitations of conducting international research is the fact that often times the first language of the research differs from that of the individuals involved. In the study and in this question language and translation issues appear to be partially the reason for the lack of responses. Two interesting facts that are indicated by the data are that only 31% of the members had received a scholarship and that the majority of the members who had graduated were either in graduate school or applying to be in graduate school. The scholarship was surprising to the WAFW Board of Directors as they had perceived scholarship to be a main reason for participation. Yet when asked further in the survey why the members joined the WAFW, the majority (90% of respondents on question) of responses indicated a desire to discover their passion, purpose and path to success. The issue of attending graduate school also was interesting as it had not been an intention of the WAFW and yet seemed logical for young leaders to choose advanced education.

The final section of the survey that involved a Likert scale for responses included 24 questions. While the statistical analyses continue on this section of the research, we do know that the majority of the responses indicate knowledge of the vision, mission and goals of the WAFW. With the WAFW being focused on successful implementation of the United Nations Millennium Goals 2 and 3 – Achieve Universal Primary Education and Promote Gender Equality and Empower Women – only half of the responses indicated that the members knew the connection between the UNMG and the implementation of the WAFW. The findings did tie directly to the questions of knowledge of the U.N Millennium Goals as only half of the members were aware of the goals existence.

The responses overall indicate value in continuing the WAFW. The majority of the respondents knew and believed the oath they had taken; they believed the WAFW was critical to their being successful women; they believed they had inner strength after completing the modules that would allow them to be global leaders; and, they understood how to utilize the problem solving skills they had learned to generate new strategies and approaches to solve global problems. As we work towards a sustainable program for the WAFW, we were pleased to find all but four respondents pledged their support in supporting the WAFW in the future to the best of their abilities.

## **Conclusions**

Our mandate as special education professionals is to provide all individuals with the opportunity for free and appropriate education. While cultural differences do play a role in how this mandate is achieved, it is gratifying to find a program such as the WAFW that has been providing young women (and now men) free and appropriate opportunities to become leaders in our global society. While the U.N. Millennium Goals are to be solved by the end of 2014, we are far from that goal. Creating a

program that provide leadership preparation for young women and men is surely a step in the right direction. To provide opportunities to learn that gender equity is a key component of sustainable global development; for women to be empowered to be equal members in that developed society is a critical step forward for all. We are passionate believers in educated young women and look to the future when all girls and young women will have the opportunities for educations as do the young women who participate in the WAFW.

### **Acknowledgements**

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## **Diversity management school Brazil/Portugal: New points of view, new ways**

Elias Rocha Gonçalves  
State Department of Education of Rio de Janeiro, Brazil  
[falacomelias@ie.uminho.pt](mailto:falacomelias@ie.uminho.pt)

### **Abstract**

This paper seeks to contribute to the understanding of the process of historical evolution and applicability of Inclusive Education between Brazil and Portugal. The methodology has being used, basically, is compiling statistical data and documentary analysis of the implementation of educational policies for students with Special Needs process. We denote the central objective is inclusive approaches. So, if you want to approach the topic in a poster (communication), a CASE STUDY among BRAZIL/PORTUGAL, bringing a discussion to civil society and policy makers, because the inclusion must be seen with a new ETIOLOGY without to speak of diseases, but in healing the society that does not see inclusion as a duty, a citizen's right proclaimed in the UN Charter. Following the route ideally drawn by Charles Taylor, the analysis seeks to take into account the ethical and anthropological aspects of intercultural brings and puts into question a hermeneutic reading and interdisciplinary in which cross ethical, relational psychology, political philosophy and social psychology. Right to Education: inclusion and reduction of social inequalities, with the guarantee of the right to quality education a fundamental management policies of education, its processes of organization and regulation, as well as citizenship principle. In a society that is perceived increasingly multicultural, whose plurality of cultures, ethnicities, religions, worldviews and other dimensions of identity infiltrate in the various fields of contemporary life. It is, therefore, a stimulus for discussion, evaluation and use of indicators in planning.

**Keywords:** Inclusive Education; Case Study Brazil-Portugal; New Etiology; Special Educational Needs.

### **Introduction**

This work aims to contribute to the understanding of the historical evolution and applicability of Inclusive Education between Brazil and Portugal process. After decades since the adoption of the Universal Declaration of Human Rights, it is undeniable that the safeguarding of human rights today occupies a central position in the international agenda in the first decade of the XXI century.

Despite protracted ideological divisions of the world, the universality and indivisibility of human rights found expression in the Universal Declaration of 1948.

The Story Since antiquity that the mode of the social orders dealt with the disabled person demonstrates their economic, social and political structure. Different conceptions and practices followed the historical evolution of Special Education. Throughout most part of the human history disable people were victim of segregation, because the emphasis was on their disability, their abnormality (Fernandes, 2002). Until the Middle Ages, in a more separatist season, the disabled were annihilated by carrying evil spirits, abandoned, displayed as aberrations, venerated because they think that their spirits were pure, or even monetized, as was the case in Egypt (where deaf were utilized like silent guards of Pharaoh). In the seventeenth century there was a more protectionist attitude with religious organizations begin to offer assistance. In the modern age, although the current Humanities exalt the

value of man, there was a pathological view of the disabled person, which brought the separation of these people. Already in 1792, Condorcet (1942) warned that human rights would be just formal if not signed on the basis of effective equality of individuals in relation to Education and Instruction. In the nineteenth century that the physician Jean Marc Itard (1774-1838), recognized as the first researcher to use systematic methods for teaching disabled, nicknamed parent of special education (Fonseca, 1989) made an important contribution when he considered that educable intelligences exist. It was also a physician Edward Seguin (1812-1880) who, influenced by Itard, created physiological training method, derived from pedagogical speculations of Rousseau (1712-1798), which was applied by stimulating the brain through physical activities and sensory. Maria Montessori (1870-1952) based their pedagogical conceptions in defense of the creative potential of children and the right to receive an education appropriate to the peculiarities of personality, combining the biological and mental development and emphasizing the prior training of muscle movements. Your technique for teaching mentally disabled has been tried in several countries in Europe and Asia.

In the 60s, according to Coll, Palacios and Marchesi (2004), the term special educational needs was being used as a way of identifying poor students without stigmatizing it. In the 70s, born the Movement of the Integration, with the concept of standardization arose, expressing that the poor should be given the conditions as similar as possible to those offered by society to ordinary people.

Since 1975, the United States, through Public Law 94 142 gave the first steps towards inclusive education. Since its promulgation public schools in the United States have been required to include these students in regular classes, where they can study with nondisabled peers, the inverse of spending most of your day in segregated classes with other students with disabilities. Special Education, as a means of assisting children and young people with special educational needs considered, arose in the 70s following the Warnock Report (1978). In 1986, the United States, with the Regular Education Initiative (REI), and culminates in a movement that had begun to emerge in Denmark in 1959, to end segregation and institutionalization in special schools, here comes the concept of INCLUSION. The best known is the Center for the Study CSIE (Centre for Studies on Inclusive Education)-is that it has broken the key documents about the field of Special Education: the UN Convention on the Rights of the Child (1989 ); UN Standard Rules on the Equalisation of Opportunities for Persons with Disabilities (1993). The UNESCO Salamanca Statement (1994); International Perspectives on Inclusion (2002).

### Portugal and Inclusive Education

In Portugal began in the nineteenth century, oriented along two lines: a care (nursing homes for which they were created), and an educational, from 1822, with the creation of the first establishment to serve deaf and blind later added to the Casa Pia de Lisboa. Followed by the creation of answers to the deafness and blindness. In 1913, António Aurélio da Costa Ferreira, gave a new impetus to deaf education, organizing the first specialization course for teachers. In 1916, he founded an institute that would bear his name - Aurélio da Costa Ferreira Institute. In the year 1929 the Pedagogical Bureau of Primary and Normal Educationl was created with the purpose of organizing special classes, and the first was opened in 1929 in Lisbon. In 1930 new special classes arise in other schools in Lisbon. In 1942, in collaboration with the Institute Aurélio da Costa Ferreira, was given a boost in mental disabled and handicapped education. The Decree -Law No. 35/ 801 of 13 August 1946, defines the creation of special classes, with the primary schools, falling to Aurelius Institute of Costa Ferreira, already in the purview of the Ministry of Education, the accountability and the guidance for the operation. Already in the 50s come new intervention centers and associations in the field of disability, a lot of energized by groups of parents: in 1955, it is created the Children's Center Hellen Keller, the Portuguese League for Disabled People ; in 1960 , is set in Lisbon, the Portuguese Association of Cerebral Palsy; in 1962, the

Portuguese Association of Parents and Friends of Children MR (APPACM) is created, later renamed the Portuguese Association of Parents and Friends of Children Decreased Mental (APPACDM); in 1964, the Minors' Assistance Institute creates the Education of the Handicapped; in 1963, the Aurélio da Costa Ferreira Institute goes to the guardianship of the Directorate General of Higher Education. Stands out in 1964, the creation of the specialization of Teachers of Maladjusted Children. In 1970, it is created in Coimbra, the Cerebral Palsy Center; in 1971, the Portuguese Association for the Protection of Autistic Children is created. Was between 70 and 80 years of the twentieth century, three legal devices configured the set of principles that several years ago consigned key international conventions on the rights of disabled citizens: the Portuguese Constitution (1976), Law on the Education System (1986) and Law on Prevention and the Rehabilitation and Integration of People with Disabilities (1989).

From 1975, first with teachers roaming and later with the creation of teams of Special Education (1976), which aim to integrate the disabled into regular classes. This democratization of education (Afonso, J., & Alfonso Moreno, J., 2005) process are created CERCI's and other institutions supporting mental disability, as Portuguese Association of Cerebral Palsy in Porto. Already in 1977, the Decree-Law n° 174/77, applied to the Preparatory and Secondary Education, allows special enrollment conditions and assessment for students with disabilities. In 1981 /82 it is initiated the integrated support students with intellectual problems. In 1989 the Law 9-Law on Prevention and the Rehabilitation and Integration of People with Disabilities and in 1990; it ratified the Convention on the Rights of the Child signed in New York on January 29, 1990. The International Year of Disabled Persons (1981) and the World Programme of Action concerning Disabled constituted a milestone awareness of society for the human rights of people with disabilities, who would become more effective as a result of the Decade United Nations Persons with Disabilities (1983-1992). From the promulgation of Decree-Law no. 319 /91 of 23 August, was regulated to integrate children with disabilities into mainstream education. Here arises the concept of special educational needs and increasing accountability of regular school due to the education of children with special educational needs. In 1994 Portugal signed the Salamanca Declaration undertook to apply its principles, which has not been a linear task, since they still linger concepts, structures, norms and practices contradictory to the values that guide Inclusive Education. With Decree –Law no 3/2008, of 7 January, brings to public discussion about the special education, the inclusion, the disability, the special educational needs and all adjacent concepts in legislative level, the concept special educational needs and arrangements special education was legislated in 1991, with the Decree Law no 319 /91 of 23 August. With the introduction of new terminology was intended to remove the stigmatizing effects of categorization of students and give a social dimension to the problem. Concerning the International Classification of Functioning (ICF), World Health Organization (WHO), adopted as a guiding framework of the design and operation of policies in the field of disability and impairment. Correia (2008) considers that frequently uses the term "disability", implying its clinical nature, when since at least 1978, it became obsolete in education, going to use the term "special needs".

#### What says the Salamanca Statement

In the current context of N.E.E. should be included children with disabilities or gifted children, street children and working children, children from remote or nomadic populations , children from linguistic minorities; ethnic or cultural areas and children that live in a disadvantaged area or that is part of disadvantage groups or marginal groups. Thus the expression N.E.E. refers to all children and young people whose needs relate with disabilities or learning difficulties and consequently have SEN at some point in their school life (UNESCO, 1994, p.3). The resolution of the Assembly of the Republic no 56/ 2009 approving the Convention on the Rights of Persons with Disabilities, adopted in New York on

March 30, 2007, reads, in Article 24 that the states should ensure an inclusive education system at all levels, ensuring that people with disabilities are not excluded from the general education system, because of their disabilities. New legislation has been produced, such as the Decree-Law no 281/2009, by which a National System for Early Childhood Intervention (SNIPI) was created. The Communication no 6/2010, of 19 February, came to regulate the evaluation process of students with special educational needs, clarifying and providing additional information on the evaluation process established by Decree-Law no 3/2008.

#### Brazil and Inclusive Education

In Brazil, the first March special education occurred in the imperial period. In 1854, Dom Pedro II, influenced by the minister Empire Couto Ferraz, admired the work of the blind young Jose Alvares de Azevedo, who successfully raised the daughter of the imperial family physician, Dr. Sigaud created the Imperial Institute of the Blind Boys. In 1891 the school was renamed the Benjamin Constant Institute-IBC. In 1857, Pedro II also created the Imperial Institute for Deaf-Mutes. The establishment of this school due to Ernesto Huet who came from France to Brazil with plans to establish a school for deaf-mutes. In 1957 the school was renamed the National Institute of Deaf Education-INES. Still in the imperial period, in 1874, began the treatment of the mentally disabled in the psychiatric hospital of Bahia (now Hospital Juliano Moreira). After the proclamation of the Republic, Mental Retardation gained prominence in public policy, even because they believed that this deficiency could result in health problems-as it was seen as an organic problem and related to the crime, and fear for school failure. By 1930 several institutions have emerged to take care of the mentally handicapped in well above that of institutions dedicated to other shortcomings number. The emergence of the first private entities marks another major factor in the history of our country: philanthropy and welfare. These two factors put private institutions highlighted in the course of the history of Brazilian special education, since the number of visits made by them was far superior to that performed by the public, and for that reason had some power when you discuss policies public to government instances.

#### Brazilian Regulatory Overview

Law 4.024/61: Ancient Law of Guidelines and Bases of National Education, provided the right of the "exceptional" education, preferably within the general education system. Says: the education of the exceptional, should, where possible, to fall within the general education system in order to integrate them into the community. Thus, it was clear that it was intended, to the extent possible, all students, disabled or not, in the educational process. Thus, while it provided for the integration of all students in the (public) general education system, also placed him encouraging private initiatives that were intended to encompass the education of students with difficulties. This made contradictory initial findings of LDB, public education for all, putting the assumptions of inclusive education as distant from the ideals of this Act Now Law 5.692/197: Altered LDBEN 1961 and defined "special treatment" for students with physical and mental disabilities who are in considerable delay in the age of regular enrollment and gifted, does not promote the organization of a learning system able to meet the special educational needs and ends up reinforcing the referral of students to classes and schools special.

As is known in 1973, MEC created the National Center for Special Education-CENESP, responsible for the management of special education in Brazil, which, under the aegis integrationist, boosted educational activities geared to people with disabilities and people with giftedness, but still defined by campaigns care initiatives and isolated state. Brazilian Federal Constitution of 1988 has as one of its key objectives "to promote the welfare of all, irrespective of origin, race, sex, color, age and any other forms of discrimination (article 3, section IV). Defines, in Article 205, education as a right for all, ensuring the full development of the person, citizenship and qualification for the job. In Article 206,

paragraph I, establishes the "equality of conditions of access and permanence in school" as one of the principles for teaching and ensures a duty of the

State, the provision of specialized education, preferably in regular education (art. 208). Have the Law 7.853/89: Provides for the support to disabled people, their social integration on the National Coordinator for Integration of Persons with Disabilities-Corde, establishing the judicial protection of collective or diffuse interests of such persons, subject to performance prosecutors. Decree no 3.298/1999: regulates Law no 7.853/89, to provide for the National Policy for the Integration of Persons with Disabilities. With specific regard to education, the Decree establishes the compulsory enrollment of people with disabilities in regular courses, consideration of special education as a type of education that permeates across all levels and types of education, the provision of free and compulsory special education in public schools, among other measures (Article 24 , I, II , IV). Reaffirms the special education as a mode of education that aims to develop the potential of people with disabilities. Have Decree 3.956/2001: Among the actions committed by Brazil at the time of signature, has highlighted the "primary" work, among many "prevention of all forms of disability ". Already Resolution CNE/CEB 02/200: Tracking the process of change, CEB National Guidelines for Special Education in Basic Education, CNE 2/2001 in Article 2 and 3, determine that: "Education systems must enroll all students, leaving it to the schools organize themselves to care for learners with special educational needs, ensuring the necessary for a quality education for all (MEC/SEESP, 2001) conditions."In this sense, provided for in Article 2. National Education Plan-PNE, Law 10.172/2001: highlights that "the breakthrough that the decade of education should produce would be to build an inclusive school that ensures compliance with human diversity." By establishing goals and objectives for education systems encourage attendance to the special educational needs of students, points to a deficit regarding the offer of enrollment for students with disabilities in regular classes, in regular education, teacher training, physical accessibility and service specialized educational.

The Law 10.436/2002: Recognizes pounds (Brazilian Sign Language) as an official language in the country along with the Portuguese. The CNE/CP 01/2002: Establishes the National Curriculum Guidelines for the Training of Teachers of Basic Education, defines the institutions of higher education shall provide in its curricular organization, focused teacher training for attention to diversity and contemplate knowledge the specifics of pupils with special educational needs. The MEC Decree 2.678/2002: Approves guidelines and standards for the use, education, production and distribution of Braille System in all types of education, including design of Braille Orthography for the Portuguese language and the recommendation for their use throughout Nationwide. The Law 10.845/2004: Establishes the Program Completion of the Educational Service Specialist to Persons with Disabilities (PAED), with the principal to ensure universalization of specialized care for patients with disabilities learner's goals, whose situation does not allow the integration of common classes regular education and progressively ensure the inclusion of individuals with disabilities educated in regular classes in regular schools.

Decree 5.626/2005: Regulates Law 10.436, of April 24, 2002, which provides for the Brazilian Sign Language - pounds, and art. 18 of Law no 10,098, 2000. Sets the training of teachers for the teaching of pounds in the final grades of elementary school, high school and higher education shall be made on the upper level, undergraduate course full degree in Letters: pounds or Letters: pounds/English as a second language. Decree 6.094/2007: In 2007 it launched the Development Plan of Education-PDE, reaffirmed by the Social Agenda, and axes as the training of teachers for special education, the implementation of multi-functional features, the architectural accessibility of school buildings, access and retention of people with disabilities in higher education and monitoring of access to school favored by the Continuous Cash Benefit-BPC.



In the MEC document Development Plan for Education: reasons, principles and programs reaffirms the vision that seeks to overcome the opposition between regular education and special education.

Contrary to the systemic concept of mainstreaming of special education at different levels, stage, and types of education, education is not structured from the perspective of inclusion and meeting the special educational needs, limiting the fulfillment of the constitutional principle that provides equal conditions for access and permanence in school and continuing in the higher levels of education (2007, p. 09).

Decree 6.949/2009: Enacts the International Convention on the Rights of Persons with Disabilities and its Optional Protocol, signed in New York on March 30, 2007 The CNE/CEB 04/2009. Establishes Operational Guidelines for Specialized Educational Services in Elementary Education, Special Education mode. Displays the ESA-Specialized Educational Services as a "service" of Special Education assured the Brazilian legislation through the 1988 Constitution Before the applicant documents to the National Policy for Special Education in the Perspective of Inclusive Education and CNE/CEB analysis 04/2009, we can see that both meets regarding ideas regarding ESA. These documents conceive the ESA as a modality of Special Education that identifies develops and organizes educational resources and accessibility, in order to remove the barriers that stand to full participation in the development and learning of students with disabilities or reduced mobility, pervasive developmental disorders and high ability/gifted.

Decree 7611/2011, provides for special education, specialized educational and other measures. Repealed in its entirety Decree 6571/2008 and caused controversy in the interpretation of Articles by "supposedly" retreat from policies that were already solidifying in ensuring the right of students with disabilities. The forecast that this clashes with the Law of Guidelines and Bases of National Education (9.394/96), which in article 59, section II, determines the specific terminally for those who cannot reach the level required for the completion of elementary education in because of their disabilities. The controversy continues when it comes to transfer of funds, as the Decree 6571/08 also guarantee under the dual enrollment students enrolled in these FUNDEB ESA opposite the schooling period. Beyond the student be in regular room, ensuring the provision of ESA on the opposite shift in rooms Multifunction Resources at the school or at another school system in the center of specialized education or philanthropic institutions. In this sense Decree Establishes the National Plan on the Rights of Persons with Disabilities-Plan Living without limit. Has the purpose of promoting, through integration and coordination of policies, programs and actions, the full and equal enjoyment of the rights of persons with disabilities under the International Convention on the Rights of Persons with Disabilities and its Optional Protocol, adopted by means of Legislative Decree no 186/2008, with the status of a constitutional amendment, and promulgated by Decree 6.949/2009. Has as one of its principal axes access to education, and provides assurance that public education facilities are accessible to people with disabilities, including through adequate transportation. The National Education Plan (PNE, 2011 to 2020) document that will serve as a guideline for all educational policies of the country for the next decade, consists of 12 Articles and an annex with 20 goals for education, and focuses on the enhancement of teaching and the quality of education.

From the INCLUSION to the INCLUSION: new ETIOLOGY

The inclusion will have to be seen with a new ETIOLOGY, without speaking in diseases, but in healing of society who see inclusion as a duty, a citizen's right and not a favor, cut corners. Therefore the child to be included will have to have structured learning situations without creating difficulties in the organization, from the entry gate to the direction, providing security, confidence and helps children and no sequences barriers. Do not forget: the more confidence that the child acquire the structure and school organization, greater predictability in learning ... the higher the predictability, lower anxiety and fear, the greater the motivation, the greater the success of teaching and learning.

### Inclusion in the school and the gap in daily

For those who have children, the season of enrollment, pre-registration, interviews, teaching evaluations, evidence to get a spot, it is a period that often raises anxiety in children and their parents to stressful levels in Brazilian institutions. In most cases the choice of the institution teaching centers on general criteria such as cost of tuition, teaching method, offering extracurricular activities and location. For other families, however, these issues are merely secondary because they are preoccupied with something much more vital and complex as the acceptance, acceptance of children who, for reasons of neuro - cognitive or psychomotor nature, are in a gap between the development said "normal" and those who have little or no chance to develop proposals for regular teaching. The human history is replete with cases that compute the genius of considered unsuitable, crazy and different, much of the responsibility for the evolutionary stage in which we find ourselves. It is noteworthy that these brains often have special skills that give them not reachable by normal intellectual abilities such persons. It is the mind that these standard deviations sometimes run out solutions to major scientific issues that haunt us or artistically changing cultural patterns of companies. In view of the conclusion I use the teachings of Beker's assertion that learning contributes to the development in that learning is not to copy or reproduce reality. In this process, not only modify what we already had, but also interpret the new in a peculiar way, to be able to integrate it and make it ours. Therefore, the philosophy of inclusion advocates an education that is effective for ALL, this change of conceptions based on the belief that the methodological and organizational changes that are designed to respond to students who have difficulties will benefit all children. In fact, those who are considered to have special needs come to be recognized as a stimulus that promotes strategies to create a richer learning environment for ALL.

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## **Equine relational therapy: The horse as a link between us and the others**

Alexandra dos Santos L.Santana  
Quatro Patas e Uma Crina - Mental Health and Educational Services  
[quatropataseumacrina@gmail.com](mailto:quatropataseumacrina@gmail.com)

### **Abstract**

Equine Relational Therapy (ERT) is a psychomotor intervention (Quatro Patas e Uma Crina, 2013). The main goal behind this communication is to explain how this therapy contributes to improve psychosocial functioning on youth with special needs due to some type of emotional distress. ERT is based upon the model of Equine Facilitated Psychotherapy and Learning (EFPL) and Psychomotor Intervention and is one of the approaches commonly known as Equine Facilitated Therapy (EFT). EFT amongst Mental Health and Education practitioners has gained an incredible amount of respect in the past decade but it is still quite recent in Portugal (Small & Supple, 2001, Frewin & Gardiner, 2005, Rothe et al., 2005, Small & Memmo, 2004, cit in, Suarez, 2005, Tetreault, 2006, Ewing et al., 2007, Schultz, Barlow & Robbins, 2007, Hutchinson, 2009, Worms, 2009, EFMH, 2003 cit in, Kirby, 2010, Shambo, 2013). This situation contributes for the lack of understanding among the Portuguese scientific community about its therapeutic and educational benefits. By explaining how EFT approaches are used within mental health settings, this presentation aims to contribute for the development of a consensus on the various issues regarding the use of EFT in Mental Health and Educational field in Portugal.

**Keywords:** horse, therapy, mental health, education

### **Introduction**

The use of horses as co-therapists and partners in the therapeutic process of children, youth and adults presenting mental health issues or educational needs has long been recognized and gained serious amount of interest among professionals and the scientific community (Small & Supple, 2001, Frewin & Gardiner, 2005, Rothe et al., 2005, Scott, 2005, Small & Memmo, 2004, cit in, Suarez, 2005, Tetreault, 2006, Ewing et al., 2007, Schultz, Barlow & Robbins, 2007, Hutchinson, 2009, Worms, 2009, EFMH, 2003 cit in, Kirby, 2010, Shambo, 2013).

Children and youth experiencing some type of emotional disorder, distress or trouble within their psychosocial functioning often display emotional, behavioral and achievement problems interfering with their academic and social development (Frewin & Gardiner, 2005, Rothe, 2005, Scott, 2005, Suarez, 2005, Nelson et al., 2004, cit in, Tetreault, 2006, Dumas, 1997, American School Counselling Association, 2006, cit in, Trotter, 2006, Ewing et al., 2007, Kakacek, 2007, Schultz, Barlow & Robbins, 2007, Kirby, 2007, Hutchinson, 2009). Due to its experiential/metaphorical learning, solution-oriented and body awareness approach EFT is becoming one of the most rich and efficient approaches professionals integrate into their work but also one that due to its recent status still needs to be further investigated (Frewin & Gardiner, 2005, Rothe, 2005, Suarez, 2005, Nelson et al., 2004, cit in, Tetrault, 2006, Trotter, 2006, Ewing et al., 2007, Kakacek, 2007, Schultz, Barlow & Robbins, 2007, Trotter et al., 2008, Hutchinson, 2009, Worms, 2009, Kirby, 2010, Frederick, 2012, Thomas, 2013).

### **Method**

The psychosocial benefits and activities experienced in an ERT intervention are common to children, adolescents and adults which makes possible to address the theme with regards to more than one of these populations. Therefore the main characteristics and benefits coming from ERT interventions were explored taken into account several different studies, articles and books regarding the use of EFT, the role emotional functioning and human action play in the construction of the Self and mind- body oriented approaches. Overall a total of 22 studies and 4 books were brought into this research.

Given the infancy of EFT intervention and its approach being influenced by many other theoretical models, it was the author's belief it would be best to approach the theme with regards to specific literature on EFT. This helped to achieve a better understatement of the theme itself, the goals intended to explore on this paper and avoided focusing on the background theories supporting EFT interventions. Because the presented study is intended to explain how ERT benefits youth with special needs due to some type of mental health issue that is compromising their ability to learn and cope positively within their psychosocial environment, the presented research findings are more focused on explaining the process upon which this outcomes occur and not so much on the results each of the consulted studies achieved.

#### Integrating Equine Facilitated Therapy in Traditional Approaches

Animal Assisted Therapy (AAT) can be described as a therapeutic modality capable of being integrated with various theoretical orientations in order to complement a range of techniques (Chandler, 2005, *cit in*, O'callaghan & Chandler, 2011). Practitioners working within this approach come from a diversity of theoretical backgrounds therefore EFT is also influenced by several theoretical models such as brief therapy, gestalt therapy, reality and rational therapy as well as mindfulness and mind-body oriented approaches (Suarez, 2005, Chandler, 2005, *cit in*, O'callaghan, & Chandler, 2011). Therapists working in this field share the opinion that integrating more comprehensive approaches in their therapeutic strategies benefits both client and therapeutic process. This shared opinion has been increasing in the past recent years due to the belief and recognition that no single theory is comprehensive enough to account for the complexities of human behavior, leaving therapists bound to the necessity of being integrative in their approaches (Smith, 1985, Kelly, 1991, Lambert, 1992, *cit in*, Suarez, 2005).

Literature suggests that when dealing with the complexity of human behaviour, a comprehensive approach is more likely to contribute to the promotion of synergetic effects whereas limited success should be expected if the therapeutic process is approached from only one perspective (Small & Supple, 2001, Small & Memmo, 2004, *cit in*, Suarez, 2005).

If a therapy is therefore most effective when incorporating a variety of strategies, therapists must then make an effort to combine certain features of each therapy in order to address cognitive, emotional and behavioral dimensions of human experience and also for effective integration to occur (Scott, 2005, Connell & Kubish, 2001, Corey, 2001, Eccles & Gutman, 2002, *cit in* Suarez, 2005).

Because EFT interventions are influenced by many theoretical models, a variety of terms has been used to describe a clinical approach using the interaction established with horses to improve a person's emotional, behavioural and learning skills. Equine Facilitated Therapy (EFT) is then a general term associated with other terms such as Equine Facilitated Psychotherapy and Learning (EFPL), Gestalt Equine Psychotherapy (GEP) and Equine Relational Therapy (ERT). These terms refer to a clinical approach doing primarily "ground work" with horses and as a therapy its main goals include the improvement of focus, the ability to trust in self and others, the establishment and understanding of boundaries, the improvement of relational skills towards the self and the others as well as increased body awareness (Frewin & Gardiner, 2005, Scott, 2005, Suarez, 2005, Beck, 2000, *cit in*, Trotter et al., 2008, Worms, 2009, EFMH, 2003 *cit in*, Kirby, 2010, Quatro Patas e Uma Crina, 2013, Shambo, 2013).

The therapeutic value Horse's characteristics bring into action during EFT

Being in relationship with horses provides opportunity for humans to reflect on emotional and behavioural issues at the same time they work on their capacity for self-regulation, choice and responsibility. Solution-oriented activities rather than instructive or directive ones are created so that clients can experiment, problem-solve, take risks, employ creativity and find the solutions that work best for them (Frewin & Gardiner, 2005, Rothe et al., 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Kersten & Thomas, 2004, *cit in*, Trotter et al., 2008, Worms, 2009, EFMH, 2003 *cit in*, Kirby, 2010, Shambo, 2013). EFT does primarily "ground work", and this includes any activity in which the person is not riding the horse. This is due to the belief that ground activities with horses provide better opportunities for growth and learning because within these activities the horse is a co-therapist, a partner and this is a lot different from what happens when one is riding and mainly giving instructions or orders. This situation leaves clients more prone to focus on formulating solutions for the challenges inherent to the ground work activities (Rothe et al., 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Kersten & Thomas, 2004, *cit in*, Worms, 2009). Ground work activities demand a greater level of relational challenge: the focus is put upon the process of problem-solving the activities with the horse and guiding him throughout that process (Frewin & Gardiner, 2005, Rothe et al., 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Kimberl, 2002, *cit in*, Worm, 2009, EFMH, 2003 *cit in*, Kirby, 2010, Shambo, 2013).

When referring to the benefits deriving from this type of ground work with horses, therapists share the opinion that much of the benefits are due to the horse's ability to give immediate feedback about human's emotions and behaviours and immediate feedback is much stronger evidenced during ground work activities (Hallberg, 2008, *cit in*, Suarez, 2005). The combination between ground work activities and immediate feedback is pointed out by professionals as being a fundamental and strong element of the practice because it allows for practical in-vivo problem-solving situations, increased self-awareness and honesty (Suarez, 2005, Worms, 2009, Shambo, 2013). Immediate feedback is associated to horses being prey animals, more specifically, "fight or flight" animals. This means they survive upon the ability to read the environment and respond accordingly to it in a very precise and fast way. A horses' neuromotor system is extremely well developed which accounts for them being keen at taking information from the smallest of action, smells and even the most subtle changes in voice tones, body postures and gestures. It is also this neuromotor system that enables horses to react with immediate feedback therefore providing great opportunities for humans to gain insight about themselves (Scott, 2005, Vidrine, 2002, Zugich, 2002, Klontz et al, 2007, *cit in*, Suarez, 2005, Vidrine et al. 2002, *cit in*, Worms, 2009, Shambo, 2013).

Immediate nonverbal feedback and the possibilities of interaction it provides, makes EFT interventions essentially body-oriented approaches. As the horse gives immediate feedback it also creates the opportunity for people to immediately look at what is happening in their bodies, enabling them to become tuned in not just with their bodies but also with their emotions (Scott, 2005, Vidrine, 2002, Zugich, 2002, Klontz et al, 2007, *cit in*, Suarez, 2005, Worms, 2009, Shambo, 2013). Because this feedback is nonverbal and coming from a horse it is unbiased and perceived as such by clients who then tend to trust in it sometimes before they trust the therapist. This type of feedback also facilitates the building of rapport and client's engagement with the therapy (Scott, 2005, Vidrine, 2002, Zugich, 2002, Klontz et al, 2007, *cit in*, Suarez, 2005, Worms, 2009, Chandler, 2005, *cit in*, Wesley et al., 2009, O'callaghan & Chandler, 2011).

The fact horses are mammals living in herds is also another strong reason accounting for the value of the emotional interaction established during EFT sessions.

Horses look for a bonding companionship, close proximity and touch and this comes into the therapeutic process as an external emotional encouragement for therapeutic interpersonal connection (Hallberg, 2008, *cit in*, Suarez, 2005). Last, but not least, the potential for emotional bonding among mammals and therefore for the effectiveness of the bond experienced in an EFT setting is best explained by Lewis et al., (2000) in the book “A General Theory of Love”, in which the authors have come up with three main characteristics shared by mammals that account for the possibility of bonding even among different species. The authors have defined these characteristics as limbic resonance: the shared empathy in which two mammals become attuned; limbic regulation: the capacity for mammals to read each other’s emotional cues and regulate each other’s physiology and limbic revision, defined as the capacity mammals have to adapt to a healthier template for future relationships (Lewis et al., 2000).

#### EFT as a self-development process amongst Youth

The majority of clients receiving EFT are either diagnosed or suffering from some kind of emotional/behavioural problem or trauma that in many ways may disable them from functioning or coping well within their psychosocial environment, therefore compromising their interpersonal and learning skills (Frewin & Gardiner, 2005, Rothe et al., 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Worms, 2009, EFMH, 2003 *cit in*, Kirby, 2010, Shambo, 2013).

When speaking of psychosocial functioning and its impact on the life of adolescents, one refers to the definition based on the six subscales of the Youth Outcome Questionnaire (Y-OQ) and Youth Outcome Questionnaire Self Report (Y-OQ-SF) for psychosocial functioning. This subscales are 1) Intra-personal distress, such as anxiety, depression, and hopelessness, 2) somatic or physical complaints, 3) interpersonal relations, such as aggressiveness, arguing, and defiance, 4) social problems, such as truancy or substance abuse, 5) behavioral dysfunctions, such as concentration or ability to handle frustrations, and 6) critical items or clinical factors, such as paranoia, obsessive compulsive disorder, suicide, or eating disorders (Suarez, E., 2005). These subscales of psychosocial functioning are also some of the main goals of intervention therapists go through with their clients (Frewin & Gardiner, 2005, Scott, 2005, Suarez, 2005, Ewing et al., 2007, Klontz et al., 2007, Schultz et al., 2007, Lancia, 2008, Worms, 2009, EFMH, 2003 *cit in*, Kirby, 2010, Shambo, 2013).

EFT, like other animal assisted therapies, has shown to be effective in cases where verbal communication is either compromised or not efficient. Many forms of therapy include verbal interaction as the main channel for change to occur which may not be effective in cases where language, verbal skills and the capacity to verbally express insight are not fully developed or of easy access, such as with children, adolescents and even adults experiencing some type of mental and emotional distress (Scott, 2005, Suarez, 2005, Kersten & Thomas, 2005, Mann & Williams, 2002, *cit in*, Tetreault, 2006, Kovács et al., 2006, Ewing et al., 2007, Schultz et al., 2007, Chandler, et al., 2010, O’Callaghan & Chandler, 2011). Cases of highly verbal people may often encounter difficulties in reaching positive therapeutic outcomes due to the tendency these people have to over rationalize things, when going through a verbal form of therapy. Diagnoses of attention hyperactivity disorder also benefit from EFT because as a result of the disorder people may find it difficult to focus or respond to verbal interaction whereas as a more body oriented approach such as EFT may make it easier to achieve therapy outcomes (Levinson, 2004, *cit in*, Frewin & Gardiner, 2005, Suarez, 2005, Kersten & Thomas, 2005, Mann & Williams, 2002, *cit in*, Tetreault, 2006). Similar benefits found outside traditional verbal therapy are also shared by professionals integrating some form of expressive therapy into their approaches. These professionals point out characteristics also found in EFT’s sessions that account for positive outcomes and these are: self - expression, active participation, imagination, and mind–body connections (Malchiodi, 2005 Suarez, 2005). The human body and the possibilities for action it enables

people to experience, plays a very important role in the creation of an autobiographic Self (Damásio, 2010). Human beings evolve and create a sense of continued Self through the interaction they establish with the environment and the integrated perceptions of that interaction within the mind.

The result of this complex and dynamic system of interaction may or may not result in a feeling of continued and coherent existence which maintains itself unique and reliably the same throughout lifetime, even when submitted to subtle changes (Damásio, 2010). It is therefore the capacity for creating an autobiographic Self that distinguishes humans from other type of animals. In order for an autobiographic Self to be constructed one needs to have a sense of self and this sense of self is deeply connected with the feeling of owning a body within which a mind operates (Damásio, 2010). It is the human body that functions has a reference to what is internal or external to the person and it is also the human body that defines the capacity to take action towards the world and the Self in order for learning and change to occur (Damásio, 1994, *cit in*, Martins, 2001, Damásio, 2010). Most of the work being done with children and adolescents in EFT is about creating activities in which they can gain conscience of and work on their emotions and behaviours in a safe and creative environment. The work done in EFT sessions enables youth to build up new and more flexible adaptive behaviours, therefore experiencing and developing a strong sense of Self (Frewin & Gardiner, 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Ewing et al., 2007, Schultz et al., 2007, Worms, 2009, Chandler et al., 2010, O'Callaghan & Chandler, 2011).

Immediate feedback is present throughout all EFT's sessions and is also responsible for creating self-development possibilities that then greatly account for youth to create a continued sense of Self (Frewin & Gardiner, 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Ewing et al., 2007, Klontz et al., 2007, Schultz et al., 2007, Hutchinson, 2009, Worms, 2009, Kirby, 2010, Shambo, 2013).

During EFT clients are challenged to display congruence between their verbal and body language which allows for a strong emotional and body awareness to occur (Scott, 2005, McCormick & McCormick, 1997, Vidrine, 2002, Zugich, 2002, Klontz et al., 2007, *cit in*, Suarez, 2005, Hutchinson, 2009, Worms, 2009, Kirby, 2010, Shambo, 2013). Adolescents are often challenged to change their behaviour and come up with creative ideas in order to problem solve the presented activities and change the behaviour of the horse. These type of solution-oriented activities enables the adolescents to take responsibility for their own behaviours and choices at the same time it teaches them divergent thinking (Rothe et al., 2005, Kersten & Thomas, 2004, Lefowitz et al., 2005, *cit in*, Suarez, 2005, Tetreault, 2006, Bowers & Macdonald's, 2001, Macdonald & Cappel, 2003, *cit in*, Ewing et al., 2007, Worms, 2009, EFMH, 2003 *cit in*, Kirby, 2010).

Another important concept to youth facing special needs due to some kind of emotional distress is brought into action during EFT's sessions and it comes in the form of assertion. To be in relationship with horses teaches adolescents the difference between being passive, aggressive and assertive. Because horses invade personal space or ignore people who are passive and may also become aggressive or quite defiant when treated in such manner, they challenge people to find honest and free of coercion approaches in order to deal with and get them participating in the presented activities. Assertiveness and self-regulation is therefore one of the most important skills adolescents learn and then transfer to other relationships (Rothe et al., 2005, Kersten & Thomas, 2004 *cit in*, Suarez, 2005, Tetreault, 2006, Kirby, 2010, Shambo, 2013). Activities with the horses also explore the concepts of boundaries, empathy, choice responsibility and provide a great amount of moments for metaphorical learning which then the therapist may help transfer to other relationships and situations (Rothe et al., 2005, Scott, 2005, Kersten & Thomas, 2004, *cit in*, Suarez 2005, Tetreault, 2006). A good example may be observing the horse's reaction of resistance or rebellion and then help adolescents gain insight on the negatives outcomes that can come out of it. This and other type of metaphorical learning activities are very common in EFT and quite often provide opportunities to overcome fears and develop



confidence and choice (McCormick & McComick, 1997, Kohanov, L., 2001, Kersten & Thomas, 2003, Levinson, 2004, *cit in*, Frewin & Gardiner, 2004, Rothe et al., 2005, Scott, 2005, Kersten & Thomas, 2004, *cit in*, Suarez, 2005, Tetreault, 2006).

The success obtained in the activities and with the establishment of assertive behaviours with the horses brings a sense of interchange into the therapeutic process that enables adolescents to feel control and realize it is possible to have a positive impact in the environment if they are willing to change something within themselves (Rothe et al., 2005, Lefowitz et al., 2005, *cit in*, Suarez, 2005, Bowers & Macdonald's, 2001, Macdonald & Cappel, 2003, *cit in*, Ewing et al., 2007, Worms, 2009, EFMH, 2003 *cit in*, Kirby, 2010).

Resilience also plays an important role in EFT and according to Rutter, (1985), Masten et al., (1990), Stein, (2005), *cit in*, Resilience in Children and Young People (RCYP), (2007), it can be defined in youngsters as “the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances”. It implies coping well with adversity (Rutter, 1985, Masten et al., 1990, Stein, 2005, *cit in*, RCYP, 2007). Youth are considered to be resilient when displaying certain Individual characteristics that account for the capacity to resist adversity, cope with uncertainty and recover from trauma (Newman, 2005, *cit in*, RCYP, 2007). These characteristics include, among others, the sense of competence and self-efficacy, internal locus of control, empathy with others, problem-solve and communication skills, emotional expressiveness and a sense of humor (RCYP, 2007).

Just as it happens in resilient theoretical approaches, EFT also aims to identify and explore these type of characteristics in the adolescents so it becomes easier to facilitate growth and change and often adolescents realize how much they already know and can contribute with (Scott, 2005, Kersten & Thomas, 2004, Small & Memmo, 2004, *cit in*, Suarez, 2005).

The fact youth have to care for and work with the horse as a partner makes it possible for resilience and responsibility skills to be experienced and developed during EFT sessions. Adolescents are required physical and mental engagement while facing tasks that require effort, provide challenges, hard work, emotional rewards and delayed gratification. EFT is therefore an approach that creates the desired and needed environment to achieve many of the goals established for youth experiencing some type of emotional distress as it provides great and diverse opportunities for better psychosocial functioning and growth to be experienced and occur (Frewin & Gardiner, 2005, Kersten & Thomas, 2004, *cit in*, Rothe, et al., 2005, Scott, 2005, Suarez, 2005, Mann & Williams, 2002, *cit in*, Tetreault, 2006, Bowers & Macdonald's, 2001, Macdonald & Cappel, 2003, *cit in*, Ewing et al., 2007, Schultz et al., 2007, Hutchinson, 2009, Hanselman's 2001, *cit in*, Worms, 2009, Chandler et al., 2010, Kirby, 2010).

## **Results and Discussion**

Studies aiming to assess the effectiveness of Equine Assisted Psychotherapy and Learning (EAPL) with at-risk adolescents have shown positive outcomes in intrapersonal distress, interpersonal relations, and somatic complaints, social and behavioural dysfunction as well as in the levels of hope (Suarez, 2005, Frederick, 2012). Children and adolescents at-risk, going under Equine Assisted Counselling (EAC) also displayed statistical significant outcomes in their psychosocial functioning with an increase on the positive behaviours and a decrease in the negative ones. In this study both parents and participants improved their ability to cope with internalizing problems, showing less anxiety, less cry, improved self-respect, adaptive skills, leadership and decreased aggression and hyperactivity (Trotter, 2006). Similar results were found in a study carried out by Klontz et al., (2007) in which adults went on an Equine Assisted Experiential Therapy program. In this study there were significant and stable reductions in the levels of psychological distress although the study itself is quite limited.

Bowers & Macdonalds (2001) and Macdonald (2004), cit in, Trotter et al.,(2008) also found significant decreases in depression and improvement of life skills and communication after an EAC intervention with adolescents. Ewing et al., (2007) also showed positive changes in students going under Equine Facilitated Learning programs although the quantitative results were not significant. Young offenders going under Equine Assisted Therapy programs, like the HorseCourse and EAC, also displayed an increase in emotional and behavioural regulation which enabled them to cope better with challenging or stressful situations and feel more empathetic towards others (Trotter et al., 2008, Thomas, 2013).

Children experiencing intra-family violence went under an Equine Assisted Psychotherapy program and displayed positive outcomes in the global functioning assessment. However, this study is poor in its methodology and lacks a rigorous approach (Schultz et al., 2007).

Children with Emotional Disorder compromising their learning and social skills went under an Equine Assisted Growth and Learning program and results held great statistical significance with improvements in the special education setting and behavior management. These children also developed skills to better interact with their peers and adults (Tetreault, 2006). All these outcomes are pointed out by professionals working within an EFT setting has being very common for clients to experience (Worms, 2009). Worms, (2009) also states that professionals alert to the fact that despite not having a specific type of client it is necessary to look out for safety and ethical issues, therefore clients experiencing psychosis and cluster B personality traits are believed to benefit more from a more contained approach. The same author tells us that professionals working within an EFT program only accept these clients if some therapy work and improvements have already occurred and clients can cope with the level of challenge found in equine assisted therapy programs. This is due to work in EFT being very challenging and sometimes unpredictable, with sounds and smells being able to trigger psychotic responses or overwhelming feelings (Worms, 2009). The same principle applies to clients experiencing trauma (Worms, 2009).

It seems that despite EFT being developed with people from very different ages, outcomes tend to be identical in regards to psychosocial functioning, mental health and life improvement skills. There is also a similarity among the type of psychological distress, intrapersonal and social skills shared by people undergoing EFT which may account for the similarities of the outcomes across all the reviewed literature.

Despite EFT being an emergent and fast growing approach there is still lack of strong quantitative research and most of it is either empirical, qualitative or lacks strong methodological and rigorous approaches towards the variables that should be taken into account when doing research that aims for scientific recognition (Frewin & Gardiner, 2005, Rothe et al., 2005, Scott, 2005, Suarez , 2005, Tetreault, 2006, Trotter, 2006, Ewing et al., 2007, Klontz et al., 2007, Schultz et al., 2007, Trotter et al., 2008, Hutchinson, 2009, Worms, 2009, Chandler et al., 2010, Kirby, 2010, Frederick, 2012, Thomas, 2013).

## **Conclusion**

This presentation aimed to explain the process upon which ERT and therefore, EFT approaches benefit the psychosocial functioning of youth with special needs due to some form of emotional distress. The findings were greatly significant in terms of what sort of therapeutic process and activities are most used in this field and what benefits come out of it. Despite most studies being qualitative and empirical they all point out the same type of positive results and benefits on psychosocial functioning and some even share common limitations and future research suggestions, such as lack of control group, studies being carried for short periods of time and lack of solid and relevant information about the participants (Frewin & Gardiner, 2005, Rothe et al., 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Trotter, 2006, Ewing et al., 2007, Klontz et al., 2007, Schultz et al., 2007, Trotter et al., 2008, Hutchinson, 2009,

Worms, 2009, Chandler et al., 2010, Kirby, 2010, Frederick, 2012, Thomas, 2013). The quantitative research done in this field also corroborates much of the information and results shared by empirical and qualitative studies in regards to outcomes found in psychosocial functioning. This situation accounts for the increased respect and validity regarding EFT programs. EFT approaches towards mental health and educational needs seem to be quite effective when it comes to positively increasing psychosocial functioning therefore it is urgent to produce more investigation in this field. Future research should contribute to better understand, assess and establish what type of methodologies are most effective and towards which goals and client profile are they most effective for. Strong consideration must be given in future research towards what disorders and personality traits are most suitable for this type of work, how can professionals from different backgrounds apply their knowledge onto EFT and use it to enrich their work (Frewin & Gardiner, Rothe, et al., 2005, Scott, 2005, Suarez, 2005, Tetreault, 2006, Trotter, 2006, Ewing et al., 2007, Klontz et al., 2007, Schultz et al., 2007, Trotter et al., 2008, Hutchinson, 2009, Worms, 2009, Chandler et al., 2010, Kirby, 2010, Frederick, 2012, Thomas, 2013).

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## **Children stories as linguistic improvement**

Beatriz Amorim Fávoro

Epheta: Specialized Institution in the Area of Deafness/Hearing Deficiency.

[beatriz031261@hotmail.com](mailto:beatriz031261@hotmail.com)

Denise Elizabeth Hey David

UTFPR: Universidade Tecnológica Federal do Paraná.

[denisedavid@utfpr.edu.br](mailto:denisedavid@utfpr.edu.br)

### **Abstract**

This work proposes the use of children's stories as linguistic improvement to deaf children. The constant practice of reading associated with children's literature is a pre-condition to the development of a reading habit and also eases the learning process. It provides vocabular development, easy access to reading, and therefore knowledge, and it helps literacy. This research /action has a descriptive and qualitative character and the stories were selected according to the child's age group. For such, stories fitted to the students schools level and the pedagogical contente of the school were analyzed and selected, proposing strategies to develop these stories, adapting pedagogical resources e evaluating the developed strategies' efficacy. The participant children presented a clear linguistic improvement not only as to the development of hearing skills, but also in reading and writing. As a result, there was a significant improvement of communication and vocabulary with meaning and comprehension.

**Keywords:** education, special education, children's stories, linguistic improvement;

### **Introduction**

Children stories as linguistic improvement

A child who can hear, when it initiates the writing process, counts on well-developed speaking skills because it participates in the dialog between adults and other children. In the case of deaf children the relationship between letters and sound during the process of writing acquisition doesn't make any sense, making it normal the beginning of formal writing learning without the structure of oral language, even though they go for different ways of communicating themselves like gestures, speech, signals and expressions. The child usually gives place to the systematization of verbal language instead of signification, meaning the child retains what has a meaning to itself. According to Vygotsky (1987), "the child that has a sensorial deficit does not develop itself less than others, just differently, suiting itself from the meaning in its own way and inherent to its difficulty. Therefore, every child is capable of acquiring language. Still, to Vygotsky, the true course of thought development goes from social to individual. It's in the meaning of words that thought and speech gather into a verbal thought.

Through the stories, the child builds its knowledge of written language. It doesn't limit itself to knowledge of graphic marks or producing or interpreting but it involves genre, text structure, functions, shapes and linguistic resources. The child learns through experience the satisfaction that a story provokes; the story's structure while starting to consider the unity and sequence in the text; conventional associations that direct our expectations when hearing the story; the expected role of a wolf, a lion, a fox or a prince; defining points of beginning and ending ("once upon a time" and "they lived happily ever after") and more elaborated linguistic structures.

According to the Referencial Curricular Nacional para a Educação Infantil, “Children education must organize itself in a way children develop also the ability to utilize different languages (corporal, musical, plastic, oral and written) adjusted to the different intentions e communication situations, in a way it can understand and be understood, express your ideas, feelings, needs and desires and go further in the process of constructions of meaning, improving more and more its expressive ability” (Brasil, 1998). Therefore, this study proposes strategies to the acquisition of the deaf child’s language and communication before it initiates the process of systematic literacy though children stories.

The language, the children literature and the deaf child

When the deaf child has access, since its birth, to a structured language that allows it to perform a process of acquisition identical to the one performed by hearing kids, it will equally appropriate this language, turning itself a native speaker of it and that will be its mother tongue (Coelho, 2007). Na important phase to the children’s (deaf or not) language development is the kindergarten phase. That’s when the child is put in a stimulating and verbal context, and so, many words appear carried with meaning. The relationship with the book before learning how to read helps the child to make it significant as an object that brings satisfaction. That happens because, by touching, handling, look, stroke the book e play with its pages and pictures, the child feels a pleasure similar to the one given by a toy (André, 2004, p.8). The deaf children need illustrated books as a reference to help them comprehending stories, given the fact that their vocabulary is limited due to their hearing loss. The images are used as isolated moments of a story that can portray an event, a happening, or and action.

It’s important that the teacher look to diverse the usual dynamics to tell stories so that each day there’s a bigger interest and attention for that particular moment. The oral reading can be explored by using support pictures, puppet shows, shadow theater, unwritten stories, and others. Through the story told, one can go to various activities like drawing production, paintings, dramatizations, group book production, photo collage, scrap metal, memory games, music games that stimulate hearing, story sequence through files, retelling of stories by the students, and others.

To work with literature the teacher must make it joyful, attractive, and creative for the children, beginning by the book selection, which must be suited to the age group, starting by its cognitive development. For each age there’s a reading characteristic:

By three years-old the stories must be short, with few details and characters. At this age the child faces stories as if they were real, everything is alive and there exists a comparison with its reality and attempts of explaining and showing how they’re like. From five to six, the child starts to demand, little by little, more elaborated stories of simple comprehension but with a richer vocabulary. At this age the child still scares easily because it can’t distinguish completely reality from fantasy. From six to seven, one discovers a new literary moment in children, because that’s the age the child begins to learn how to read, trying to decipher words. The stories remain short with a simple and known vocabulary and must contain facts that are part of the everyday life, even if subjectively.

## **Method**

It took place in “EPHETA” Specialized Institution in Deafness/Hearing Deficiency a research-action applied in special school that has as a guiding principle the teaching of written and spoken Portuguese language. According to Moreira (2006), the research-action is an intervention in small scale of the real world and the close examination of that intervention. In the school and in the classroom it’s a way of stop the diagnosed problems in specific situations, providing the teachers new abilities, methods to enhance their analyzing skills and introduce extra and innovating approaches in the teaching-learning process.

Epheta presents its own methodology that develops from two axis: hearing/voice/speech and production/reading/linguistic analysis. These axes are resources to the social inputting of the student (Metodologia Epheta, 2000) and are anchored at the officialized legislation by the National Special Plan in Perspective of Inclusive Education (Brasil, 2008). Epheta, by the Epheta Methodology, develops the Portuguese language directed to the acquisition of academic skills of reading and writing that estimate the development of oral language associated to other forms of verbal and non-verbal (drawings, expression, body language, technology and others) communications that side each other looking for making the interaction process possible.

The subjects of this study are the students of Epheta, users of the Sound Amplification System (AASI) and Multichannel Cochlear Implant and included also in regular school. The AASI had a significant improvement in the last decades and with the Cochlear Implant the child has the feeling of a hearing with enough quality for perception of speech.

Through the goal of this work, age group, school level and student profile and their needs were selected three stories that: present quality in creation, quality in narrative structure, fitness to the mother tongue, vocabulary diversity, graphic drawing related to the story's plot, facts that deal with everyday life even if subjectively, child and animal characters, adventure subjects and that develop hearing skills through music and dialog.

The selected books were:

FLOP by Laurent Cardon is a book that presents only illustrations with a variety of expressive content, meaningful vocabulary, poetry and creativity.

GOLDILOCKS AND THE THREE BEARS by the version of Annelore Parot is a story that takes place inside a Family home. It presents vocabulary diversity, develops knowledge, language and thought. It awakes the memory, attention, imagination and reflexion.

PETER AND THE WOLF by Sergey Prokofiev was selected because is a story told through music. It presents a musical language in which each character is represented by different instruments.








Through literature the children can develop some important abilities such as, attention, mimicking, memory, imagination and others. For such, there were used memory games with the elements of the story, dramatizations, puppet shows, drawings, games with music that stimulates hearing, story sequence through files, retelling of stories by the students, among others strategies.

Analysis and outcome of the use of "Peter and the Wolf"

The strategies used to the realization of the "Peter and the Wolf" story telling, the activities proposed and comments about the experiment are presented at Table 1.

**Table 1: Analysis and outcomes of the use of "Peter and the Wolf"**

Table 1  
 Analysis and outcomes of the use of “Peter and the Wolf”

PETER AND THE WOLF	
Proposed activity	Outcome
<p>The story was told by the use of the book and the supplement of music.</p> 	<p>The story drew attention due to the use of music. The students perceived that each character had a different song.</p> 
<p>The students drew and told the story to the teacher. Each student borrowed a copy of the book to tell the story at home for the family and vice-versa.</p>	<p>Each student drew the story their own way. The teacher then asked about each drawing and the students described it. The teacher made the register of what they said in the drawing itself.</p>
<p>The students dramatized the story with the teacher’s help. At the dramatization there’s was the recorded music accompanying the plot.</p> 	<p>It was a very dynamics activity. All the students participated. They feared the wolf represented by a student. Each student represented a character. The dramatization was performed at the classroom. Costumes weren’t worn. Each student knew what their character was like and how to act according to the story. The children created their own story through the story that was told. The vocabulary we used to present the story became significant when the child was involved with the story. This story eventually went out of the classroom and went to the patio and to the household.</p>
<p>Performing of a few pedagogic activities involving the music that each character represents, as well as activities of literacy and basic concepts.</p>	<p>Some students realized that each character was represented by a different song. Others realized that the song was different, however, couldn’t tell correctly which song it was. The activities of literacy were performed according to the level of learning of each student. For a few of them it was needed the intervention with the demonstration of the concrete material to develop the activity.</p>
<p>Specific activities of hearing abilities with dialog, files and pictures of the musical instruments from the story and the recordings of the songs.</p> 	<p>This activity was performed with the use of puppets from the story and the recorded CD. It was studied the characters and their songs. Some students identified by hearing the names of characters like the grandpa, Peter, the wolf, the hunter, the bird, the duck and the cat, and also recognized by hearing the songs that represented each character, therefore, answered to questions raised by the teacher to verify the comprehension of the story.</p> 
<p>Ludic activities with elements that are part of the story, musical instruments, music, different versions of the story, memory games with pictures of musical instruments and characters, costumes, masks, and others.</p> 	<p>This moment was developed in classroom using different versions of the story in different books, memory games, puppets and the music that was played while the kids were playing in the room. Some students heard the music and made references to the puppet. Some played freely dramatizing the story.</p> 



## **Conclusions**

This Project is centered at the proper and planned use of activities to develop hearing skills, the linguistic improvement and the taste for literature of the students of Epheta and can be performed at the regular school as well, because it provides the teaches a theory base and pedagogic activities suggestions developed within the context of children stories. For such, it is needed to analyze and select the stories that are fitted to the school level of the student and to the pedagogic content of the school, proposing strategies to develop the selected stories, adapting pedagogic resources and evaluating the efficiency of the developed strategies.

As the activities went, it was possible to observe some aspects about the students' performance, like, for example, articulating sentences from the character's speech, representing and expressing certain situations that occurred in the story, expressing their ideas orally, retelling the story with the story characteristics told by the teacher like object names, character names, names of places, character description, as well as narrating facts as they happened in the story, tell experiences of diverse everyday situations connecting it with the story, showing feelings, opinions, wishes, needs and others. In the use "Peter and the Wolf", it was clear that music is an element that can't be forgotten from the classroom of deaf children, because every student noticed it and some were able to recognize the songs related to the characters and musical instruments.

The children stories perform a fundamental role in the process of language acquisition, verbal communication and writing. These stories promote the possibility of the deaf student to make the use of the language in a comprehensive way, opening the possibilities of dialog and increase o verbal repertoire and like that, making it easier the beginning of literacy for a deaf child and possible that this student may go to first grade with an expressive and meaningful language having, like that, the possibility of continuing it's studies in a way it can participate of society autonomously, with respect and being subject-author of their own story.

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## **Inclusion in Brazilian public schools: The contribution of collaborative teaching and consultation**

Maria A. Almeida  
Federal University of São Carlos  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

The objective of this study was to describe the establishment and evaluation of teaching and collaborative consultation programs in public school in Brazil. Instruments were interviews, observation, field notes. Collaborative teaching happened three times a week and Consultation meetings were weekly; Results indicated that collaborative teaching improved students learning and collaborative consultation contributed to teacher training. Both, collaborative teaching and collaborative consultation can be an important solution for the inclusion process in Brazil

**Key Words:** Collaborative Teaching; Collaborative Consultation; Intellectual Disability, Inclusion

### **Introduction**

In Brazilian public schools, the inclusion of students with special needs is gradually occurring. The inclusion process has generated conflict and distress to many teachers not knowing how to work with these students even though Brazilian public policies try to guarantee the best about inclusion. Teacher's main complaint refers to the fact of not knowing how to work with special students, mainly with the ones who are not literate.

According to Gargiulo (2012) There are three distinct proposals for collaborative work in the educational context, and can involve: common school educators and specialists (collaborative consultation), common school educator and special educator (collaborative teaching or co-teaching) and service teams of own school.

In this sense, collaborative teaching and consultation can constitute an important form of support for teachers and students with special needs. The collaborative teaching and consultation are forms of mutual work between regular school teacher and a specialized professional to discuss problems, find solutions to problems related to inclusion.

The collaboration has proved to be the main contemporary strategy to feed innovation and creativity for effective educational programs. Considering the difficulty of the educator to effectively meet the needs of all students, the author suggests that the combination of teacher's knowledge and skills / specialized professionals on instructional strategies, approaches to cooperative learning, behavioral problems and assessment practices, could provide the collective creation in more effective schools. (Jordan, 1994; Friend and Cook, 2007; Idol et al., 2000; Kampwirth, 2003, Argueles; Hughes, Schumm, 2000)

Friend and Cook (1990) define consulting as an interaction between two or more partners who work together to make decisions toward common goals. For these authors there are some conditions for collaboration to occur, such as: having a common goal; equality among participants, participation of all in the process, responsibilities and resource sharing, and finally enter the process voluntarily.

Idol et al. (2000, p.1) define collaborative consultation as "Interactive process that enables people with diverse expertise to generate creative solutions to mutually define problems".

According Kampwirth (2003) collaborative consulting must be proposed developed in stages, which are: routing, initial discussion with the teacher, observing the class, meeting with parents, assessment and referral of students, the intervention plan, monitoring of the intervention.

Another example of collaboration is when an assistant professor promotes individual support to students with disabilities who are most of the time in the regular classroom. In this case the head teacher takes responsibility to plan instruction for the entire class, while the special education professional takes responsibility of collaborative consultation along with the classroom teacher in order to plan adaptations, providing specialized curriculum or instruction required by promoting specific in-service training and monitoring student outcomes (Jordan, 1994; Argueles; Hughes, Schumm (2000) .

In light of the above explanation the objective of this presentation to present to case studies that established and evaluated programs of collaborative teaching and collaborative consultation in order to improve reading and writing in students with special needs.

## **Methods**

### Description of the studies

Study 1: This study is part of the doctoral dissertation of Danusia Cardoso Lago, under my supervision and had the objective to evaluate a collaborative teaching program with 4 teachers from public schools in two cities in different regions of the country and involved 5 students with intellectual disabilities. The study was conducted in two metro education networks - the year 2011 in the network of metro schools in São Carlos, São Paulo, and year 2012, with a network of metro schools in Vitória da Conquista - Bahia. The main researcher (Danusia) participated as a special education teacher in four classrooms.

The instruments were: a school questionnaire a semi-structured interview for teachers; semantic test and educational activities for students with intellectual disability; script for daily observation and field notes. Student data were individually analyzed in a qualitative and quantitative manner taking into account the analysis of the process, and interviews with teachers were subjected to content analysis.

The results indicated the importance of Collaborative Teaching for teachers, specifically in the expansion of knowledge about the ways of acting in the regular classroom with students with disabilities; for students, there have been advances in the social aspect - changes in behavior and in academic development. This results support this strategy as a model that could broaden the participation of students with disabilities in the context of the regular school, and provide continuing education for professionals involved. However, this partnership needs to become permanent, and be documented in an official manner so that both students with disabilities as well as regular classroom teachers can count on this

Study 2: This study is part of a doctoral dissertation conducted by Andrea Carla Machado, under my supervision and had the objective to verify the effects of a program developed by a special education collaborative consulting professional with special education teachers in one elementary metro school which indicated the students who were having learning difficulties. This is a survey of collaborative design imprint, whose investigative path was qualitative / quantitative design with pre-test-intervention- post-test-Tracking. To do so, data were collected through thirteen instruments distributed among the participants: Students (14) and their parents (14), teachers (06) and expert / researcher.

The consultant proceeded with a plan of action in three levels from the knowledge of the needs of students needs and their teachers, to the establishment of a partnership with systematic support among teachers in meetings every fifteen days , plus activities for reflection on practice, meetings with family members, and meetings with students:

In relation to parents of target students, monthly lectures were given to assist them in relation to academic life of their children. Data were collected before and after the intervention and also follow-up.

The results indicated a positive effect in relation to collaborative consultation with statistically significant difference when comparing the data before and after follow-up.

It is noticed a social validity when responses on satisfaction from teachers and parents were obtained.

Study 3. This study is part of a Pos Doc Report developed by Sandra Lúcia da Silva, under my supervision. The objective of this study was the establishment and evaluation of a program on collaborative consultation between the project coordinator, specialized teacher and regular education teachers for intervention in reading and writing with children and adolescents with different educational special needs.

The project arose due to a concrete need for a local public school. The study was guided on a methodology of collaborative action research, in which the function of the researcher is to take part and make a process of change previously stated by the group to achieve the scientific standards.

The research was realized in one regular public school located in the interior of Sao Paulo state, Brazil. The participants were the researchers (one university professor, one specialized teacher) and 8 regular public school teachers who have children with disabilities in their classrooms. Eight children were involved. The project was approved by one government research agency that provided all the material and equipment necessary. Besides that, each teacher was contemplated with a scholarship for being a study participant. Thus, digital cameras, computers, printers, among other equipment, as well as all sort of materials on reading and writing were offered to teachers in a way they could better prepare their classes and videotape/photograph they own action in classroom. The teachers had group meetings every week with the researchers to evaluate and to discuss their own progress and problems found in every day situation. Besides that, they had lectures every month with a specialized professional about a chosen topic by the group.

The data was collected by teacher interviews before and after intervention, Intervention Planning Protocol on reading and writing, Field Diary, Student Progress Recording, Videotape Recordings on children performance. The results demonstrated that the collaborative consultation project has been proven to be an efficient support for teachers who have special children included in their classrooms. During the meetings the teachers verbalized they feel much more prepared to teach and the data on children demonstrated that not only the children with special needs but all children in their classroom made visible progress in reading and writing skills.

The results demonstrated that the collaborative teaching helped student s in the acquisition of reading and writing and that the collaborative consultation has been proven to be an efficient support for teachers who have special children included in their classrooms in Brazil.

## **Results**

Most expressive results from the three studies

1. The classroom teacher's impressions about collaborative teaching and collaborative consultation:  
It's a new experience, learn different things and share with other colleagues, this partnership between university and school. So I started to feel more secure for this collaborative work. "(Sandra's Study)  
It's a new experience, learn different things and share with other colleagues, this partnership between university and school. So I started to feel more secure for this collaborative work. "(Sandra's Study)  
"I would like to reiterate the importance of the Program on Collaborative Consultation that has contributed so that we could increase the positive results of our work." (Sandra's Study).  
"... Our meetings gave us the opportunity to emerging ideas with attempted changes with the evolution and progress in relation to our students and our pedagogical practices." (Andrea's study)

"I think if we had had support from the school coordination for collaborative teaching ...something expressed in one law, we would have had more results! Even though we made much progress in this classroom. "(Danusia's Study)

"[...] Besides helping with the student with intellectual disabilities, Danusia, collaborated with other students and with me in the organization and preparation of assessments for the class, in adaptations for students with special needs, in conducting conversations with some parents of rebellious students [...]"(Danusia's Study)

## 2. Results on student's performance

"I never imagined that a student with intellectual disability who is included in this regular school for more than nine years just doing doodles and vowels could learn so many things. [...] After collaborative teaching in see him being able to respond to an adapted assessment and realizing many other activities on reading and writing" (Danusia's Study)

"B. is starting to read and write...I am so excited! (Andrea's Study)

The collaboration, being in a co teaching form or being in a consultant form, pointed out by Gargiulo (2012) generated many positive results for teachers and students with special needs. Maybe the most expressive result from these three researches can be expressed in this letter that one student wrote to me:

"Dear teacher:

I am writing this letter to you to talk about the project, to say that I liked a lot and also helped me a lot. Before, I did not read the things I did. Today I read and see a big difference. And that is not only this.... Difference at all. But I am writing to you to thank you and the team for everything you all did for me. You helped me a lot. Thanks and have a great season" (Sandra's Study)

## Conclusion

The teachers' involvement with the collaborative teaching and collaborative consultation, has provided the students with special needs a real school inclusion and not just "their insertion" in the regular classroom, where when the "so -called normal" students are developing activities from the curriculum of their grade level, the students with special needs are developing activities that have nothing to do with those developed with students considered "normal".

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## **A learning environment assessment tool (CAAP-AP) to support students with attention and planning difficulties**

M<sup>a</sup> Beatriz Páramo-Iglesias  
University of Vigo, Spain  
[mariabeatriz.paramo@uvigo.es](mailto:mariabeatriz.paramo@uvigo.es)

M<sup>a</sup> Esther Martínez-Figueira  
University of Vigo, Spain  
[esthermf@uvigo.es](mailto:esthermf@uvigo.es)

Manuela Raposo-Rivas  
University of Vigo, Spain  
[mraposo@uvigo.es](mailto:mraposo@uvigo.es)

### **Abstract**

Attentional and planning processes capabilities are configured as axis of learning process, but even more of teaching process. Under the umbrella of developmental education, an instrument (CAAP-AP) is presented in response to some difficulties in these cognitive processes, from the teaching practice in a particular learning environment. Having said that, attention and planning are positioned as curriculum content and academic activity; and functional, temporal and relational dimensions articulate that instrument. We could be faced with two metacognitive strategies extrapolated to any practice and teaching sequence.

**Keywords:** learning diversity, Childhood, cognitive processes, attention, planning, CAAP-AP.

### **Introduction**

The concept of education for development, its theoretical framework and its implications in the classroom have been key factors in determining intervention and analysis educational models, present in the classroom that have been happening over time. Learning to learn has been emerging to position itself as a key point of education nowadays, allowing reflection and analysis to understand the learning disabilities and in particular, attention to diversity and learning variability s that we could sense in the classroom at an early age. In line with latest educational trends, intervention in learning disabilities and attention to diversity is considered that intervention in the NEAE need to take of attention and planning processes as driving elements of the teaching processes (Das, Deaño, Garcia and Tellado, 2000).

This paper`s starting point is a more extensive study on teaching and intervention practice in planning and attention in Childhood (Páramo-Iglesias, 2011), assessing the learning environment, having the role to enhancer them by CAAP-AP, (Cuestionario sobre los Ambientes de Aprendizaje como Potenciadores de la Atención y de la Planificación - questionnaire on learning environments as enhancers to attention and planning). This instrument is design as a tool for the analysis of how the learning environment and these two cognitive processes are organized to answer to different needs, limitations and skills that they could be already notice in children in Early Childhood Education. The process of construction and validation of the instrument reported reflections, dimensions and first data, explained in the following pages.

## **Method**

The main objective of CAAP-AP is to assess how teaching practice works attention and planning in Early Childhood Education. The specific objectives are:

- To find out the importance given on care and planning, as well as activities in charge of strengthen them.
- To determine type of activities that are developed to enhance them at different times school hours.
- To know the level of interaction between teachers and students in different moments when are worked these two skills as well as time spent on them.

The procedure followed for the original construction and subsequent validation was initially constituted by a literature review and analysis of content, and later, on a first version of the instrument, to perform a pilot study and Delphi technique, as there are not procedures or adequate statistical data to estimate the content validity in a qualitative questionnaire (Hernández, Fernández and Baptista, 2010).

The sample that has made it possible both construction and validation of the questionnaire was delimited through non probabilistic techniques, being a casual sampling (Cohen, Manion and Morrison, 2011) and consists, for the pilot study, of ten Early Childhood Education teachers in schools of the city of Lugo (Galicia, Spain) and secondly, to carry out the Delphi technique, eight teachers belonging to Early Childhood Education and University, Degree of Education.

Through these technical, data are collected that allow first approximation of the instrument between the latest version of it, after making modifications and guidance about estimates, technical adequacy, suitability, subject and form. This meant suggestions about:

- Presentation: related to the need to make known the study, indications and previous definitions of the subject, as well as the closure, with a question designed to observations.
- Extension, which was decreasing as advanced different versions.
- Format, as to the need for two-way tables, point type, letters and differentiation between questions and answers.
- Alternative options to answer some questions and changes in names, in order to be closer to the teachers 'speech.

The final version of the CAAP-AP instrument is made up of 19 questions, 20 variables, 192 sub variables grouped into four dimensions that meet the Iglesias 'suggestion (2008) relating them to an environment in charge of learning to learn and attention to diversity: Contextual data: consists of ten questions about institutional geographic information (ownership, location, number of students and teachers and educational levels), personal (gender and age) and professional (employment status, years of experience, ratio of students in classroom, aid in the classroom and its specification).

Physical dimension, a question related to the classroom's organization (free and self-directed time, guided moments, guide individual moments and guided small group time) and another question in terms of the spaces' versatility.

Functional dimension, which by Likert scales reflects the importance that teachers attributed to attention and planning as cognitive learning strategies; and to a series of attentional and planning activities to point if teachers think they can enhance the capabilities mentioned. The last question of this section scattered these items activities that develop sustained and selective attention, planning, memory and imagination, which are respectively abilities necessary for the development of these cognitive processes. In this, teachers have to point out if they used those activities at different times indicated in physical dimension.

Temporal and relational dimension, which raises, in one hand, the time that teachers enhanced this capabilities at different times with a temporal scale estimate (ten to ten minutes) ranging from none to more than an hour. And, in the other hand, there is a question about the level of teachers and students' participation and control at different times in which these processes are worked by an estimation scale.

In this way, validated its suitability through the above techniques and Cronbach's alpha of .96, which has a high level of questions` stability (Field, 2009), we present an instrument that would response how teachers organize the environment in charge of enhancing attention and planning strategies and activities (Osorio and Gonzalez, 2008).

### **Results and discussion**

The pilot study reported some initial results about how teachers work attention and planning in their classrooms. We classify them in order to response our objectives, using the dimensions mentioned.

In relation to the physical dimension 60% of teachers noted a mixed organization (guided individual moment and small group) and the remaining debate between a small group and free and self-directed time organization. In terms of spaces` versatility and dynamism the balance is equalized among teachers that enable transformation and who are inclined to astaticism.

Focus on the functional dimension, these early data suggest that the conception of teachers towards the attention and planning is positive, all respondents value the high importance of the first and 80% in the second; which is corroborated by the high rate of attentional activities identified as important (between 100% and 80% of activities), and finding more plurality in planning (between 20-60%). However, responses to the following question about the real implementation of these activities in different educational moments, we find the following: despite a mixed organization, between 70% and 80% respondents do not us, in order to word these cognitive processes, free and self-direct moments (for example in the classroom`s corners with different activities), as happens with the routines (small group guided times). It is at individual guided moments where 94% of the activities are used; and between 70% and 100% used guided moments to development planning activities.

And finally in relation to the temporal and relational dimension, note that guided small group is when these two processes are worked (about 41 to 60 minutes throughout the school day) with enough teachers` participation (50%) and some among students (60%), followed by guided moments. The information about participation and control shows that teachers and students` control is between a lot and enough.

### **Conclusions**

This instrument show many agents who are involved in the process of developing attention and planning in Early Childhood Education. With the pillars and dimensions of the instrument it allows for analyzing and reflecting how teaching practice affects learning to learn, and development of the two basic cognitive processes in this educational stage. Nowadays, attention to diversity (Martínez-Figueira, 2012, 2013, Martínez-Figueira and Raposo-Rivas, 2013; Martínez-Figueira, Raposo-Rivas and Añel, 2012) is a concern in these early ages. It means new procedures into regular classes, work and dedication to the difficulties and limitations, but also to strengths. This kind of instruments would be the first steps of analysis and reflection in order to best-practice with metacognitive intervention, new proposals, techniques and materials, answering to inclusive key of learning to learn in different contexts of socialization.

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## **Cross-cutting issues and students with intellectual disabilities**

Maria Rita Figueiredo Toledo Volpe  
Educational Institution - Brazil  
[rita\\_volpe@hotmail.com](mailto:rita_volpe@hotmail.com)

Stella Maris Cortez Bacha  
Speech-Language Office  
[sbacha@terra.com](mailto:sbacha@terra.com)

### **Abstract**

Intellectual disability (ID) is characterized by significant limitations, both in intellectual functioning and in adaptive behavior, which covers a range of everyday social and practical skills. To attend the educational and the social functioning life necessities of the students with ID, it is important that the school offers them an educational proposal that attend the traditional areas and contents (Language, Mathematics, History...) and present, across, other themes linked to everyday life, relating to ethics, environment, health and sexual orientation, proposed as ‘Cross-cutting issues’ (CCI), in order to help them to understand and to deal with important issues of daily life. The purpose of this work is to show a speech-language action in school, involving CCI. These issues were presented, by the teachers, in thematic groups, to 16 students of a special educational school, in 2011 and 2012, and were adapted by the speech-languages of the school and characterized a transforming proposal for new social, personal and collective attitudes.

**Keywords:** Intellectual disability, cross-cutting issues, special education

### **Introduction**

People with Intellectual Disability (ID) are known for presenting significant limitation, both in their intellectual functions – logic, learning, problem solving - and in adaptive behavior, which involves several social abilities and daily routines. Amongst social skills, we highlight interpersonal skills, which are the capacity of dealing with other people in an appropriate way to each person’s needs and demand of the situation, as well as abilities related to social responsibility, ability to follow rules, obey laws, and others. As for the practical abilities, we can mention daily life activities – personal and health care, as well as ones which involve occupational abilities and routines (AAIDD, 2013).

This way, in the educational environment, students with ID must always be guided towards favoring their learning process and academic development, additionally to the other abilities mentioned in the paragraph before, with the purpose of achieving the highest level of functionality and quality of life.

It is important that the school offers this student more than only the traditional subjects (Mathematics, Native Language, Physical Education, Arts and so on), but also offer structured opportunities of learning through offering themes linked to their daily lives, and by doing this behold both their educational needs and ‘social-functional’ lives.

It has been many years since Brazil has opted for an inclusive educational system, and following the national guidelines for special education and basic education, the Política Nacional de Educação Especial na Perspectiva da Educação Inclusiva (National Policy of Special Education in Inclusive Education’s Perspective) has been in effect, which aims to ensure educational inclusion of students

with Necessidades Educacionais Especiais – NEE (Special Educational Needs), including the Atendimento Educacional Especializado – AEE (Specialized Educational Counseling), which benefits students with ID among others (Brazil,2007).

There are also the Parâmetros Curriculares Nacionais – PCNs (National Curricular Plan Guidelines) (Brazil, 1998), which are a reference to innovating and re-elaborating the Brazilian curricular proposal; a document shaped not by an imposing and even curricular model, but by a flexible proposition, which brings reference to primary, secondary and high schools all over the country; assuring the children and youngsters in Brazil the right to make use of the knowledge known as necessary for citizenship.

In volumes eight to ten, the PCNs (Brazil, 1998) present the ‘Cross-Cutting Issues’ for primary and secondary schools. They are: Ethics, Environment, Cultural Variety, Health and Sexual Orientation. These, which have been adapted, have been used as reference for students with ID in the education project described in this paper.

In a featured way, the speech- language acting with people with ID approaches, in both evaluation and intervention, the spoken language in its pragmatic, semantic and grammatical (syntax, morphology and phonology) aspects, the written language (reading, writing and mathematics) and orofacial myology (Brazil, 1981; CFFa, 2010).

The purpose of this paper is to present a speech- language practice in the educational environment, involving ‘Cross-Cutting Issues’ with 16 students with ID in primary school at a special educational school in the city of Campo Grande – MS, Brazil.

## **Methods**

Starting from the educational context and reality of the students, thematic groups with sub-topics were chosen by the pedagogical team and speech- languages together:

- Related to Ethics: mutual respect, justice and solidarity;
- As for the Environment: quality of life, environmental balance, social relationships, family life and violence;
- About Sexual Orientation: dating, birth control methods, sexually transmitted diseases;
- For the theme Health: basic notions of hygiene, personal care, drugs and alcohol consumption and teenage pregnancy.

The thematic groups were organized randomly and presented by the teacher in a structured lesson which happened once a week for sixty minutes. These lessons had a didactic treatment themselves:

- 1 – Texts were elaborated by the school’s speech languages based on varied reading about the chosen subject (from the Internet, newspapers, magazines and books) and given to the teacher for awareness and inclusion in the lesson plan;
- 2 – As for the textual production, what were used as criteria: accessible vocabulary of common and simple usage, as well as in a short display;
- 3 – About the visual-graphic production: texts were typed using font Arial, size 16, upper-case letters and double-space, aiming for accessibility while reading;
- 4 – Three to five questions were elaborated to begin the discussions;
- 5 – Only one text was presented in each lesson.

After reading each text, discussions happened to cite thinking and lead to understanding of the theme chosen.

This educational proposal had the support of teachers involved during the years of 2011 and 2012. When necessary, themes were presented again in another given time, in the speech- language therapy counseling with students.

There is an example of one of the texts below:

Centro de Desenvolvimento do Potencial Humano Raio de Luz-Texto n. 18  
VALE A PENA SER HONESTO?  
É COMUM VERMOS PESSOAS TENTANDO ENGANAR O PRÓXIMO.  
SE PROCURARMOS A PALAVRA HONESTIDADE NO DICIONÁRIO, ENCONTRAREMOS A SEGUINTE DEFINIÇÃO: ATO, QUALIDADE, OU CONDIÇÃO DE SER HONESTO. ISTO INCLUI SER VERDADEIRO EM SEUS ATOS E DECLARAÇÕES, SEM ENGANAR, MALICIAR, MENTIR OU FRAUDAR.  
A MAIORIA DAS PESSOAS ODEIA DESONESTIDADE E CORRUPÇÃO. CONTUDO, MUITOS ACHAM QUE UM POUCO DE “FALTA DE HONESTIDADE” NAS PRÓPRIAS VIDAS, É UMA MANEIRA FÁCIL DE CONSEGUIR AS COISAS.  
EMBORA PAREÇA QUE AS PESSOAS DESONESTAS SEMPRE SE “DÃO BEM”, POR TRÁS DISTO, HÁ SEMPRE CONSEQUÊNCIAS QUE FAZEM OS OUTROS SOFREREM, PERDEREM ALGO IMPORTANTE OU ATÉ MESMO SE PREJUDICAREM.  
ENGANO PENSAR QUE ELAS REALMENTE SE “DÃO BEM”.  
QUEM AGE SEM HONESTIDADE, SENTE CULPA EM VEZ DE PAZ, FICA ENVERGONHADO AO SER APANHADO, INVENTA MENTIRAS PARA ENCOBRIR SEUS ATOS, PERDE A CONFIANÇA DOS AMIGOS E PESSOAS QUE AMA.  
AO VIVERMOS UMA VIDA HONESTA, TEREMOS PAZ, ALEGRIA, RESPEITO DOS OUTROS, E BONS RELACIONAMENTOS. E ENTÃO? VALE A PENA SER HONESTO?

Adaptado por: Maria Rita Volpe e Stella Cortez Bacha

**Figure 1: Example of textual production / theme Ethics (original text, in Brazilian Portuguese)**

## Results

The described educational proposal developed throughout the years of 2011 and 2012 presented the following results:

- 1 – About 76 informative and/or reflective texts involving Cross-Cutting Issues were elaborated with linguistic accessibility and facilitating teaching/learning for students with ID;
- 2- The educational action favored interpersonal relationships in the school environment as well as change and/or establishment of new attitudes and social practices.
- 3 –The acquisition of new concepts and general knowledge related to the environment and society was observed;
- 4 – The development of learning processes, autonomy and participating was also observed;
- 5 – Due to the grandest linguistic difficulty, it was necessary to retake some themes with three students in individual speech- language therapy sessions. This resource favored the learning process.

In this educational practical proposal, the speech- language therapist had a decisive role in the pedagogical team at the educational institution, guiding and intermediating actions involving students with greatest language difficulties.

## Conclusion

The Cross-Cutting Issues worked as described are a way of including social matters in the school curriculum, working as a didactic instrument and transforming the lives of students with ID.

The presented proposal achieved its goal and can demonstrate several possibilities of acting in Educational Speech-Language Therapy in the educational environment.

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## **Inclusion in a transformation school district: A crisis inclusive approach**

Marianne J. Fidishin

Gary Community School Corporation, Indiana, USA

[mfidishin@comcast.net](mailto:mfidishin@comcast.net)

### **Abstract**

Despite the long-standing campaign for inclusion of special needs students in general education classrooms, many poor, urban school districts continue to have a disproportionate number of minority students with disabilities in segregated classrooms. With a history of segregating students and findable direction from the state education agency, the purpose of this case study is to describe the process that one urban school district implemented to increase inclusive opportunities for special needs students. Challenges to the process are discussed and findings support that inclusive practices are successful through invested leadership.

**Keywords:** Special education, inclusion, urban

### **Introduction**

Since the inception of Public Law 94-142, the Education for Handicapped Children Act (EHCA), in 1975, one basic yet crucial element of the legislation is to ensure that all special needs children be educated in the least restrictive environment (LRE). Despite undergoing several revisions, the most recent in 2004, IDEA continues to enforce LRE as a key principle of the legislation.

Wright and Wright (2009) explain, "to the maximum extent appropriate, school districts must educate students with disabilities in the regular classroom with appropriate aids and supports, referred to as supplement my aids and services, along with their nondisabled peers in the school they would attend if not disabled, unless a student's individualized education program (IEP) requires some other arrangement." The concept of inclusion, however, is not defined in the federal Legislation and no federal definition as such has been created (Wright & Wright, 2009).

Without a succinct federal definition, educators and scholars have sought to define inclusion with great variation (Collins, 2003; Katzman, 2007; Stainback & Stainback, 1990; Odoms, Buysse & Soukakou, 2011; and Osgood, 2005.Odoms, Buysse and Soukakou, 2011). A most recent version of Miriam Webster dictionary defines inclusion as: "the act of including; the state of being included; and the act or practice of including students with disabilities in regular school classes" (Miriam Webster, n.d.).

In 1993, the United States Congress instituted the Government Performance and Results Act (GPRA) to measure federal program performance. Resulting from concerns that federal programming lacked specific goals and outcome information, the GPRA required every federal agency to develop annual performance plans and program performance reports. In 2004, when the Individuals with Disabilities Education Act (IDEA) were reauthorized, similar performance requirements were instituted for state education agencies (SEAs), the state departments of education. One of the key goals of the monitoring was to ensure the provision of Free Appropriate Public Education (FAPE) in the least restrictive environment. As a result, the Office of Special Education Programs (OSEP) identified 20 indicators to guide SEAs in their implementation of IDEA and in how they report their progress and performance to OSEP itself. Indicator five (5) was specifically designed to address LRE by identifying the percent of children with IEPs aged 6 through 21 served: a) inside the regular class 80% or more of the day; b)

inside the regular class less than 40% of the day; and c) in separate schools, residential facilities, or homebound/hospital placements. (National Dissemination Center for Children with Disabilities, Part B Indicators, n.d.).

## **Method**

The school district in this case study is in an urban, Midwest city consisting of 8922 enrollment of 8922 students, kindergarten through grade 12. Of those students, 80.6% qualify for free and reduced lunch (and indicator of socio-economic status), 15.3% qualify for special education services, and is 92.8% African American. DeMatthews and Mawhinny (2013) remind us students with disabilities are separated and/or isolated from their non-disabled students more frequently in urban, high poverty, minority schools.

The school district had a history of significantly failing in all twenty special education indicators. With the requirement to monitor school districts more closely, the SEA assumed strong oversight of the district special education programming in 2006 to guarantee compliance was obtained and maintained. However, despite this oversight, the school district did not show improvement or positive progress on any indicator. It wasn't until the arrival of a new superintendent and director of special education in July, 2012, that special education programming received much needed attention.

Successful inclusive processes and practices require a strong investment in such practices and processes. Absent that investment, certain practices challenge inclusive practices and or maintain segregation between special education and general education students. McCarthy, Wiener & Soodack (2012) found the internalized institutionalized practices of a school maintain obstructions to inclusive practices. By way of interviews with eleven administrators, McCarthy et al. (2012) found that historical beliefs about special education were perpetuated in, 1) expectations of the students, 2) placement decisions, 3) teacher tracks, and 4) administrative structures, which include special education decisions made by central administration principals' detachment from special education law, programs and requirements as the impediments to successful inclusive model. Much like the McCarthy et al. (2012) results, the district noted similar barriers, promoting an overwhelming number of students enrolled in full time special education classrooms.

During the 2012-2013 school, the percentage of district students in general education 80% or more of the day (GE 80%>) was 18.26%; the state target was 60.4% or more. Similarly, the percentage of students in general education 20% or less of their day (GE 20 %<) was 60.7%; the state target was 15.27% or less. This data reveals the substantial level of segregation special needs students experienced. More accurately, student placements were diametrically opposite of state requirements. Student placements for the 2012-2013 academic years (August 15, 2013 to May 30, 2013) are depicted in Table 1.

**Table 1: Students placements for the 2012-2013**

School	GE 80%>	GE 20%<
School A	18.8	50
School B*	0	0
School C	0	95
School D	24.6	73.1
Middle School 1	9	70
School E	18.6	26.7
School F	0	91
Middle/High School 2	17.2	55.8
School G	3.2	39.3
School H	2.9	29.4
High School 3	100	0
School I	100	0
School J	2.5	80
Middle/High School 4	16.2	63.5
School K	26.6	62
Middle/High School 5*	100	0
Total	18	60.7
State Target	60.4	18.3

\*Select enrollment school

As noted by the data, considerable segregation existed, supporting the SEAs aggressive oversight of the special education programming. Furthermore, the majority of the students were segregated from the general education population from eligibility determination in elementary school through graduation progress. Consequently, the SEA employed their authority to withhold federal funding until demonstrated progress. More specifically, the district was required to meet SEA established special conditions to obtain the federal IDEA funds.

An overall climate and culture of a district that did not support inclusion, as theory or practice was arguably the greatest challenge confronted. As McCarthy et al. (2012) remarks, long-standing historical beliefs significantly impede progress towards full inclusion. Another challenge district leaders faced was the inability to properly prepare staff for the inclusion process. Hampered by deadlines imposed by the SEA special conditions and a teacher's contract that strictly limited professional development opportunities, teachers received little preparation in advance of the upcoming school year. Besides the district-wide mandate to schedule students in greater number of general education classes, the strategy that promoted inclusion the most was utilizing special education case managers. This position was designed to supervise and facilitate the Individualized Education Plan (IEP) meeting process, in effort to addresses inclusion challenges such as increase teacher's expectations of special needs students, increase focus on LRE placement, and to ensure decisions were made under the auspice of special education law and best practice.

## **Results and Discussion**

Within one year of inclusive oversight and practice, Table 2 reveals the significant change in LRE placements.



**Table 2: Least Restrictive Environment, January, 2014**

*Least Restrictive Environment, January, 2014*

School	GE 80%>	% Change	GE 20%<	% Change
School A	30.2	0	35.5	-29
School B*	87.5	+71.2	0	
School C	18		63.9	-32.7
School D	31.3	+27.2	57.8	-20.9
Middle School 1	12.5	+38.9	72.5	+3.6
School E	35.1	+88.7	35.1	+31.4
School F	27.3		45.5	-50
Middle/High School 2	31.9	+85.5	43.6	-21.9
School G	43.8	+1268	36.5	-7.1
School H	46.2	+1493	17.8	-39.5
High School 3	84.8	-15.2	9.1	
School I	85.3	-14.7	2.9	
School J	44.7	+1688	34.2	-57.3
Middle/High School 4	26.6	+64.2	42	-33.9
School K	31.8	+19.5	56	-9.7
Middle/High School 5*	100	0	0	0
Total	32.1	+78.3	39.6	-34.8
State Target	60.4		18.3	

\*Select enrollment school

Even though the district has yet to reach the LRE goal established by the SEA, substantial growth has been made: 78.3% increase in inclusive settings. Encumbered with building the plane as they're flying it, the district has provided professional development for teachers during the 2013-2014 school years. One of the most unfortunate consequences of the radical inclusive process has been the academic preparedness of the special needs students. Since students had languished in segregated special classrooms coupled with low teacher expectations, transitioning students to grade level classrooms has been challenging. Considerable support is required for both the students and teachers to guarantee academic achievement.

**Conclusion**

As the school district moves forward, providing an appropriate education in the least restrictive environment for special needs students is paramount. With a year of experience lived, notable concerns were identified and must be addressed to make certain students are provided an inclusive learning environment. Of utmost importance is an increased focus on sound instructional strategies for both general education and special education teachers. Providing engaging, relevant instruction while differentiating to all students though a multi-sensory approach addresses the needs of all students. Likewise, increasing the expectations of all students, especially special needs students, and establishing sound behavior management strategies would greatly diminish any challenges while changing the overall school culture.

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## **Co-Teaching as a strategy for inclusive schooling: Do yhis, don't do that!**

Marilyn Friend

The University of North Carolina at Greensboro

[m\\_friend@uncg.edu](mailto:m_friend@uncg.edu)

### **Abstract**

Although co-teaching is widely implemented as an inclusive educational approach, evidence of its effectiveness is limited, at least partly because implementation is inconsistent and not necessarily reflective of practices known to enhance its positive impact on student achievement. Four critical components of co-teaching that contribute to its efficacy include (a) strong administrative support; (b) role reciprocity between teaching partners; (c) specially designed instruction embedded in the general curriculum; and (d) contemporary collaborative planning practices that include alternatives to face-to-face planning. When these components are firmly in place, co-teaching is far more likely to result in improved educational outcomes for students with disabilities.

**Keywords:** co-teaching, inclusion, teacher roles, collaboration, curriculum access, specially designed instruction

### **Introduction**

One option for inclusive schooling is co-teaching (Friend, 2014), in which students with special educational needs (SEN) join typical learners in a general education setting for all or part of the school day accompanied by their SEN teacher. The teachers, who partner in sharing instructional responsibilities and accountability, collaborate to ensure that dual goals are accomplished: First, all students in the class have access to and succeed in the general curriculum; second, students with SEN receive the specialized instruction that will enable them to succeed academically, behaviorally, and socially. The result is an intensive and individualized education for all the students. However, this approach is not without controversy: Many professionals report positive data related to student academic achievement (e.g., Huberman, Navo, & Parrish, 2012; Walsh, 2012), but others express concern about the lack of rigorous research on this service delivery arrangement (e.g., Solis, Vaughn, Swanson, & McCulley, 2012). Co-teachers often are left wondering how to make sense of the research that exists and how to ensure that their practices enhance student outcomes.

The purpose of this paper is to draw on existing literature to identify dilemmas faced by co-teachers (don't do this) and to propose strategies for addressing such dilemmas (do this). The challenges addressed include the nature of the relationship that should exist between co-teaching partners, the necessity of embedding specially designed instruction in co-taught classes, contemporary models for collaborative planning, and the importance of administrative support.

### **Method**

Effective Co-Teaching Practices

Reciprocal Relationship between Teachers

In the past and too often in the present, the roles of general education (GET) and special educational needs (SET) teachers have been conceptualized in a way that may undermine co-teaching practice. Specifically, co-teachers may not have an opportunity to negotiate their classroom roles prior to the

beginning of the school year, and thus they may settle into the roles they know best, that is, the GET leading most instruction and the SET providing individual assistance to students who are struggling (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). Much has been written in the professional literature about the risks of this arrangement, including teacher dissatisfaction and student perception of the special needs educator as a paraprofessional (e.g., Embury & Kroeger, 2012).

In contemporary practice, role clarity and reciprocity are emphasized (e.g., van Hover, Hicks, & Sayeski, 2012). That is, the GET is primarily responsible for the core curriculum while the SET is primarily responsible for the specially designed instruction needed by students with disabilities. However, the expectation exists that the GET is clarifying curriculum expectations for the SET so that the latter can effectively participate in its delivery. Simultaneously, the SET is informing the GET about strategies needed to reach students with special needs, so that the latter can effectively participate in the delivery of those strategies. This reciprocity results in a classroom in which instruction is intensified and clearly tailored to ensure student success. Reciprocity does not mean that the teachers are interchangeable, but it establishes parity in the classroom (e.g., Gurgur & Uzuner, 2011).

### Embedded Specially Designed Instruction

No one would argue that teachers are under enormous pressure to deliver a rigorous curriculum and make certain that their students achieve proficiency in that curriculum. Unfortunately, in co-taught classes this sometimes translates into SETs focusing almost exclusively on answering student questions about the topic at hand and trying to quickly remediate any gaps that emerge related to the current instruction. What often does not occur is the delivery of the specially designed instruction (SDI) that directly addresses the student's disability-specific needs. One symptom of this dilemma is seen when SETs rely entirely on the GET's lesson plans for co-taught lessons; no additional set of plans reflects how students' disability-specific goals are being addressed within the planned instruction.

Concern about the delivery of SDI is a hallmark of contemporary co-teaching (e.g., Brinkman & Twiford, 2012; Friend, 2014). SETs have responsibility for identifying student's needs and interventions to address them (e.g., strategies related to learning, behavior, social interactions). They then are charged with finding places within the general instruction to inset such SDI, whether this is accomplished by grouping students in a particular way, individualizing work that students complete, or focusing on particular skills with designated students even while teaching a larger group. Finally, the SET (and possibly the GET) gather appropriate data in order to document service delivery and plan next steps for instruction.

### Contemporary Collaborative Planning Models

A quick review of the professional literature demonstrates that the lack of common planning time has plagued co-teaching implementation almost from its inception (e.g., Conderman, 2011). In fact, numerous authors have written about the importance of shared planning time, sometimes even intimating that without it co-teaching is doomed to failure.

Certainly co-teachers need collaboration time, but expectations are growing that they should use alternative models, especially those that incorporate electronic planning options, thus reducing reliance on face-to-face interactions (Charles & Dickens, 2012). Many applications for electronic planning are available, often grounded in contemporary practices in the field of business. For example, in some schools teachers now used a shared calendar (such as the calendar in Google or Microsoft Outlook™); the GET prepares lesson plans within the calendar, and the SET annotates those lesson plans with the required SDI. Because shared calendars allow attachments, teachers also can share planned assessments and adjustments to them, slides to be shown to students, assignment sheets, and other instructional materials. Other teachers use platforms designed specifically for educational planning,

such as Planbook.com. This inexpensive application enables teachers to design lessons, associate lessons with prescribed standards, share lessons among teachers, and include attachments as with a shared calendar.

When electronic planning is the core of collaboration between co-teachers, many challenges are reduced. If this type of planning is supplemented with occasional, intensive face-to-face planning as well as strategies for touching base within the co-teaching time block, co-teaching is both effective and efficient.

### **Administrative Support**

The co-teaching components discussed thus far pertain largely to teachers and their roles and practices. However, unless administrative support is strong and proactive, co-teaching is liable to be too dependent on the commitment of individual teacher participants. The results of limited principal support typically are uneven practices (across grade levels, teams, or departments) and a school culture in which co-teaching is considered an option rather than a necessity.

The role of the principal in successful inclusive schools incorporating co-teaching has been clearly articulated (e.g., Hoppey & McLeskey, 2013; Waldron, McLeskey, & Redd, 2011). The principal ensures that teacher voice is integral to decisions made regarding the structure and delivery of co-teaching in the school, that clear schedules are developed to foster co-teaching, that options are created for flexibility as needed to address student needs, and that teachers are jointly accountable for co-teaching implementation and its impact on student achievement. In addition, the principal sometimes assists the SET and GET to negotiate their relationship; provides support through coaching of classroom practice; and facilitates problem solving when challenges arise concerning teachers, students, or service delivery. Individual teacher partners can create a successful classroom, but only strong principal support can lead to co-teaching as a sustainable option at a system level (Isherwood, Barger-Anderson, Merhaut, Badgett, & Katsafanas, 2011).

### **Conclusion**

As co-teaching implementation grows as a means of making inclusive schooling a reality, it is crucial that practices evolve so that student outcomes improve (Causton & Theoharis, 2013). A number of co-teaching practices that in the past were considered acceptable or even recommended now are viewed as inadequate to achieve the promise of this service delivery option. It is imperative that teachers and administrators continually refine classroom and school co-teaching expectations so that students can truly reach their potential and take their place as contributing members of society.

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## **Cyberbullying: Inclusive practices to address digital aggression**

Mickie Wong-Lo, Ph.D.

Northeastern Illinois University Department of Special Education

[M-Wong-Lo@neiu.edu](mailto:M-Wong-Lo@neiu.edu)

### **Abstract**

The digitalization of aggressive behaviors affects the lives of students across the countries. Cases of cyberbullying behaviors continue to increase within and outside of schoolyards, which generates its significance for practitioners to identify approaches to prevent and intervene effectively. Distinctly, the manifestation of digital aggression and its targeted victims impact students of all backgrounds. In addition, the adoptions of technological methodologies permit its instinctive and global effects, which consequently generate a heightened exposure of vulnerability for the students. The transformation of bullying among our digital generation and strategies towards becoming up standers for all students affected by cyberbullying are discussed. Specific components include (a) etiological knowledge of digital aggressive behaviors, (b) identification of the characteristics and symptomatic effects of cyberbullying, and (c) preventive and intervention strategies of digital aggression among at-risk population.

**Keywords:** Cyberbullying, Digital Aggression, Inclusive Practices

### **Introduction**

The complexities of cyberbullying behaviors challenge researchers to reassess conventional understandings of peer relationship. The shift from face-to-face bullying to the digital display of aggressive behaviors demands practices that encapsulate its fluid tendencies. Cyberbullying incidents reinforce how complex its multi-dimensional nature is and confirms that a unilateral approach should be avoided (Festl & Quandt, 2013; Hinduja & Patchin, 2007; Kowalski, Limber, & Agatson, 2008; Raskauskas & Stoltz, 2007; Tokunaga, 2010; Wong-Lo & Bullock, 2011; Wong-Lo, Bullock, & Gable, 2011; Ybarra & Mitchell, 2004). Specifically, the permanent effects of digital aggression (i.e., Jamey Rodemeyer, 2011; Kristina Calco, 2005; Megan Gillan, 2009; Megan Meier, 2006; Phoebe Prince, 2010; Ryan Halligan, 2003; Tyler Clementi, 2010) present distinct evidence, unlike cases of face-to-face bullying. To anatomize the factors associated with cyberbullying behaviors, a summary of its etiology, classification of digital aggressive behaviors and prevention/intervention practices is discussed.

### **Etiology**

The advancement of technology continues to shape the social climate and introduce innovative mediums for individuals to stay connected. Global accessibility defies traditional boundaries and allows users to enter into territories that were once impossible. While such digital freedom presents opportunities to obtain the unimaginable, the same sentiment can be destructive when operated maliciously. Cyberbullying has been defined by Patchin and Hinduja (2006) as “willful and repeated harm inflicted through the use of technological devices” (p. 152). Since the inception of its definition, additions have been made to specify the tools that aggressive behaviors can be transmitted via (e.g., smart phones, tablets, photo/video social network websites). The modification in the definition of

cyberbullying mirrors its evolving characteristics of aggressive behaviors when digital venues are utilized as ammunition.

### **Characteristics and Symptomatic Effects**

Characteristics that are unique to cyberbullying behaviors provide a framework towards its foundational understanding. Specifically, researchers categorized expressive differences that distinguish the display of digital aggression from face-to-face bullying behaviors (i.e., Wong-Lo, Bullock, & Gable, 2011). One alluring characteristic of cyberbullying behavior is the ability to inflict harm in uncharted territories. Specifically, the display of aggressive behavior through the use of the Internet allows one to submit threatening or hurtful messages that could easily be retrieved within the victims' personal computers and/or digital devices in environments that were once considered private. Second, the chameleon characteristic of cyberbullying behaviors offers an option of hidden identities, which generates an enticing advantage to exhibit aggressive behaviors online versus in-person. Third, global accessibility opens an infinite dimension for the demonstration of aggressive behavior toward its victims internationally. Finally, the permanence of abuse presents a perpetual reminder of the hurtful messages posted through text-messages and/or social networking websites, which inheritably facilitates a repeated cycle of emotional abuse to the targeted victims.

Furthermore, symptomatic effects of cyberbullying behaviors manifest differently across individuals. Researchers have general descriptors of behaviors to consider if the victimization of digital aggression is suspected – for example, emotional and/or behavioral challenges such as a sudden display of social isolation/withdrawal behaviors, refusal or hesitation to attend school/school-related activities, and apprehension towards checking personal electronic messages or websites (Hinduja & Patchin, 2012; Kowalski, Limber, & Agatson, 2008) are among some of the warning signs to be considered.

### **Prevention and Intervention Practices**

The development and implementation of inclusive practices against cyberbullying behavior requires a multi-disciplinary approach with a unified appreciation of individual differences. As noted previously, the ramifications of cyberbullying behavior manifest uniquely in each victim. Therefore, prevention and intervention strategies must not be applied as a blanket remedy across all incidents. It is within recommended practices to adopt preventive measures such as the activation of privacy settings, refrain from posting personal images or videos on public platforms, or review personal profiles to ensure that only trusted individuals (e.g., friends, family members) have access to view a webpage. However, it is important to recognize that these protective strategies do not fully guarantee one from cyberbullying behaviors.

Moreover, researchers suggested that one critical approach when confronting digital aggression is to collect all evidence of cyberbullying behaviors. Such documentation (i.e., text messages, e-mails, screen captures of tainted websites) could assist legal authorities to investigate and further examine a pattern of the aggressive behaviors. Second, to ensure the safety of the victim, it is imperative to report and block individual(s) who exhibit cyberbullying behaviors. Lastly, develop an individual support plan to assist victim(s) and families navigating through the complexities of coping and rebuilding from such trauma.

### **Conclusion**

In the age of connectivity, technology has become a necessity towards global accessibility. The Internet offers a venue for individuals to explore the unknown and opportunities to share personal information with those that are nearby or thousands of miles away. When aggressive behaviors occur within the digital realm, the responsibility to take actions on behalf of the victims is warranted. Regardless of the



role (i.e., victim, bystander) individuals may find themselves part of a cyberbullying incident; it is imperative to recognize that choosing silence is equivalent to condoning the victimization cycle. Therefore, to effectively respond to cyberbullying a behavior is to relinquish the role of a bystander and instead become an up stander against digital aggression.

### **Acknowledgement**

To all the families and victims of cyberbullying, may this manuscript be a voice for those that are voiceless.

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## **Learning difficulties: Symptoms, causes, and solutions**

Paul Worthington

Lindamood-Bell Learning Processes®, California  
[paul.worthington@lindamoodbell.com](mailto:paul.worthington@lindamoodbell.com)

### **Abstract**

Helping children who struggle with language- and/or cognitive-based learning difficulties is a complex issue, but with the application of researched-based sensory-cognitive instruction, it is now possible to better prevent children either from landing in a deficit situation or remediating them once they do fall behind their peers. This paper will illustrate these effects through the lens of a meta-analysis from a cross section of students with disabilities within the United States and a comparative observational research inquiry from very-low-performing schools in Colorado. These results will be offered relative to building a stronger understanding of symptoms, causes, and solutions for specific sensory-cognitive, language-based learning difficulties. The central thesis of these research findings is based on the effects of embracing and applying a comprehensive, robust, inclusive Theory of Mind pedagogy based on Dual Coding Theory. The subjects in this study were served within an inclusive environment, thereby improving a community's capacity to increase achievement for special education students. Methodologically, outcomes will be offered from a mixed-methods research perspective using neuro-scientific, tightly controlled clinical or behavioral interventions, and real-world ecological validity evidenced-based examples from regular educational environments. These findings provide new insight into a research-based sensory-cognitive approach that can meet the challenge of significantly improving the success of children and youth with special education needs.

**Key words:** Inclusion, Exceptional Needs, Learning Difficulties, Self-Efficacy

### **Introduction**

Clearly the goal for educating all children is to have them reach full self-efficacy in their learning behaviors, academic life, ultimately ending in positively participating in the world in which they live. This is especially true for children with exceptional needs. Historically, the prevailing model of addressing language-based learning deficits for children has been to isolate special needs children away from their peers and the community in which they live to address their learning needs. The antiquated model of isolating special education students is particularly alarming when the educational deficits of such students are often compounded by physical disabilities, poverty, abuse, disease, and even war. These individuals—who often need the most assistance—may never even have the opportunity for a normalized education with individuals their own age. How is this to be systematically addressed?

The first challenge is to discover and document, within the early developmental phases of children's growth, the symptoms and causes of at-risk learning behaviors. The next challenge is to then prescribe, on a student-by-student basis, the intervention(s) or solutions to the cause(s) of their difficulties in a scientifically based theoretical model and engage students as much as possible within an ecologically valid inclusive environment.

This is precisely the approach that Lindamood-Bell Learning Processes has been continuously researching and developing with the goal of effectively addressing the wide range of causes and solutions needed for children who are at risk in their learning behaviors. The central model and associated pedagogy of this process is based on Dr. Allan Paivio's Dual Coding Theory, which focuses

on the relationship between language processing and mental imagery. “This theory assumes a distinction between two mental codes: the verbal code and the nonverbal code. Both codes involve various sensory modalities (e.g., visual, auditory, and haptic). Reading as decoding, comprehension, and response is explained via representation and processing within and between the two mental codes in this theory. One of the many instructional implications of this theory is its emphasis on concrete language and multisensory experiences (for extensive treatments of the theory and comparison with other theories of reading, see Sadoski & Paivio, 2001, 2004).” (Sadoski and Willson 2006). Based on nearly thirty years of educational experience, the knowledge we have gained, and the solutions we have discovered, has helped thousands of children learn to their potential. However these solutions remain comparatively unknown in many communities, especially at a global level, in spite of a large corpus of evidence.

What research and practices must be revealed, embraced, and acted upon to best address this demand? The concept of inclusive approaches to meeting the learning needs of children is one of the paramount factors associated with maximizing the potential of all children. What theoretical model is the most compatible with an inclusive approach and how have we researched its application to meeting student learning needs?

## **Method**

The methods we have chosen include two studies. The first is a meta-analysis based on clinical research from our private Learning Centers across the United States, and the second is an observational study based on results from a public elementary school in Colorado.

### **Study #1 (Meta-Analyses)**

#### **Inclusion Criteria**

Two separate meta-analyses were conducted based on the type of Lindamood-Bell® instruction received—the Seeing Stars® program that addresses decoding deficits and the Visualizing and Verbalizing® program that addresses comprehension deficits. Both analyses are based on several studies involving subjects with learning disabilities and deficits. The studies in each area were based on previously reported diagnoses. All studies are based on a single-group, pre-/posttest designs, and were conducted in 2013 at Lindamood-Bell Learning Centers across the United States. Subjects were primarily school-aged and received a minimum of 20 hours of Lindamood-Bell instruction. Table 1 shows the number of studies, disabilities, and the outcome measures for both analyses.

Effect sizes (d) based on standard score changes (posttest–pretest) were calculated using the following formula:  $M / SD$ . Mean effect sizes were determined by averaging across all studies. For example, within Seeing Stars, an average was taken of the five effect sizes for Symbol Imagery, one for each study (i.e., disability category).

## **Results**

Sample sizes were large (> 30) for all of the studies except hyperlexia. Table 2 shows the sample sizes for each of the studies.

**Table 2. Study Sample Sizes**

Seeing Stars (Decoding)	Visualizing and Verbalizing (Comprehension)
Study\Study\N	
Dyslexia225Autism49	
Attention-Deficit Hyperactivity Disorder200Asperger’s Syndrome36	
Specific Learning Disability106Pervasive Developmental Disorder41	
Speech or Language Impairment76Hyperlexia13	
Central Auditory Processing Disorder40Speech or Language Impairment89	

**Table 3 shows the effect sizes for all outcome measures for each of the studies.**

Study	SI	LAC	WRMT	SORT	GORT-FLU	Study	PPVT	DTLA-OD	DTLA-WO	GORT-COMP
Dyslexia	1.24	1.05	1.11	1.10	.74	Autism	.51	.64	.57	.56
ADHD	1.34	1.11	1.24	1.10	.72	Asperger’s	.48	.84	.69	.90
SLD	1.40	.98	1.45	1.15	.79	PDD	.25	.55	.31	.46
SLI	1.50	.92	1.19	.97	.63	Hyperlexia	.82	.99	.24	.58
CAPD	1.51	.92	1.49	1.32	.76	SLI	.58	.48	.49	.61

Note. SI = Symbol Imagery Test, LAC = Lindamood Auditory Conceptualization Test, WRMT = Woodcock Reading Mastery Test (word attack), SORT = Slosson Oral Reading Test, GORT-FLU = Gray Oral Reading Test (fluency), PPVT = Peabody Picture Vocabulary Test, DTLA- OD = Detroit Tests of Learning Aptitude (oral directions), DTLA-WO = Detroit Tests of Learning Aptitude (word opposites), GORT-COMP = Gray Oral Reading Test (comprehension), ADHD = Attention-Deficit Hyperactivity Disorder, SLD = Specific Learning Disability, SLI = Speech or Language Impairment, CAPD = Central Auditory Processing Disorder, Asperger’s = Asperger’s Syndrome, PDD = Pervasive Developmental Disorder.

Using Cohen’s criteria to interpret effect sizes (small = .20, medium = .50, and large =.80), large effects were realized on four of the five outcome measures in the Seeing Stars meta- analysis, and medium effect sizes were realized on three of the four outcome measures in the Visualizing and Verbalizing meta-analysis. Table 4 shows the mean effect sizes and magnitude (small, medium, or large) for both of the meta-analyses.

**Table 4. Meta Analyses Effect Sizes**

Outcome Measure	M	Magnitude	Outcome Measure	M	Magnitude
Symbol Imagery Test	1.40	Large	Peabody Picture Vocabulary Test	.53	Medium
Lindamood Auditory Conceptualization Test	1.00	Large	Detroit Tests of Learning Aptitude (oral directions)	.70	Medium
Woodcock Reading Mastery (word attack)	1.30	Large	Detroit Tests of Learning Aptitude (word opposites)	.46	Small
Slosson Oral Reading Test	1.13	Large	Gray Oral Reading Test (comprehension)	.62	Medium
Gray Oral Reading Test (fluency).73		Large			

### Study #2 (Observational)

Coupled with our clinical findings, for ecological validity reasons, we have been researching and addressing the needs of all at-risk populations from across the U.S. Finally, we have investigated the process and programs from a real-world application standpoint to ascertain this theoretical educational model by operationalizing it within the context of public education.

Six low-performing elementary schools in Colorado participating in a federal school improvement grant initiative were included in this observational study. All schools began implementing the above-

referenced reading interventions to turnaround their schools during the 2010–11 school year. One school, Haskin (experimental) implemented Lindamood-Bell Dual Coding Theory base programs both developmentally and remedially, and the other five schools (comparison) implemented other interventions. All schools implemented their respective reading interventions from 2010–11 to 2012–13. The outcome measure for this study was the state language arts assessment in Colorado, the Transitional Colorado Assessment Program.

## Results

Haskin Elementary School outperformed the other five elementary schools in terms of change (2010 to 2013) in percent proficient and advanced on the reading portion of the Transitional Colorado Assessment Program. Table 5 shows the average change in percent proficient and advanced across grades 3–5.

**Table 5. Average Change in Percent Proficient and Advanced on State Assessment**

School	Haskin	Clifton	Gilpin	Greenlee	Hanson	Sheridan
Δ	29	11	11	7	4	1

## Conclusions

We see great value in sharing our research with the Division of International Special Education and Services (DISES) community because we believe this research can serve as a catalyst for the international exchange of information that will help improve global learning practices for individuals with exceptional educational needs. Indeed, the model outlined here is now being spread internationally. From these findings, we expect that educators and families will gain greater awareness of the underlying causes that manifest symptoms of learning difficulties, and the research-validated solutions they can help students overcome. Ultimately, it is now clear that building a common understanding between practitioners and families can be significantly enhanced by creating communities that embrace a model with a much more robust, inclusive model to meet the needs of all students and supporting the opportunity for every single member of the community to learn and succeed.

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## **The portfolio of language development and hearing for students with deafness in early intervention**

Neide Mitiyo Shimazaki Tsukamoto

Epheta: institution specialized in the Area of deafness/hearing loss.

[neidemity@yahoo.com.br](mailto:neidemity@yahoo.com.br)

Salette Maria Marmentini de Bortoli

Epheta: institution specialized in the Area of deafness/hearing loss.

[sannybortoli@hotmail.com](mailto:sannybortoli@hotmail.com)

Beatriz Amorim Favaro

Epheta: institution specialized in the Area of deafness/hearing loss.

[beatriz031261@hotmail.com](mailto:beatriz031261@hotmail.com)

### **Abstract**

This experience enlightens chronicle the process of early intervention made in people with hearing loss between the ages of 0 and 3 for establishment of dialogical interaction with their family members. For such, here it follows the premises of the Epheta Methodology for hearing stimulation and the development of language, aiming the formation of multidimensional students. The portfolio elaboration, a result of the early interventions, assists the hearing signification and the conscious communication of deaf children.

**Keywords:** Early Stimulation, Portfolio, Hearing loss, Family interaction

### **Introduction**

In the social conviviality, the lack of hearing may represent to the subject with deafness losses related to the development of language and communication. In the social-cultural sense, too, affects the construction of an identity as social individuals.

Osório (1996) assigns to the families the functions of reproduction and of creating conditions which ensure the physical, cognitive, affective and social development of their children, and also transmitting the cultural legacy of the individual and collective accumulated experiences necessary at where they live. Thus, there is a need to establish the necessary links to balance the possible situations of consternation among the parents, siblings and the child with special educational needs (SEN), especially with deafness.

On the other hand, Augustus and Chacon (2011) observed when unenlightened parents, in the face of deafness, can express feelings of ambivalence between indifference and the overprotection, requiring adjustments to avoid erroneous judgments lectures to settle and constitute obstacles in the course of development of children with deafness.

In this way, Silvestre (2007: 53) notes that "the positive effects of early attention are visible not only in language development, but also in the social-affective of the deaf child", especially with children who have been analyzed before six months of age, so that they focus on the importance of early diagnosis of hearing impairment and a proposal for a consistent educational intervention.

Aware that the child with deafness requires training/education as early as possible, Epheta: institution specialized in the area of deafness/hearing impairments (EPHETA) develops the program of

Early/Essential Stimulation, for children with hearing impairments, that anchors on effective participation of parents, with the purpose of guiding them and assist them in the formation of aware postures allowing the multidimensional development of their children with deafness.

To this end, this study presents the results of the use of the portfolio in the early intervention process conducted with children with hearing loss between the ages of 0 and 3 years of EPHETA, along with their families.

The institution advocates that discussions about the validity of one language over another must be met and focus attention on the search for educational processes that meet the real needs of the subjects with deafness. In this sense, the EPHETA adopts the term hearing impairment in its Pedagogical Political Proposal.

Thus, were registered in the portfolio guidelines, information on the hearing, the didactic organization of interventions and outcomes, which requested the direct participation of the parents, on the appropriateness of format insources of information and consultations, for the family and for professionals in the area, a daily picture of emerging pedagogical practices in the context of transdisciplinarity.

#### Family considerations and the hearing

In these days, the concepts of diversity expand, synchronically, with other movements of paradigmatic transitions. However, regardless of the constitutions, the family is responsible to promote the formation of moral and social values.

However, Osório (1996) realizes that the birth of a child with disabilities can result in changes in family dynamics and even become a traumatic event capable of fragmenting families because it represents the symbolic loss of a perfect baby. This experiment requires an affective relationship rescue appropriate and enough for the maintenance of self-esteem capable of offering conditions for the child with disabilities o have independence.

Silvestre (2007) holds that not only the early diagnosis is crucial to start the learning processes of children with hearing impairments, but also, appropriate educational conditions that can ensure a good communicative interaction. In the case of appropriation of the oral language, the author suggests the support of technological resources, such as access to the cochlear implant (CI), FM System, Individual Sound Amplification Device, and others. In Brazil, these resources are provided free of charge by the Unified Health System (SUS).

Educational actions, in this way, should combine the experiences familiar with systematical knowledge organized by the school through the Early/Essential Stimulation, in which, the school and country have shared participation of reflections on deafness, founded on clarifications, guidelines and strategies to provide communicative interactions and social situations.

#### **Methods**

This research is characterized as being qualitative, which according to André (2005, p. 93) has the character of case studies, because it united the school situations with the evaluation procedure, through the participation of parents and teachers, in which, changes of conceptions and pedagogical practices were presented by EPHETA's portfolio.

The case studies allows the understanding of how the phenomena investigated develops, "makes it possible to describe actions and behaviors, grasp meanings, analyze interactions, understand and interpret languages, studying representations without unlinking them from the context and the special circumstances in which manifest themselves" (André, 2005, p. 93).

The target audience consists of twelve families of children aged 0 to 3 years, under which: six students have profound loss, four with severe loss and two with moderate loss.



The portfolio was developed in EPHETA: institution specialized in the area of deafness/hearing impairments, located in the city of Curitiba-PR. EPHETA operates in the educational process of students with hearing impairment/deafness, with the purpose of school and social inclusion of the deaf subjects, since 1950. It works in line with the Federal Resolution No. 7,611, 2011, in which is characterized in offering Specialized Educational Assistance (ESA), which means that one hundred and forty students are included in regular education and attend EPHETA. The Epheta Methodology structure programs of Early/essential stimulation (0 years-old) until the insertion in the work life (until 21 years – maximum).

## **Results**

The Early Stimulation program/essential: operating structure

The process of admission of Early/Essential Stimulation Programs students for the hearing impaired, from 0 to 3 years, begins with an interview conducted with the parents by the interdisciplinary team consisting of speech therapist, pedagogues, teachers, specialists, Otolaryngologist and upon confirmation of the clinical evaluations.

Emphasizes that the use of the term "Early Stimulation/essential" to identify the work with the first age group ranked by attendance guidelines and Bases Act No. 9394/1996, as early childhood education/Preschool.

The children and their families are met individually and in two weekly classes with a running time of 50 minutes, the absence of parents must happen gradually. After this phase of adaptation, the child stays for 3 and a half hour in daily attendance, beginning group activities in Early/Essential Stimulation.

The portfolio as a mediator of the processes of Early Stimulation/essential and results

The portfolio of EPHETA's Early/Essential Stimulation program/EPHETA essential Stimulation doesn't represent only a collection of information and data prepared by the team, but, as indicative for the understanding of deafness, the guidelines for the stimulation of communication, consolidating in elements to compose the diagnostic and procedural evaluation.

However, the singularities and the data of the child are recorded by the family: parents, uncles, grandparents, among others. As the first school/family interaction activity, parents, here identified as "PA" with addition of number, reported that:

"When we filled the file, it seemed that it was true that our daughter was deaf and could use a special school, but I felt very taken care of". (Pa1)

In the data sheet's parents are asked to paste pictures of (a) student (a) and family (father, mother, brothers, grandmothers, grandfathers, uncles, aunts, cousins) with goals of self-knowledge and identification of the components of your family.

"I couldn't gather everybody, because I was alone. Everybody moved away from me, after the birth of my son". (Pa4)

Osório (1996) comments that the disintegration of the family finds itself imbued with the lack of motivation of a cordial relationship arising from a deficient birth in family. In this situation, the educational process represents an integrator challenge in families, with effects on the personality development of their children.

The proposal from the Epheta Methodology is presented in the portfolio, in the form of textual genre instruction, titled "This is the path you will choose along with your child towards autonomy and professional choice". To this view, the parents recorded their impressions; the next testimony represents a general view of most parents:

“When I saw the course of the school, I felt safer. Many questions have been answered, because I'm anxious and I want to see everything going on. I know I'm going to need a lot of help to pull this path” (Pa7).

In relation to the development of the 1st axis of Epheta methodology (hearing, voice and speech), the use of HEARING AID or CI means shared actions between the school and family. The portfolio contains a text about the audition and technological resources with the instructions for use and preservation.

“I learned how to use the implant, but, I'm still afraid of losing it because if I lose or break the wire it's very expensive. I still don't use it everywhere”. (Pa8)

Despite the guidelines, many of the parents trigger defense mechanisms, which according to Galt (2004), the stage of awareness and efforts are to reverse the situation and support their children is accompanied by traces of denial and requires support until you reach the stage of adaptation to the real needs of children with deafness, particularly in establishing the communicative interaction.

“I've learned that we don't have to give her everything easily before she asks. I did that, but I find it hard that my mom could teach someone how to speak. The school asked her to come to class, because I learned so much”. (Pa10)

The unawareness of the family about the particularities of deafness is, mostly, associated with cognitive disabilities. Thus, "no information, no longer interact with children, or restrict their interaction to the satisfaction of some basic needs of the child" (Casati; Digiampietri 200, p. 06) and don't teach, effectively, any communication system.

About this, the interdisciplinary team organizes the parenting group, organized by the educational psychologist, with registration of planned interventions, in which, intercalate the proposal of the day with goals to be reached with guidelines, which requires explanatory reading class and informational texts, for example the text "family and their participation".

“I will never forget the guidelines, which was more than helpful in my life. Now I'm sure my son is capable [...] I not only learned, but saw my son's ability. I cry a lot thinking about the mistakes I made” (Pa13).

The results shall be indicators for the adequacies of affective-social behavior and linguistic and auditory answers verified by the teacher and the parents, so that, the statements and returns on the achievements and difficulties are analyzed in the Board of collective class.

The portfolio of Early/Essential Stimulation closes with record of the life project of the parents and with projections and desires for your child with hearing loss.

## **Conclusions**

The investigation revealed that the portfolio constitutes a preventive mean of social and school exclusion because it requires the participation of families in the process of apprehending knowledge in terms of adoption of technological and educational resources that enable the acquisition of Dialogic and interactive language in Portuguese.

It can be affirmed by the analysis of the statements, that the 12 parents who followed the service of Early/Essential Stimulation of their children have become safer about the issues involving the deafness when related to the incorporation of language and mastery of issues that involve the child's development stages, especially on issues involving the deaf or hard of hearing.

In these case studies there have been changes in the quality of dialogic interaction between parents and children, with reflections on self-esteem, being possible the valorization of the EPHETA's Pedagogic/Political Proposal and its positive effects on school contexts.

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## **Do iPads affect the writing abilities of students with learning disabilities?**

Julie K. Corkett  
Nipissing University  
[juliec@nipissingu.ca](mailto:juliec@nipissingu.ca)

Tina Benevides  
Nipissing University

### **Abstract**

Students with a learning disability in the area of writing are often provided with a computer or tablet. The current study examines how the writing of nine grade six students who have a learning disability differs when they use a pen-and-paper versus using an iPad. Specifically, the study examines whether there is a difference in (a) writing productivity; (b) spelling accuracy; (c) syntactical complexity; and, (d) lexical diversity. Findings suggest that while the use of iPads may not affect the sub-skills of writing, it may influence students' spelling accuracy and the number of ideas expressed. The difference in the number of ideas expressed may be caused by the students' motivation to use iPads. If we can increase students' desire to write, as demonstrated by an increase in students' ideas expressed, it may provide them greater opportunities to practice their writing skills. Therefore, the use of iPads may have long-term effects that cannot be measured in a short-term study.

**Key words:** writing productivity, syntactical complexity, lexical diversity, technology

### **Introduction**

Although our definition of a literate individual is continually evolving, language is necessary for an individual to function as an active member of society. Although the majority of individuals acquire adequate oral communication skills or compensatory oral language skills (e.g., American Sign Language), many individuals encounter difficulties with written material. Therefore, meeting the learning needs of individuals with writing difficulties and developing strategies to help alleviate these difficulties should be a major goal of all schools. This paper will explore whether the use of tablets positively influences the writing skills of students with a learning disability.

When students have an LD in writing, they experience specific deficits that range from lower-order mechanical difficulties to higher-order cognitive and metacognitive problems (Bui, Schumaker & Deshler, 2006). These deficits affect students' abilities to focus on a topic, organize their writing, master basic writing skills (e.g., spelling, sentence formation, capitalization and handwriting); writing complete and complicated sentences and using effective revision and editing techniques (Bui et al., 2006; McCurdy, Skinner, Watson & Shriver, 2008). In general, students who have an LD in writing are typically less productive in their writing and experience greater difficulty writing both simple and complex sentences than their typically developed (TD) peers (Koutsoftas & Gray, 2012; Puranik, Lombardino & Altmann, 2007).

Research consistently indicates that there is a significant relationship between spelling and written composition (Abbot et al., 2010; Puranik et al., 2007; Wakely et al., 2006). Furthermore, students with LD produce sentences with lower levels of complexity than their TD peers (Koutsoftas & Gray, 2012). Wakely et al., speculated that the lack of automaticity in spelling might negatively affect a student's writing ability. That is, when an individual's short-term memory is being utilized for processing

spelling there are no resources left for producing ideas fluently, composing sentences and monitoring the writing processes (Abbott et al., 2010; Wakely et al., 2006). This difficulty may be attributed to the dual-route model of spelling.

Assistive technology has long been recognized as a valuable tool for assisting students with learning disabilities. When students who have an LD use word processors their written text tends to be longer, contain few mechanical errors and are of a higher overall quality than their handwritten compositions (Montgomery & Marks, 2006). While AT is now readily a part of individual education plans, a full understanding of the specific writing skills that are enhanced by the use of AT is lacking. The current study will examine how grade six special education students' (who have an LD), writing using a pen-and-paper differs from their writing when using an iPad. Specifically, the study will examine whether there is a difference in (a) writing productivity; (b) spelling accuracy; (c) syntactical complexity; and, (d) lexical diversity.

## **Method**

The participants consisted of nine (female = 1, age = 12.5; male = 8; mean age = 11.5) grade six students from an upper middle-income public school in Northern Ontario. The classroom teacher selected the participants based on the fact that each participant had an Individual Education Plan for literacy. All of the participants received their language instruction in the regular grade six classrooms and by the same grade six teachers. All of the participants had English as their first language, had normal or corrected vision, normal hearing and no evidence of neurological or mental health issues.

The participants completed two standardized assessments: Test of Non-verbal Intelligence and the Stanford Diagnostic Reading Test. The Stanford Reading Diagnostic Test – Fourth Edition Online (SRDT) (Karlsen & Gardner, 2003) is one of only a few untimed reading assessments that can be administered on-line. The SRDT was used to assess the students' reading abilities. Except for two participants whose grade equivalence scores were 4.7 and 5.1, all of the participants' had grade equivalence scores that were significantly below grade level, (mean = 3.37; min. = 2.10; max. = 5.10).

The Test of Non-verbal Intelligence-3 (Brown, Sherbenou, Johnsen, 1997) was administered as a norm-referenced measure of intelligence, aptitude, abstract reasoning, and problem solving. Four of the participants had age equivalency scores that were below their chronological age (mean = 7.4; min. = 6; max. = 8); two participants had age equivalency scores at age level and three participants had age equivalency scores that were above their chronological age level (mean = 16.13; min. = 12.6; max. = 17.9). Since the group sizes are so small no statistical analysis can be reliability made to determine whether nonverbal intelligence (NVI) influenced the participants' writing ability.

The participants completed, using a pen and paper, an EQAO short writing practice question that asked, "What would happen if a local park is closed?" The participants were permitted to use a dictionary and a thesaurus; however, no other supports were provided to the students (e.g., scribes, support from an educational assistant or teacher). The following week, the participants were assigned a second parallel EQAO short writing practice question. The practice question asked students to describe what life would be like if there was no electricity. The participants wrote their passage using Pages on an iPad. The Pages application indicated if a word was misspelled and provided suggestions for the correct spelling of the word. No other supports were provided to the participants (e.g., speech-to-text, or support from an educational assistant or teacher).

## **Results**

**Analytical Scoring.** The analytical scoring scheme included the scoring of writing productivity, lexical diversity and density, spelling, syntactic complexity and grammatical accuracy.

**Table 1. Summary of the differences between the pen-and-paper passage and the iPad passage**

	Min.	Max.	Mean	STD	Min.	Max.	Mean	STD
Writing	61	101	74.56	12.68	57	142	94.67	27.67
Productivity								
Spelling Accuracy	75	98.41	91.94	7.75	90	100	96.87	3.24
Lexical Diversity	21.35	67.07	42.46	41.97	15.71	59.20	39.63	12.24
Lexical Density	45.90	60.32	54.02	49.1	46.67	60.92	52.98	4.61
Grammar Accuracy	0	83.33	26.96	25.53	2	11	5.89	2.93
Number of T- units	4.00	9.00	6.89	1.54	6.00	14.00	9.22	2.22
Average T-unit Length	7.88	16.83	11.54	2.93	6.88	15.17	10.48	2.70
Clause Density	1	2	1.39	0.29	1.00	1.67	1.36	0.22
Ideas	3	7	4.44	1.24	4	9	6.78	1.92

The participants' writing productivity was determined by counting the total number of words written in a given sample (Koutsotas & Gray, 2012; Scott & Windsor, 2000). A paired- sample t-test revealed no significant difference in writing production (as measured by word count) between the pen-and-paper passage (M = 74.56, SD = 12.68) and the iPad passage (M =94.67, SD = 27.67),  $t(8)=-1.999$ ,  $p = .081$ . However, the participants made significantly more spelling errors on the pen-and-paper passage (M = 91.94, SD = 7.74) than on the iPad passage (M= 96.87, SD = 3.24),  $t(8) = -3.211$ ,  $p = 0.012$ .

In addition, there were no significant differences found between the pen-and-paper passage and the iPad passage for the following: in the participants' lexical density ( $t(8) = .476$ ,  $p = .647$ ) length of the T-units ( $t(8)=1.201$ ,  $p = .264$ ); in the number of clauses ( $t(8)=-2.051$ ,  $p = .074$ ) or in clause density ( $t(8)=.314$ ,  $p = .762$ ). In addition, there was no significant difference in the number of sentences ( $t(8)=-1.474$ ,  $p = .179$ ); the number of words per sentence ( $t(8)=.152$ ,  $p = .883$ ); and in the percentage of grammatical errors between the pen-and-paper passage (M =29.96, SD = 25.528) and the iPad passage (M = 45.56, SD = 23.073),  $t(8)= -.1557$ ,  $p = .158$ .

The number of ideas expressed in each passage was calculated by counting each argument presented in the passage. The participants expressed significantly more ideas when using the iPad (M = 6.78, SD = 1.92) than when they used pen-and-paper (M = 4.44, SD = 1.24),  $t(8) = -3.742$ ,  $p= .006$ .

## Discussion

Simply providing students with tablet technology may not affect the mechanics of the students writing. While there were significantly fewer spelling errors in the iPad passage, this may be attributed to the spell check feature of Pages. There were also significantly more T-units in the iPad passage, which suggests that the students may be producing more syntactically complex passages on the iPad than when they write on paper. This is also supported by the fact that the students produced more ideas when using the iPad than when they wrote using pen-and- paper.

A possible explanation for the difference in syntactical complexity and increase in ideas expressed may be the students' motivation to use iPads. If we can increase students' desire to write it may provide them greater opportunities to practice their writing skills and in turn have more confidence in their writing ability. Furthermore, since the participants expressed more ideas when using the iPad, tablet technology may be a more appropriate tool to assess students' understanding of concepts.

As Kennedy and Deshler (2010) point out, "the evidence base for using technology in the literacy instruction of students with LD is relatively small" (p. 289). Of this research, the majority focus on reading and the development of reading skills. Very few articles focus on writing and those that do, focus on students with a LD in oral language. As a result, there are few guidelines for the use of technology for students who have writing difficulties, beyond speech-to-text, technology. Teachers often provide laptops or tablets to students with writing difficulties believing that it will improve the student's writing ability. The current study suggests that simply providing students with a computer or a tablet will not significantly impact the students' writing abilities.

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## **Working towards inclusive education in Oman: Reflections from teachers of students with learning disabilities in elementary schools**

Shariffa Khaled Al-Said;  
Ministry of Education, Sultanate of Oman  
[shariffaalsaid@yahoo.com](mailto:shariffaalsaid@yahoo.com)

Mahmoud M. Emam  
Sultan Qaboos University  
[memam@squ.edu.om](mailto:memam@squ.edu.om)

### **Abstract**

The study explores the recent developments towards inclusive education in the Sultanate of Oman. Due to the initiation of the Inclusion Mandate in Oman, schools began to provide inclusive education to pupils with learning disabilities. The inclusive service delivery model relies mainly on supporting pupils with teachers specializing in the instruction of students with learning disabilities and establishing an LD unit, which represents a learning support centre. Based on a questionnaire comprising of open ended questions, LD teachers' perceptions regarding issues related to inclusive practices were explored. This includes: curriculum adaptations, modifications, types of support delivered in school, intervention plans, and suggestions to improve inclusive practices. A qualitative analysis of teachers' responses maps out the challenges that teachers face in providing inclusive education to students with LD. Implications of the study are discussed in relation to establishing a prototype of inclusive education in Oman.

**Keyword:** Inclusive education, Sultanate of Oman, Learning Disabilities

### **Introduction**

The trend in social policy in many countries of the world during the past three decades has focused on promoting inclusive programs and combating exclusionary and discriminatory practices (Mittler 2000). Friend et al. (1998) defined inclusive education (IE) as the integration and education of most students with disabilities in general education classes. The fundamental principle of IE is that all children should learn together, wherever possible, regardless of any difficulties and differences they may have (UNESCO 1994). Bunch (1994) considered full inclusion in the educational sense and argued that all students with special needs must have the opportunity to be enrolled in the regular classroom of the school with age-appropriate peers. Clearly, inclusive programs are crucial for learners with disabilities in the developing countries (DCs) in that it is estimated that the majority of the world's population of people with disabilities live in the DCs, some 150 million of them being children, but only 2% are receiving any form of special needs services (Mittler 1993).

The Sultanate of Oman is moving towards transitioning public schools to be more inclusive schools that provide special education services to students with special educational needs (SEN). Statistics of the Department of Special Education at the Ministry of Education (MoE) in Oman show that the number of pupils classified as LD who receive special education services in inclusive schools, has increased significantly in the last decade (Emam & Kazem, 2014). In addition, schools have become incapable of providing special education services to more pupils referred LDs due to lack of both human and learning resources. Since 2007 the MoE began to include children with LDs. As a result of

an Educational Mandate in 2007, which was issued in accordance with the Omani Children with Disabilities Care and Rehabilitation Act in 1996 (later reauthorized in 2008), children with LDs became eligible for receiving additional help by special education teachers who hold a specialized one year Higher Diploma in LDs, a program which is tailored by Sultan Qaboos University to fulfill special education needs of the Ministry of Education professionals in the Sultanate of Oman (Emam, 2012). The current study investigates to what extent Oman is working towards IE by exploring the provision of inclusive practices to pupils with LD in elementary schools in Oman.

## **Method**

### **Participants**

The participants of the study included 30 teachers who are enrolled in the specialized higher diploma in LD, a program offered by Sultan Qaboos University to fulfill the training needs of LD teachers in schools.

### **Instrument**

The teachers filled out a questionnaire comprising seven open-ended questions. The questions explored issues around curriculum adaptation, support services, the role of LD teachers, the role of the general teacher, the challenges which they face in including pupils with LD, and how these challenges can be overcome. Examples of questions are: (1) How do you see inclusive practices for pupils with LD in school, (2) What support do pupils with LD receive in class? (3) What is the role of learning support center for pupils with LD? (4) What changes do occur in the curriculum for pupils with LD? (5) What is the role of the general teacher for pupils with LD? (6) What are the challenges that face the provision of inclusive education to pupils with LD? (7) What do you propose to improve inclusive education practices for pupils with LD?

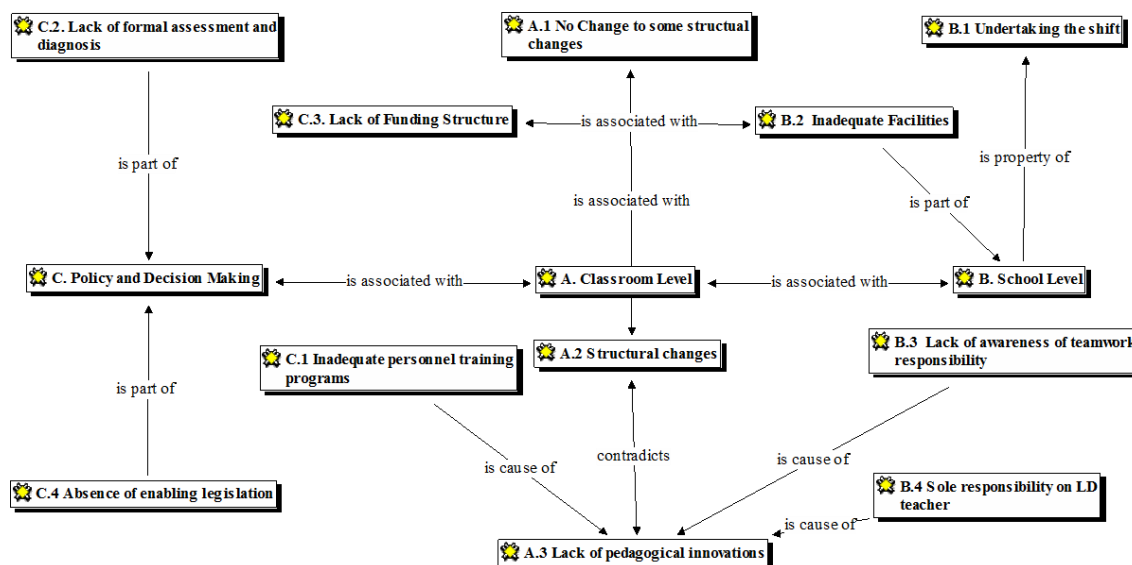
### **Analysis**

The study is an empirical inquiry which “investigates a contemporary phenomenon (the inclusion of pupils with LD) within its real-life context (mainstream schools) when the boundaries between the phenomenon and context are not clearly evident” (Yin, 2003, p.13). A qualitative analysis was adopted. A typical qualitative analytical approach is likely to include coding qualitative data in order to examine the classifications made to identify relationships between aspects of the phenomenon under investigation. The second stage involved the use of grounded theory (Charmaz, 2006) coupled with thematic analysis (Boyatzis, 1998) to develop themes and categories for each participant, using Atlas Ti 5.2 qualitative analysis software. We used initial coding, focused coding and axial coding, to code line by line. This was followed by selecting a number the initial codes in order to synthesize larger segments of the data, and finally developing sub- categories to build a dense texture of relationships around the axis of a category. According to Boyatzis (1998, 4) thematic analysis is a process of encoding qualitative explicit codes into a list of themes, a complex model with themes that are causally related, or something in between these two forms. A theme may be identified at the manifest level (directly observable in the information) or at the latent level (underlying the phenomenon). At the end, the data was re-examined for significant statements, a procedure known as ‘horizontalization’ (Creswell, 1998, p.55).

### **Results and discussion**

The two-phase analysis generated a conceptual network. The conceptual network view (Figure 1) describes the key themes, which determine the quality of IE provision to pupils with LD in Omani mainstream schools. The network display reflects the relationships between the different aspects, which can have an impact of the successful provision of pupils with LD. In what follows we discuss these

key themes and link this to related literature. Key themes and sub-themes are given numbered letters in Figure 1 as well as in the discussion.



**Figure 1. Key themes illustrating the different aspects, which have an impact on working towards quality inclusive education of pupils with LD in Oman.**

#### A. School Level

Participants’ responses to the questionnaire showed that schools had to undertake the shift (B.1) after the Inclusion Mandate. However, this shift was not easy in all cases as there are drastic differences between schools in terms of the availability of both adequate funding (C.3) and adequate human resources represented in trained LD teachers (C.1). The dominant discourse of undertaking the shift towards inclusive education to pupils with LD springs from a central decision by the Ministry, which made it compulsory for schools to adhere to. Therefore it is a top-down shift.

#### B. Classroom Level

Teachers were asked if they witnessed a change taking place as a result of increased student diversity in classrooms. The majority of LD teachers argued that classroom teachers did not change their teaching practices. This was because children did not have low IQ; hence there was no need to teach them in a different way. They were capable of adjusting to the existing classroom structure (A.2). Some LD teachers argued that it was not feasible for classroom teachers to undertake any changes to their teaching practices within the existing constraints. In addition classroom teachers are likely to count on LD teachers in providing support to pupils with LD outside the classroom (B.4). The absence of flexible structural changes has led to the absence of any pedagogical innovation by classroom teachers (A.3). Responses by the LD teachers reflect that there were no curriculum adaptations for LD pupils. Teachers saw pupils with LD as the sole responsibility of LD teachers (A.4). Alternatively, however, a few LD teachers reflected that a few teachers made structural changes such as making sure that the LD pupil sit in front rows so that attention is being given by the teacher to his needs (A.1). Therefore, classroom teachers did not assume the learning and participation of pupils with LD as their responsibility; rather they showed high dependency on others. In a similar vein, LD teachers argued that teachers focused on the role of others, mainly LD teacher. It was interesting to note the absence of collaboration between both LD and classroom teachers. For instance, even though in some cases classroom teachers relied on LD teacher to teach the child, they did not meet to discuss the child’s needs. Rather, the only interactions that were mentioned were based on chance (B.3). Analysis of data

addressing classroom practices adopted suggests that these were primarily aimed at adapting the classroom organizational framework, rather than differentiating the learning experience for pupils with LD (A.1). Therefore, it seems that there is a reduced membership of pupils with LD in classrooms.

### C. Policy and Decision Making

Teachers reflected that the lack of relevant facilities and materials is a major obstacle to the implementation of effective inclusion of pupils with LD, a theme which was echoed in previous research studies (Eleweke & Rodda, 2002). For some teachers the facilities essential for educating pupils with LD in many schools in Oman are lacking or grossly inadequate where available. Teachers expressed that pupils with LD do not receive in class support and instead they spend more time in the LD unit, which affects the achievement of meaningful inclusion (Eleweke & Rodda, 2002).

LD teachers expressed their view that decision makers have not yet considered the establishment of a national diagnosis service in the country (C.2). In addition there is a lack of adequate personnel training programs (C.1) and therefore the LD teachers feel incompetent in a number of essential aspects such as the capability of administering diagnostic tools to help in the diagnosis process of referred children. According to Eleweke and Rodda (2002), the successful education of learners with disabilities in inclusive schools requires the involvement of different professionals who assist in identification, referral, diagnosis, treatment and provision of appropriate educational and related services. Research indicates that adequately trained professionals are required in the provision of meaningful educational services to students with special needs in regular schools (Eleweke & Rodda, 2002).

### Conclusion

We explored how Oman is working towards inclusive education using the inclusion of pupils with LD as a case study. Based on the brief analysis above, it seems that there are several challenges which need to be addressed in Oman. In order to meet some of the inclusive goals, support services have to be implemented inside and outside of the school setting (C.4).

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## Using mobile media devices and Apps to promote young children's learning

Sharon Judge,  
Old Dominion University  
[sjudge@odu.edu](mailto:sjudge@odu.edu)

### Abstract

This paper discusses young children's usage and learning with mobile media devices, with a focus on smart phones, iPod touches, and iPads or other tablet devices and applications (apps). Key opportunities to seize mobile media devices' unique attributes to improve learning are described. The paper describes the benefits of how mobile learning can change the way young children with disabilities learn, provides strategies on how to integrate mobile devices and apps for young children with disabilities, and provides information that may assist professionals and parents in selecting high-quality apps for young children with disabilities.

**Key words:** Applications, disabilities, media devices, mobile technologies, young children, Mobile Devices, Apps, and Learning

### Introduction

In January, 2013, Apple announced that its app store had officially hit the 40 billion app download mark. A new study from App Hero (Smith, 2013) found that there are over 800,000 apps available in the app store and 56.2% of the apps are free. Similarly, the Google Play Store, formerly known as the Android Market, had passed the 700,000 app mark in October, 2012. The mobile app marketplace is growing at a tremendous speed and recent large-scale studies have documented the use of apps among adults and older children (Purcell, Entner & Henderson, 2010; Rainie, Zickuhr, Purcell, Madden, & Brenner, 2012), however, little research has been conducted with younger children. The following section examines the content and types of apps for young children and how children are using and learning from mobile media devices and apps. Content and Characteristics of Apps for Young Children Several studies have been conducted on the types of apps offered to children (Federal Trade Commission, 2012; Shuler, 2009; Shuler, 2012). The Federal Trade Commission (2012) conducted a survey of apps offered for children in the Apple app store and the Android Market. Searching the Apple app store and the Android Market for the term "kids", they randomly selected 200 apps by each app store and found that education, games, math, spelling, and animals were the most popular app categories. The prices of the apps ranged from free to \$9.99, however, 77% of the apps were priced at \$0.99 or less, and 48% were free. Free apps were the most frequently downloaded. Of concern is the limited amount of information about the apps' data collection and sharing practices, meaning that parents often cannot determine, before downloading an app, if personal information is collected from children.

Shuler (2009, 2012) highlights the app explosion, especially for young children, in an iLearn line of market research on the top-selling paid apps in the educational category of the Apple app store over a two year period. Findings indicate that from 2009 to 2011, the percentage of apps for children has risen in every age category, with a decrease in apps for adults. Of the 196 top-selling paid apps in 2011, 58% of the apps were targeted for young children and experienced the greatest growth (23%). Even more interesting is that 60% of the top 25-selling apps target young children, strengthening the popular

demand for educational apps for children. Similar to the Federal Trade Commission study (2012), most children's apps are priced at \$0.99 or \$1.99. However, over the two year period, the average price of children's apps has risen by over \$1.00. The most popular app category was general early learning (47%) and there were significantly more general early learning apps than the second most popular subject (math, 13%). Usage and Learning with Mobile Devices and Apps Studies indicate that children are quite comfortable and adept in using mobile media devices and apps and that moving from novice to mastery occurs quickly with age appropriate apps (Chiong & Shuler, 2010; Cohen, 2011; PBS KIDS, 2010). If children had initial usability issues with the device, parents reported that they disappeared after the child played with the device a few times. Observations of young children's use of iPads demonstrated that iPad accessibility and use are relative to the design of the app interface, child's prior digital gaming experience, and the relationship between the app content and the child's developmental level. Overall, using mobile media devices and apps came quite naturally to children. Evidence also shows that children can learn from apps (Chiong & Shuler, 2010; Cohen, 2011; PBS KIDS, 2010). Children's learning through app play takes several forms involving active exploration, construction of solutions, and learning explicit content. In an evaluation of two educational literacy apps, Martha Speaks: Dog Party and Super Way, the majority of the children displayed gains on the content and skills of both apps after playing with them (PBS KIDS, 2010). The Martha Speaks: Dog Party app focuses on vocabulary development for children ages four through seven. Vocabulary gains were made for every age group, with the older children gaining the most after playing the app. In contrast, younger children gained the most after playing the Super Way app, which aims to increase literacy skills. In addition, parents perceive apps as educational.

## **Methods**

Mobile media devices provide young learners with an easy to use touch interface that offer motivating and engaging learning environments filled with brilliant colors, animations, and sounds that encourages learning and participation. Parents, educators and related service providers of young children with disabilities often seek out activities and opportunities to increase engagement and participation to ensure that children can reach their potential. Mobile media devices can provide opportunities for inclusion, active participation, and social interactions. It is important to note that a mobile media device itself is not educational; it is how the device is integrated into curricula and real/authentic tasks provide meaningful learning experiences (Guernsey, Levine, Chiong & Stevens, 2012).

## Strategies for Integration

All children need positive human relationships in order to learn best, and communication is essential to relationship building. Some children and adults need more assistance communicating than others (Bestwick & Campbell, 2010). Often children with disabilities lack common experiences and background knowledge that they could share with their peers. Mobile apps can provide an inclusive common ground for children to play, engage, and learn together. Parents, children and educators can use such technology to strengthen their interactions with each other and improve familiarity with sounds, words, language, and general knowledge (Guernsey, Levine, Chiong, & Severns, 2012). For example, a parent and child can read developmentally appropriate books together on the iPad that include sounds and interactive activities. Such an activity expands the knowledge and learning presented in traditional shared reading times. Rather than carrying a variety of learning toys in the car or on errands, a child can interact with apps that teach the alphabet, letter sounds, and simple words. In classrooms, teachers can utilize iPads and learning apps as a way to supplement and enhance learning and socialization. Speech apps can be programmed to serve as a voice output device for children with delayed or limited speech to use during large group to greet peers, say a repeated line in a story, or even

announce the day's weather to the class. There are also speech to text apps that will allow students with limited fine motor skills to share their thoughts and ideas in a written format, just as their peers without such needs.

In addition to building communication and opportunities for relationships, mobile apps have been found to engage children in collaborative learning, reasoning, and problem-solving activities that had been thought to be too sophisticated for them to understand and carry out at very young ages (Yelland, 2005). One example of this is in the area of math. Virtual manipulatives have been found to have several advantages over physical hands-on manipulatives (Clements & Sarama, 2007; Sarama & Clements, 2004). Such advantages include: (1) enabling learners to make their knowledge explicit, (2) offering flexibility in the way mathematical concepts are displayed, (3) allowing learners to save their work and retrieve it later, (4) linking the concrete with the abstract both visually and with explicit feedback, and lastly (5) dynamically linking more than one representation of the same concept to encourage problem posing and conjecturing (Clements & Sarama, 2007). Specifically, children have virtual manipulatives as well as identical manipulatives in their classroom or home to assist in making the connection from the real object to the more abstract, virtual object. A child can be introduced to tangrams in their classroom or home environment so that they can become familiar with the features of tangrams blocks. Then, while traveling in the car when interaction with actual tangrams would not be possible, the child could play My First Tangrams app and would already have the exposure to the real object for a more meaningful and connected learning experience.

For the young user, it is essential that apps for learning incorporate feature matching. It is essential for success to match the features of the technology to the student needs and/or IFSP or IEP goals. Does the device or app offer flexibility to alter settings to meet different children's needs? Does the app provide opportunities for creative choice making or imaginative expression? The Proloquo2Go app offers a full array of communication and language systems on the iPad. Therefore, if a child has language or communication goals on their IFSP or IEP, the communication system is present with him or her as s/he is interacting with peers or caregivers while still having access to learning games and the freedom to navigate the environment with only an iPad versus also carrying an augmentative communication device.

Learners who use digital media that involves the selection of colors, music, animation, or main characters in a story (to name a few) build fundamental curiosity along with skills involving hypothesizing, problem solving, and positive self-evaluation (Lieberman, Bates & So, 2009). Apps are available to build communication skills, pre-literacy skills, pre-math skills, and science skills. Video modeling and social stories through the use of mobile media devices provide just-in-time learning examples that can be used in modeling appropriate behavior and meaningful problem solving in social settings. Prior to lining for lunch at school, a child can view a social story on expected behaviors during lunch with a simple click of a button. Likewise, before interacting with peers on the playground, a child could view a social story on playing on the playground to enhance their experience and communicative opportunities once s/he is on the playground.

## **Conclusion**

As our youngest of learners begin using digital devices, it is imperative that the whole child is considered when making the determination of the goodness of fit. Mobile media devices do not replace the unique learning that occurs dynamically between caregiver or teacher and the child. However, if properly matched and implemented, the utilization is an ideal augmentation of the experiential learning of the child. Although there is limited research on the utility of mobile media devices and apps with young children, there is no doubt that the growth of apps targeted at supporting young children and children with disabilities will continue to grow.



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## **Infusing learning without limits into a teacher education program in Barbados**

Stacey Blackman

University of the West Indies, Cave Hill Campus

[stacey.blackman@cavehill.uwi.edu](mailto:stacey.blackman@cavehill.uwi.edu)

### **Abstract**

The conditions that promote effective teaching and learning have been and continue to be a subject of great importance to education researchers. The study reported here is qualitative and uses a case study strategy (Cresswell, 1998) to understand how a small group of teachers utilized learning without limits principles to understand their own practice in a teacher education programme in Barbados. The research questions are: How did teachers engage with ideas associated with learning without limits in the teacher education programme? and How did teachers incorporate learning without limits principles into their own practices. The findings are discussed in the paper.

**Key words:** Learning without limits, teacher education, Barbados

### **Introduction**

The conditions that promote effective teaching and learning have been and continue to be a subject of great importance to education researchers. In 1999 an ambitious group of education researchers from the University of Cambridge embarked upon a project which aimed to identify teachers who rejected ideas of fixed ability and intelligence and instead focused on teaching in ways that were “free from ability labeling” (p.14). Hart, Dixon, Drummond and McIntyre (2004) called the project ‘Learning without Limits’ and as its name suggests connotes the idea that teachers can choose to see the inherent differences between children in positive ways and shape conditions in classrooms to promote the learning of all students.

The notion of ability is construed as a judgment that teachers make about what children can and cannot do and is communicated to students verbally in words like ‘more and less able’, ‘average and below average’ and non-verbally in school reports, grades and marks. These judgments are reinforced by theories that view ability as synonymous with intelligence and therefore fixed and suggest that students are 1. Born with a given amount of intellectual power, 2. Accurate test can be designed to measure intellectual power and 3. Intelligence is the principal determinant of learning in school (Hart, et al., 2004). How can transformation be achieved? Hart et. al, (2004) proposed three principles: co-agency, trust and everybody that teachers can use to ensure that all children participate equally in the learning process. The principle of co-agency recognizes that teaching and learning is a joint enterprise between teachers and students and therefore teachers need to share and harness their power to that of their students in order to provide opportunities that take advantage of their students’ skills and knowledge. The principle of everybody complements co-agency, but also ensures that equality of opportunity to learn is given to all students via accessible learning tasks, curriculum and resources. Finally the principle of trust is multifaceted, it not only means that students can be trusted to value their learning, but it also means a commitment on the teacher’s part to continue to meaningfully engage their students at all times regardless of their differences.

The current research reported on in this paper examines how principles associated with Learning Without Limits was incorporated into a teacher education programme at the University of the West

Indies, Cave Hill and how in service teachers in that programme sought to infuse the principles in their own practice. The research questions are: How did teachers engage with ideas associated with learning without limits in the teacher education programme? How did teachers incorporate learning without limits principles into their own practices?

## **Method**

The study is qualitative and uses a case study strategy (Cresswell, 1998) to understand how a small group of teachers who are part of a two year Masters programme in Education utilized learning without limits principles to understand their own practice. The three teachers participated in a modular course called Foundations in Special Education: Theories of Inclusive Education which ran for thirteen weeks. Teachers were asked to engage in a period of self- assessment and reflection using instruments designed by the researcher, read the relevant chapters and case studies of teachers in the learning without limits project and evaluate their own practices for a minimum of two weeks using: a scored check list, self-reflection sheet, video of classroom practice and reflective journal to collect data. Teachers were also required to do an in- class presentation of their findings.

## **Instruments**

Data was collected qualitatively and quantitatively using the Teacher Principles and Purposes Evaluation Check List (Blackman, 2013) and a Learning Without Limits Self-Reflection Sheet (Blackman, 2013) which teachers used to reflect on their practice in their journals. The Teacher Principles and Purposes Evaluation Check List (Blackman, 2013) is a self-report checklist that comprises of 25 Yes (1), No (0) items based on the three principles of Co-agency (total score of 14), Everybody (total score of 5) and Trust (total score of 6) as noted in the Learning without Limits project. The Learning without Limits Self-Reflection Sheet presented a number of statements that asked teachers to reflect on how they incorporated the three principles into their day to day practice. Statements for co-agency included, “How (do/did) you make connections with your students that reflect/ed their way of thinking about what school, learning and teaching should be like?” Statements for Everybody subscale included “How (do/did) you ensure that ample opportunities and time is/was given to students to learn from each other in the classroom? Statements on the Trust subscale included, “How (do/did) you ensure that students construct meaning from the information, knowledge and experiences they encounter in school and the classroom? Teachers were also asked to video tape segments of their lessons and keep daily reflection journals to record their experiences and facilitate self-reflection for the course.

Data from the checklist was analyzed descriptively and is presented in a narrative format while themes were derived using inductive data reduction techniques recommended by Miles and Huberman (1994). Descriptive codes, for example ‘grouping’, ‘labelling children’ were applied to sentences and phrases in journals and teachers’ verbatim transcripts from in-class presentations. These codes were then distilled into larger inferential categories, for example ‘approaches to classroom instruction’ and then themes like ‘gleaning new meanings’. While it is difficult to present a case for the reliability of the instruments at this time due to the very small cohort of teachers, the researcher did allow a pool of experts in education to vet the instruments as a measure to ensure content validity. Feedback from this process was positive and the instruments were then distributed to teachers in the study.

## **Results and Discussion**

Teacher’s narratives revealed that they benefited from the guided reflection process assisted by the learning without limits principles. In particular pedagogical changes enhanced opportunities for students to learn. Themes from the study included ‘Gleaning new meanings’ and ‘conquering teachers

fears' and these not only captured what is problematic about entrenched notions of ability, but they also revealed how the Learning without Limits principles of everybody, co-agency and trust challenged ways that restricted student learning.

'Gleaning new meanings' captures teachers' awareness of how instructional decisions influenced their students' learning. Janet is a general education teacher who teaches at a small rural primary school with a school roll of around 132 students and a staff of 14 teachers. She reported low scores on each of the three principles in her initial evaluation: co-agency 8, everybody 1 and trust 1. As a classroom teacher of 19 seven year old class 1 students, she noted clear differences existed between the group i.e. skill development, knowledge and processing of information, in order to deal with this diversity she noted that, My classroom, at present, is set out in such a way that I have the main group and the small group. The main group I have named Asteroids and the small group has been named Comets. This has been done to accommodate the cognitive disparity within the class and so that when I have to work with the small group that it would be easier as they are all sitting together. My board is divided in such a way that I write work for the main group on their side of the room and work for the small group on their side of the room. This is a practice which was handed down when I received the class, they were already divided into the two groups, and so I just continued. I genuinely believed that this was something that would benefit my students. I gave separate activities and even spelling words. (Janet/Journal Entry)

Hart et al (2004) notes that many teachers view grouping for instruction by ability as a common sense idea that allows teachers to deal with the differences that students present in the classroom. However, it means that entrenched beliefs about what children can and cannot do remain unchallenged, as noted in the narrative; Janet was simply not challenging an established practice at the school. However, after reading, Learning without Limits Janet realized that grouping students by ability was contrary to the principle of everybody. She later changed her classroom arrangements to reflect one that facilitated more cooperative grouping, and increased the participation of everybody in the classroom. She noted that, immediately I went back to class and now everybody is all mixed up, I took away the names, I had comets and asteroids and now everyone is now Class one stars. What I did was, I did it in such a way that I now have one stronger and one weaker person sitting together and that was I began to encourage more pair work, so those persons who were in the main group before and going through the process of teaching them how to help others to learn and not just necessarily giving answers but you are helping others to learn, you are talking things through, you are discussing, because you are stronger in reading you are going to read the passage, but that does not mean that you are going to sit and copy the answers, you are going to follow, look for the words that you recognize. (Janet/transcription 1)

By confronting traditional approaches to grouping students Janet was able to change the socio-cultural context of her classroom into one that impacted both the cognitive and affective characteristics of her students' learning. Not only were children more meaningfully engaged, but the children who were 'weaker' benefited from those who are more knowledgeable. They were also notable changes in students' attitudes. She notes that, I found that within the past three weeks or so since I have tried that, one young lady that had a really nasty attitude in the beginning, I find that she is a lot more fun, she is a lot more willing to help, even if you are not working together she sees the young gentleman sitting next to her doing something, she will say "why don't you check over that..." It is another small victory because they are now helping each other (Janet/ Transcription 1).

### Conquering Teachers' Fears

'Conquering teachers fears' captured teachers' attempts to deal with practices which did not engender trust or facilitated co-agency in their classrooms. For Janet, fear is associated with a number of

reactions that include: a perceived loss of control of classroom teaching time, unsettled behaviour by students, not covering the curriculum, trying new approaches to assessment and teaching. One instance that demonstrates this in a powerful way is Janet's reflection on when she wanted to introduce a new form of assessment for her students. She noted that, At the beginning of the school year, and I put this in my journal, I said I want to do different types of assessment, I want to be able to do that, and that is where the trust came in, because thinking about giving them a project I thought "the children ain't going to know what to do and I am going to have to explain this, and I thought, abandon that idea". But going through learning without limits "isn't that what Anne talked about?" them actually discovering what they are learning, the true meaning of discover, and I am thinking because, there is this fear of what will come back if you just let them go. Will I have to sift through all of that and make sense. But I think that that in itself has to be used in order to teach them so whatever they bring back that is how they view it, that is their perspective, and you have to be able to use that... (Janet, Transcription 1)

Another poignant account which reflects the theme 'conquering teachers' fears' was provided by Jacintha who is an aesthetics teacher at a special education school with a school roll of approximately 73 students. The aesthetic programme is part of the technical vocational curriculum offered for female students and there is a functional weekend nail salon attached to the school. Jacinta determines what designs can be used by students and organizes clients for her students to conduct their services on, any proceeds are reinvested to provide resources for the programme. Jacintha reported initially high scores on the three principles of Co-agency 14, Trust 4 and Everybody 4. However, in practice, her guided self-reflection revealed an inflated score for trust, and this was based on fears she had about her students making mistakes when conducting services on clients, she noted that, I realized that the area of trust was an issue and I took ...even though I know the general...I still don't trust them enough to leave them in the room to do what they are doing, I still feel the need to watch what they are doing and one of the students commented that on the fact that I am always walking around to see that they are okay, I do not give them enough room and I felt that that was so good that I was constantly checking on them, that was a good thing, but yet in this area it showed that I did not trust them enough to really know what they were doing, cause I wasn't really sure that they know what they were doing...I said I did...I never, I never leave them alone...depending on if there is a client...because of the fear that they would do something that is not okay or mess up somebody's hand...we are always checking and that really is not a good thing I need to let them make mistakes... (Jacintha, Journal Entry)

Now I plan to implement that give me four of your designs that you plan to use but not necessarily ones that I give to you...I just never gave them an opportunity to do something outside of that, it is one of the things that I am going to be doing ...(Jacintha, Transcription 2)

An analysis of teachers' stories revealed that sometimes limits are imposed on students' learning because teachers are not confident about their students' capacity to produce assignments and products that are worthwhile and this inevitability leads to a restriction of opportunities to learn and stunted innovation and creativity on the part of their students. As teachers engaged more with the self-reflection sheet and the teachers purposes and evaluation checklist they became more aware of and confident in their capacity to provide learning experiences which honored the learning capacity of their students and they used the ideas presented in learning without limits (Hart et al., 2004) as a framework to make alternative pedagogical decisions.

## **Conclusion**

The infusion of learning without limits principles (Hart et al., 2004) as part of a guided self-evaluation process provided a framework for this researcher to not only guide teachers' reflection throughout a course of study in a new Masters of Education programme. It also challenged teachers to confront what is problematic about what they do in classrooms and to address those practices to create spaces and

opportunities for all students to learn. The principles associated with the University of Cambridge's Learning without Limits are not new, but their powerfulness is gaining momentum as evidenced in their adoption by other researchers and other teacher education programmes in the United Kingdom (Florian & Linklater, 2010; Florian & Black-Hawkins, 2010; Florian & Rouse, 2009). Teachers in this study became more aware of the meanings associated with their pedagogical decisions and how their fears needed to be confronted by trying new approaches outside those prescribed by the confines of a narrow curriculum and ultimately they understood their own power (Hart et al., 2004) to lift the limits off their students' learning.

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## **PROADE –Proposal for evaluation of school difficulties –**

Stella Maris Cortez Bacha  
Speech-Language Office - Brazil  
[sbacha@terra.com.br](mailto:sbacha@terra.com.br)

Maria Rita Figueiredo Toledo Volpe –  
Speech-Language Office - Brazil  
[rita\\_volpe@hotmail.com](mailto:rita_volpe@hotmail.com)

### **Abstract**

We present the PROADE – Proposal for Evaluation of School Difficulties – as a speech-language instrument for qualitative and individual evaluation, embracing aspects of the learning processes of reading, writing and Mathematics, such as: cognitive-linguistic, social-emotional, motor, sensorial and perceptual, pedagogical and cultural. There are instruments for: the initial interview; observation of social-emotional and cultural aspects; evaluation of oral language, reading, writing, mathematical learning with specific activities for each school year; observation of the school supplies; verification of the scholar routine along with the staff; evaluation of speech-language related aspects. It is directed to the students of primary school with complaints about learning difficulty in school; it offers the evaluator tools on how to apply tests and examine results, making it possible to get to know the process of learning and development of each student, in a way that favors more directive intervention to contribute with learning as a whole process, including in school. The procedures of PROADE were elaborated from studies that had already happened, linked to the clinical speech-language practice, which has satisfactory results; we sought to carry out the process in a smaller number of sessions – up to four, from the first interview to the feedback, being careful with the accuracy of the findings, considering the application of PROADE in full. The worry about time is related to the practical needs, mainly of public services, which have a grand demand. PROADE has a clinical speech-language approach, but can also be used by other professional of related areas.

**Keywords:** Evaluation of learning, assessment of learning, learning difficulties

### **Introduction**

Speech-language therapists have dedicated themselves more and more to the study of the learning process and its difficulties, mainly in school. They have been studying, along with professionals in similar fields, reading, writing, as well as mathematics with abilities involved in it (such as reading and writing and logical reasoning, among others) (Santos & Navas, 2004; Pantano & Zorzi, 2009; Zorzi, 2003, 2009, 2010).

There are many terminologies related to diagnosing school difficulties as a main theme, but we have emphasized that these are not ‘labels’, and have the purpose of guiding references to overcome any issues.

The terminologies in CID-10 (1999) and DSM-IV (1994) have their root in Health practices, and because we work the interchange between Health and Education, we have used the ones suggested by a multi-professional team involving a speech-language therapist, a pedagogue and a psychologist (Bacha,

Finocchio & Ribeiro, 2008): learning disorders, difficulty in school learning, specific disorder of reading-writing, featuring the presence of emotional and/or behavioral components.

Diagnose of 'Learning Disorder' was proposed by Zorzi (2003): in these cases, the development of learning is compromised ever since the first years, showing itself mostly in language. This disorder comes before learning to read and write and will probably affect directly the process of learning to read, write and mathematical and logical thought, endangering the academic performance as a whole. Many times it is not possible to differ spoken and written language disorders and learning disorders.

The 'Difficulty in School Learning' was described by Ciasca (2003): the difficulties a student has in learning are related to the teacher and the school, involved in a social cultural poorly structured process, with problems which can go from pedagogical inadequacy to lack of material and human resources.

The 'Specific Disorder of Reading-Writing', as Zorzi (2003) described: it makes reference to specific disorders of the ability to read and write without necessarily involving the contents of the scholar learning process. The student presents a development without changes at first. Problems start coming up when learning reading and writing from the beginning of the process of literacy. In these situations there is an absence of neurological, cognitive, sensorial, emotional and educational initial pressing matters. The syntax, semantic and pragmatic abilities of oral language are preserved, which means the problem is centered in written language.

The intention with the suggested terminologies for diagnosing learning is not to go for a 'softer' name, because we understand there is none only by using names, easier or harder ways of referring to them. It is necessary to understand what each comprehends basing in theoretical guidance. This way, 'difficulty', 'disorder', 'disturbance', 'alteration', 'dysfunction' or other words will not say, by itself, the dimension of the state.

We also highlight that the mentioned terms for diagnose in learning cannot be confused with other diagnosis, such as speech-language or even psychological or medical, such as Simple Delay in Speech, Scholar Phobia, Attention Deficit Disorder with or without Hyperactivity, among others.

To come to possible diagnosis or hypothesis of such, it is necessary to conduct a formal initial evaluation or even a procedural evaluation following an intervention. It is necessary to know how the students learn and for this the choice, organization and systematization of resources, materials and procedures are very important.

In the clinic, throughout the many years of a speech-language therapy practice, we have the habit of gathering many resources to apply an evaluation of learning and development, of which the analysis of results requires great experience.

We have knowledge of some systematic proposal of evaluation available in Brazil (Chamat, 1997; Carvalho, Alvarez & Caetano, 1998; Zorzi, 1998; Moojen, 2003; Andradre et al., 2004; Saraiva, Moojen & Munarski; Stein, 2005; Capellini & Smythe, 2008; Cunha & Capellini, 2009; Cuetos, Rodrigues & Ruano, 2010), among others, but involve specific areas and our experience has lead us to the need of a group of more extensive materials, resources and procedures, seeking to associate learning and development.

From the needs observed in clinical practice, particularly with the evaluation of difficulties in learning of students in primary school, we had as a goal in this paper to present an extensive evaluation proposal, PROADE - Proposal of Evaluation of School Difficulties.

## **Methods**

We elaborated PROADE as a speech-language tool of evaluation, qualitative and individual, which comprehends aspects of learning and development of reading, writing and mathematics (cognitive-linguistic, social-emotional, motor, sensorial and perceptive, pedagogical and cultural).



It is directed mostly to Brazilian students in primary school (1st to 5th years) of regular schools which have come across a complaint of difficulties to learning in school. To complement the reading-writing and mathematical evaluation, we propose evaluation of oral language and other speech-language aspects such as fluency, voice and orofacial myology.

PROADE seeks to offer speech-language therapists and professionals in similar areas pre-established guidelines for its application and analysis of results, as well as get to know in an as detailed as possible way the student's process of learning and developing, without any intention to even or classify, but of having arguments to suggest a more directive intervention, which contributes to the student's learning as a whole, including in school, and aiming for his/her progress.

The procedures of PROADE were elaborated from studies which have already happened and from Brazilian educational policies, associated to our practical knowledge in speech-language therapy which has satisfactory results. We also sought to evaluate in a smaller number of sessions – up to four, from first interview to feedback, being careful about accuracy of findings.

Worrying about time is related to requirements of practice, mainly of public services, which have great demand. This evaluation seeks to diagnose from sustainable hypothesis to elucidate what is intrinsic to the student and what is not.

### **Results and discussion**

PROADE was organized to be applied by a professional, adding value to the interactive process during the evaluation, but in some cases the collection of data is intended to be done indirectly due to the time taken.

As for reading, writing and mathematics, specific evaluating activities are proposed to each school year of primary school (1st to 5th years); the evaluation of oral language is more general, as well as the other speech-language aspects; there are guidelines for applying as well as analyzing results.

We emphasize that the analysis of results will be, inevitably, in the professional's background and understanding he/she has of the evaluated aspects.

In PROADE, the evaluated aspects and proposed tools are:

1. Resource for the initial interview: five pages with multiple choice questions (also some open questions); it also contemplates information about school, language and development, health and hereditary factors, habits and customs.
2. Instrument for observation of social emotional and cultural aspects: a table with guidelines for elaborate a story, a prop with a list of words for oral repetition, one with suggestions of directed questions aiming for engaging interaction between examiner and examinee, groups of pictures forming stories in sequence, one table with guidelines for taking notes of results.
3. Resources to evaluate reading: a prop with isolated letters from the alphabet, one with lists of words according to levels of difficulty, props with texts (two for each school year, with adjustments for the first year), one prop with questions which evaluate text understanding, one table with guidelines for taking notes of the results.
4. Resources to evaluate writing: a prop with pictures for nomination, scenes for creating sentences, a prop with themes for compositions, one with words for dictation, one table with guidelines for taking notes of the results.
5. Resources to evaluate the learning process in mathematics: props with specific activities (one for each school year), a list with the answer key of the results, one table with guidelines for taking notes of the results.
6. Resource to observe the student's school supplies: one file with guidelines for specific notes to be registered according to what was verified from the procedure.

7. Resource for checking the school's routine along with staff: one file with guidelines containing questions about the evaluated student's routine at school.
8. Resource for evaluation of other speech-language aspects (fluency, voice and orofacial myology): one file with guidelines for taking notes of the observed information from all evaluating activities.
9. File with guidelines with the conclusion of the evaluating procedure, diagnostic hypothesis and suggested forwarding, but at the same time it is directed to the learning process at school of students of primary school (1st to 5th years), and it is individual.

### **Conclusion**

PROADE is a proposal of speech-language evaluation involving the learning process at school and, therefore, does not contemplate all aspects involved in this process due to its complexity, extension and range of the topic. Because of that it might be necessary to use further investigating tools for a better understanding and/or clarification of the study case.

This evaluation has clinical speech-language approach, but can also be used by other professions in similar fields, such as a psychologist and pedagogue, taking into consideration the specificities of each area. The 'clinical' approach referred to here means having a selective gaze towards the individual person, considering his/her learning and development process in constant interaction with the environment, and not only an organic and reductionist point of view.

The use of PROADE is, sometimes, limited to a specific public, but will certainly contribute with the students involved by use of the results observed, as well as with the many professionals which make use of it, allowing them practicality and refinement.

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## **Students with special educational needs in higher education reflections around inclusion**

Teresa Gonçalves

Escola Superior de Educação e Comunicação - University of Algarve

[tigoncalves@ualg.pt](mailto:tigoncalves@ualg.pt)

Maria Leonor Borges

Escola Superior de Educação e Comunicação - University of Algarve

[mlborges@ualg.pt](mailto:mlborges@ualg.pt)

Maria Helena Martins

Faculdade de Ciências Humanas e Sociais- University of Algarve

[mhmartin@ualg.pt](mailto:mhmartin@ualg.pt)

### **Abstract**

In this paper are presented some preliminary results about inclusion in higher education (HE). This research is part of a wider investigation project<sup>1</sup> designed to understand what are the trajectories and experiences of students with special educational needs (SEN) in the Algarve University concerning access, and global conditions for staying in HE with success. This exploratory study raises questions and also suggests reflections around the concept of inclusion, trying to understand the perspectives of academic management and academic staff. We found positive perceptions from academic management and academic staff about this student's inclusion. However, these preliminary results also shows that should be developed efforts to provide students with SEN opportunities that allow them to continue their academic career in higher education, promoting inclusion, personal development and participation in social and economic life.

**Keywords:** Higher Education, Inclusive education, Special Educational Needs (SEN).

### **Introduction**

According to Salamanca Statement (1994) people with disabilities have been approached by society that stresses more their limits instead of their potential. The commitment made by the Government of Portugal in Salamanca to develop an education policy that answers effectively to children and young people with special educational needs (SEN) form, opposing segregation and failure, a stimulating educational path of their abilities under a "Education for All", was an extremely important contribution (Ainscow, 1995). In 2008 with the United Nations International Convention on the Rights of Persons with Disabilities<sup>2</sup>, we saw the recognition of disability as one more element that marks the social diversity, breaking with the negative view that had hitherto prevailed in law and culture. For this purpose, contributes the formal involvement of persons with disabilities in the preparation of the Convention, giving them voice, namely the right to decide about their rights in the first person. This concept of disability as part of social diversity came to give a new impetus to the rights of persons with disabilities by enabling their organizations for a more active involvement in the promotion of their rights and, consequently, create a new paradigm for students with disabilities (Harpur, 2012). So we have seen in the last decades, resulting from the assumptions of Inclusive Education, the increasing democratization of Higher Education (HE) and the implementation of Bologna process, it has been

observed the widening access to non-traditional students from low and socio-economic contexts, students that are under-represented in HE such as: students with special needs, African students; students of technological specialization courses; and students older than 23 years. Assuming the responsibility that university has for social development, it should be noted, however, that inclusion of these minorities in HE it is not consensual, and their participation, especially their academic success, finds many constraints that must be analyze in order to guide the institutional change.

Disable students raise particular challenges to HE, not only in terms of gaining physical access to buildings, but also in relation to much broader access issues concerning the curriculum, teaching-learning and assessment. The right of students with SEN to continue their academic career in HE is a way to promote their inclusion development and participation in social and economic life, but does the universities have the right conditions in order to ensure the inclusion of these minority students?

## **Methodology**

This paper is a preliminary and partial outcome of the research project “Non-Traditional students in higher education: research to steer institutional change”<sup>3</sup>. Our study intends to understand the inclusion process of non-traditional students in the Universities of Algarve and Aveiro (Portugal). Regarding the group of students with SEN, our research question will be the following: What are the trajectories and experiences of students with special needs, in our university concerning access, and global conditions for staying in HE with success? We hope that the results of the present study represents a strong contribute to discuss possible recommendations with structures of academic management, in order to improve academic success. Our research project is divided into two parts. The first part is based on a qualitative methodology trying to privilege the use of semi-structured interviews (Arksey and Knight, 1999), applied to students with disability, lecturers, academic management (especially the directors of learning programmes) and also some elements of academic staff. The second part of this research project includes life stories (Atkinson, 1998) and focus-group interviews (Barbour, 2007). For this paper we decided to consider only the interviews with lecturers, academic management and also academic staff. Semi structured in-depth interviews, conducted by the authors, constituted data collection. This type of interview is particularly suitable if we want to cross, compare and analyze cases (Patton, 1990; Bogdan & Biklen, 1994; Van der Maren, 1995) as in this study. The semi-structured interviews were used primarily to ensure collection of rich information and also flexibility in addressing emergent themes. Individual interviews range between one and two hours. All participants were informed about the main purpose of this study, and it was also asked about their permission to record the data. This is a convenience sample (Fortin, 2000; Patton, 1990) where participants are encouraged to report their feelings, ways of thinking and also emotions. The data is organized in four major areas: a) inclusion in HE institutions, the context of University of Algarve; b) attitudes towards inclusive education; c) pedagogical support for disable students and teaching-learning process (curricular adaptations); obstacles identified by lecturers and academic management; and finally, d) some suggestions for improvements and conditions to achieve academic success in university.

## **Results and discussion**

### **Inclusion in HE institutions - the context of Algarve University**

During this academic year, it was created the Disability Office (GAENEE) to support the students with special education needs and promote the academic success and inclusion. Headed by a group of lecturers (one element of each school or faculty), this office has as important mission: to give all the support to students with SEN, who are enrolled at the University of Algarve, no matter the course they are attending. This Special Education law<sup>4</sup> allows to students with disability to implement a specific set

of conditions based on the recognition of the right to difference, without sacrificing the normal parameters of demand and quality of teaching-learning process. The creation of this structure means an important step to all academic community comprising all the bodies of university structure: students with disability, lecturers, and researchers, academic management and also academic staff.

The attribution of this Special Educational Law is at an early stage and only started this academic year (2013/2014).

#### Perspectives of lecturers and academic management

‘Uncertainty, Fear and Unawareness’ - The need to develop methods and learning strategies in order to promote an inclusive education becomes an important step since the moment that universities ‘embrace’ these group of students. Thus, it is important to highlight that lecturers should be aware and prepare themselves about how to deal during presence of these students in their classes (Madiaga, Hanson, Kay & Walker,

2011). Some studies (Correia, 2008; Silva, 2013) confirm feelings of anguish, uncertainty, fear and unawareness witnessed by lecturers when they have students with disabilities in their classes. Our participants also mentioned lack of knowledge and feelings of fear, about how to teach and how to deal with students with disability: (...) there is a lack of information, but I think there is a good will from people and bodies for that, to become university more inclusive, but in practical cases I don’t know if we have the right conditions to give the right answer! (Math teacher).Some of the participants complained about the lack of identification and also recognition of students with SEN at the beginning of their classes. Sometimes, they are only informed at the mid-semester or via the course director.

#### Pedagogical Support

‘Lack of information and specific training’-According to Tinklin and Hall (2006) the lack of information and specific training represents an obstacle in several HE institutions. The University of Algarve is not an exception. The major bodies of academic management don’t have a real concern, many of them are uninformed, or in some cases, are less familiar or experienced to work with the several types of disabilities (e.g. Syndrome of Asperger). In several cases, academic staff complains about the very large number of students on some courses; therefore, the amount of time that they have available to interact with individual students is not enough. The collecting data shows us that there is a lot of work to do. Beyond the lack of information about students with disability, some lecturers’ don’t have a specialized formation about inclusive education field and they never had any workshops to learn more about special needs. “Maria” defends itself saying: Actually, we don’t have too many cases of disability students. What happened with me it was only occasional cases?

‘Teaching-adaptations’- Concerning to teaching adaptations, almost all the lecturers of this study showed care feelings and a large sensitivity about this issue, trying to provide alternatives for several moments of assessment. Beyond the extra time given during the exam, an English teacher, for example, decided to give a special exam to “João”. Once João has some problems in written tests, the teacher decided to adapt the exam using multiple-choice questions: [João] have, yes it is multiple choice. So he don’t have to write, he just have...only have to identify (...). In other cases, one of the lecturers shared the idea that teaching should be equal for all. He argues, that in large classes it’s difficult to give attention to all students, especially when they have a SEN student that requires lot of attention: (...) we have classes of 30 students, and we must divide by thirty two hours...with limitation we give a little more attention to “Peter” but we can’t give too much! (Informatics’ teacher).

#### Suggestions for improvement to universities

Despite the fact that lecturers did not have much knowledge about students with disabilities, however, they recognize the lack of institutional support. Some of our participants suggested that should be established a Disability Office staffed with professionals to inform about students with SEN when they begin the academic year. One of the elements of academic staff share with us about this idea: (...) it was lacked this structure...I would say that it missed a technical support...a structure that would comprise the several efforts here (...) when there was a student with a problem. Finally, concerning to library, the official expressed their will to make some adaptations, for example: (...) in a short period of time I would like to put labels on the bookcases, and beside should appear in braille.

### **Conclusions**

Through the preliminary results of this study it was possible to obtain a first approach to understand inclusion and access for students with SEN to higher education. Based on perceptions obtained through participants (agencies, academic management and elements of staff) it was possible to highlight a diversity of perspectives that differ according to the lived experience by each subject. We should highlight a group of participants who strive to ensure the better conditions to achieve academic success of these students (e.g. extra time to exams). On the other hand, it is necessary to interfere more actively, for example, trying to invest in awareness and specific training on the various disabilities presented by students. As some authors state, in order to achieve a genuine inclusion of students with disabilities in HE we need to create fair socially just pedagogies to combat the vision and academic elitist attitudes, based on the sense of normality (Madriaga, Hanson, Kay & Walker, 2011).

We believe that our study will be an important contribution to discuss possible recommendations with structures of academic management in our university, in order to improve success academic among these students and a real academic inclusion. We also hope this research could emphasize the role extremely important that HE performs to develop equal opportunities to all students and to social development.

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## **Solution enhanced coaching for students with severe behaviour disorders**

Souveny, D.M.,  
Wolf Creek Public Schools  
[dwaine.souveny@gmail.com](mailto:dwaine.souveny@gmail.com)

Marlene Alberts,  
Wolf Creek Public Schools

Wanda Christensen  
Wolf Creek Public Schools

Terry Ramsay,  
Wolf Creek Public Schools

Brenda Massing,  
Wolf Creek Public Schools

### **Abstract**

Solution Enhanced Coaching and its positive impact on students displaying severe behavior disorders were examined during an applied research project within a rural school district in Alberta Canada. Solution Enhanced Coaching techniques were utilized following a specific coaching model within the modalities of an initial in person group meeting, weekly email coaching and monthly group video conferencing. To assess the success of this project, qualitative and quantitative information on the students and educators was collected when the project began and after its completion.

**Keywords:** Coaching, cognitive coaching, instructional coaching, severe behaviour disorders, solution, solution focused, ADHD, autism, FASD

### **Introduction**

Research indicates that “school-based coaches contribute to the improvement of teaching and learning in schools” (Kilion & Harrison, 2005). Downey (1999) defined coaching as “the art of facilitating the performance, learning and development of another”. The intent of coaching is to help an individual to grow and excel in those areas in which they wish to improve.

The role of coaching within the education system is increasing. Coaching is being used to address such diverse student exceptionalities as Attention Deficit Hyperactivity Disorder, Autism, Reading Disorders, Early Intervention and Behavioral Disorders.

Solution Enhanced Coaching combines cognitive coaching (Neenan & Palmer, 2001, Costa & Garmston, 2002) and instructional coaching (Knight, 2007, 2006) with principles of positive psychology and solution-focused strategies (McConkey, 2002) to provide an effective belief and behaviour change tool for educational personnel. It provides both a process and structure to facilitate successful accomplishment of goals.

### **Method**

An integral part of the coaching process involves a structured format which may be utilized in a flexible manner. Auerbach (2003) utilizes a model focusing upon the acronym GOOD emphasizing identification of a Goal, the Opportunities to achieve the goal, Obstacles to the goal and then Do it by taking specific action steps towards the goal. This GOOD model was modified by the present authors to become the GOODS model in order to emphasize the Successes that a person might have in achieving their goal.

The format allows the person/team being coached to identify specific goals that the “coachee” would like to focus upon. The “Coachee” identifies the strategies that are to be of focus and any strength that he/she/they may bring to the situation – this is referred to as opportunities. Next, the “coachee” discusses any obstacles that must be overcome or that are blocking the goal from being realized or achieved. Finally, the “coachee” identifies the next actions steps to be undertaken to achieve their set goal and describes what they will feel, see, experience, when they have successfully accomplished the set goal.

Wolf Creek School Division is located in the rural setting of central Alberta. It has approximately 7500 students in 25 schools spread across 100 miles. The population of students includes 400 with severe disabilities. To enable Wolf Creek Public Schools to bring Coaching to our staff within the district, 4 staff (from the Student services Team) was trained in Solution Enhanced Coaching techniques.

For the design of this study coaching programs took place over a 5 month period of time; one from September to January and then again from February to June. Selection of the students considered for participation in this initiative was based on each student displaying a severe behaviour disorder. Specific behaviours included being argumentative, refusing to follow requests or rules and being verbally and/or physically aggressive. School-based teams (teacher, educational assistant, administrator) volunteered to participate (as School Learning Teams) in this project with one team for each student.

**Initial 1 day In-service:** The coaches initially met with 5 school teams and provided them with a 1 day in-service. Content of this day focused on Solution Enhanced Coaching, the GOODS model and the development of a Positive Behaviour Plan for each student. Each team worked with a designated Coach. Initially a single goal was chosen to work on, and then the coaching began. Once that goal had been achieved, another goal was chosen and focused on. It is important to note that the coach ‘coached’ the Student Learning Team but not the student. The Student Learning Team provided the direct contact to the students.

**Weekly email coaching:**

During this project, the school teams e-mailed their Coach each week. Often they would email their comments on a Friday and the coach would reply on the Monday. Using the GOODS format, they reported upon their student’s week as well as what the Team did during the week. The Coach then replied to that email by incorporating comments and questions into what had been written by the team. By making comments and asking powerful questions within each of the GOODS categories, the Coach was able to ascertain information that was helpful in providing the team insight into the week. The coaching process also provided affirmations to the team based on their perceptions of challenges or success.

**Monthly video conference coaching:** Monthly, all 5 teams met through video-conferencing.

Once the teams became comfortable with the technology, as well as with their colleagues at other schools, the video-conferencing provided opportunities to share. It also provided the opportunity for the teams to coach and provide feedback to each other.

**Wrap-up Meeting:** At the end of the five month session, the teams met in person, talked about some of the challenges that they experienced and celebrated their success.

## **Results and Discussion**

During the course of the school year, qualitative and quantitative information was collected on two groups of 5 students, from their Student Learning Teams, when the project began and after its completion 5 months later. Quantitative data was gathered through the use of the Behavior Assessment System for Children, Second Edition (BASC-2). BASC-2 data was collected from each of the student's teachers upon initiation of the 5 month project and again upon its completion for 9 of the 10 students participating in the project. [Note: One student was transferred during the project].

The Overall Behavior Symptoms Index T-score mean decreased on average, from the Clinically Significant range (Mean score =78.77) to the At-risk range (Mean score = 67.00). This indicates a significant decrease in the scope and intensity of the behavioural challenges as indicated by a one-way ANOVA ( $F = 26.73$ ;  $p < .001$ ). The Externalizing Behaviour Index T-score mean decreased from the Clinically Significant range (84.11) to the juncture of the Clinically Significant and At-risk ranges (70.67). This decrease in challenging behaviour was also highly significant ( $F = 20.64$ ;  $p < .001$ ). These results indicated a significant improvement in the student's behaviour, particularly in the areas of Aggression, Conduct (rule governed behaviour) and Hyperactivity. A positive impact was also noted for the internalizing behaviours of anxiety and depression. Noteworthy, many of these students had longstanding issues of behavioural concerns, including aggression and non-compliance; by the end of only a 4 – 5 month time frame, many were considered to be functioning without requiring substantial supervision and support.

At the end of each 5 month coaching program, each individual on the Student Learning Team completed a questionnaire which included the use of a 5 point Likert scale. Each respondent, was asked to rate levels of improvement on a 1-to-5 response scale. The following results, with each rating average in brackets, were indicated: Additional Skills/Strategies were learned (4.9), Stress Level (4.5), Communication and Collaboration (3.97), Feelings of Support (4.57), Set Goals (4.25), Look at Options (4.13), Identify and Overcome Obstacles (4.13), Establish next steps and actions (4.38), and Feelings of Success (4.38).

Qualitative data focused upon inviting participants to comment on the effectiveness of the coaching process and communication methods. Respondents overwhelmingly indicated that the weekly e-mail, video-conferencing and direct communications were highly beneficial. Respondents felt that the strategies developed were creative, positive and easily implemented, the team was supportive and positive, and that the weekly e-mails were useful as a future planning resource. Participants were also extremely positive in regard to the supportive and positive relationships that developed with their Coach.

## **Conclusion**

Solution Enhanced Coaching has made a significant difference for students who display challenging behaviors in Wolf Creek School Division. Students who participated in this program experienced increased success in academic growth and were able to display more independent behaviors in the classroom. Many of these students began with longstanding issues of behavioural concerns, including aggression and non-compliance; by the end of only a 5 month time frame, many were considered to be functioning without requiring substantial supervision and support.

Student Learning Teams who received initial training and participated in the behavior coaching initiative, reported many positive results including feeling supported, not working in isolation, and gaining more skills and knowledge in teaching students with severe behavior disorders. Before the coaching initiative was implemented, teachers and support staff reported that there was very little

support if any at all to assist them with the education of students with severe behavioral challenges. The Solution Enhanced Coaching initiative was Wolf Creek's response to address this gap in service. E-mailing and video-conference coaching were very effective in a rural school division. A tremendous amount of time and cost were saved by being able to communicate in this fashion. E-mail coaching has a number of benefits, the most notable being there does not need to be a specifically scheduled appointment time for when the coach and coachee are together. Additionally, both the coach and coachee could take time and put thought into what they were going to say within the communication together. Furthermore, there is much power in the written word. Thus, when the coachee reports and wrote down that they are going to do something, there was increased likelihood that it would, in fact, occur. Written communication through electronic means is becoming progressively more popular within our culture, with many students, executives and teachers spending more time communicating via email than through telephone conversations.

The Solution Enhanced Coaching program, combining cognitive and instructional coaching with principles of learning and positive psychology, was indicated to be a powerful, effective and essential framework of training, support and guidance to ensure that all students who present with challenging behaviors have every opportunity to experience success in their learning environment. Results indicated a significant decrease in externalizing behaviour (Hyperactivity, Aggression, Conduct Problems) and internalizing behaviour problems (Anxiety, Depression). Furthermore, teachers reported improvement in areas including additional skills/strategies were learned, stress level reduced, communication and collaboration, feelings of support and feelings of success

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## Using ICT with SN children: Perceptions of professionals and parents

Teresa Sousa  
University of Aveiro  
[teresa.sousa@ua.pt](mailto:teresa.sousa@ua.pt)

Oksana Tymoshchuk  
University of Aveiro  
[oksana@ua.pt](mailto:oksana@ua.pt)

Ana Margarida Almeida  
University of Aveiro  
[marga@ua.pt](mailto:marga@ua.pt)

Paula Santos  
University of Aveiro  
[psantos@ua.pt](mailto:psantos@ua.pt)

### Abstract

The goal of this paper is to present two research projects that aim to contribute to the enabling and empowering processes of professionals and families of children with special needs, in their thrive to acquire and optimize competencies of using information and communication technologies (ICT) contingent to the needs of their children. The central dimensions of these projects are: (i) to promote the exploitation of an online space – where participants can share resources, successes, doubts and needs; (ii) to mediate the articulation between the different agents involved in the children's educational processes; and (iii) to develop teaching resources, within a co-design methodology, destined to promote oral and written language in children with language disorders in the phonological sphere.

**Keywords:** Special Needs (SN); Information and Communication Technologies (ICT); Share.

### Introduction

Inclusion of children with special needs brings great challenges to schools, as well as to society, as there is not only few knowledge available and lack of materials/intervention strategies adapted to the characteristics of each child, but there are also communicational difficulties among the different educational agents (family members, education and health professionals). The intervention process can be facilitated by a friendly, positive and convergent communicational set, optimized and adjusted to the critical periods of the child's development and learning process.

A survey was applied at the first stage of the research, aiming at the characterization and analysis of the existing scenario, in what concerns both the training in information and communication technologies for special needs, and the sharing of information and resources relevant to facilitate the learning process of reading and writing among the different educational agents.

Through data analysis, especially concerning the needs of sharing and engagement, we decided to create a pilot group, comprising family members, teachers and health professionals involved with children with phonological disorder.

Child development results from numerous interactions with their ecological environment (McWilliam, 2002). High importance is attributed to family and community and natural learning environments that can promote child learning and development, and can increase the inclusion of children and their families in the community (Dunst, Herter & Shields, 2000). Thus, family centered practices and intervention in natural contexts, developed by a trans disciplinary team, configure a high quality intervention in this domain (Sandall et al. 2005; Dunst, Leet, & Trivette, 2011).

The “family centered approach” is based in the ecological perspective of human development, proposed by Brofenbrenner (1974). Dunst and colleagues (1988) emphasized the concept of "empowerment" and "enabling", contributing to the evolution of the family centered approach. The concept of "enabling" points the need of supporting families in the process of identifying and creating capabilities, resources and strengths, and plays an important role to meet their children's needs. "Empowerment" assumes the implementation of interventions so that family members maintain or acquire a sense of control over their family life as a result of their own efforts to achieve their goals.

According to Galvão, Ricarte and Daura (2011), an extended consensus between educational and other agents intervening with children/youth with special needs and their families is very important, especially when the main purpose is to create optimized circumstances for learning and development. Based in the ecological and trans disciplinary model, we intend to create an online space for self-training in ICT, and for sharing knowledge and understanding, but also doubts and knowledge gaps. New ways for the social inclusion of children/youth with SN (Special Needs) are being created by the current technology advances, allowing access where, otherwise, would be difficult or even impossible to achieve (Alves et al., 2008; Ribeiro et al., 2009). The incorporation of ICT depends on the adaptation of technical resources to the needs of the child/youth with SN and to the professionals and families' knowledge (Antunes, 2012; Rêgo, 2010; Ribeiro, Almeida & Moreira, 2009; Ribeiro, 2012). So, promotion of ICT training in education and health professionals, as well as in family, assumes a very high importance. Specialized and suitable training for families is necessary in order to promote optimal use of ICT, ensuring that there is an adequate response to the needs of the child/youth with SN. This training must be adapted to the model referred above, while benefiting the acquisition of knowledge and skills, and providing opportunities so families and professionals can learn how to use ICT with children/young with SN (McWilliam et al., 2002).

## **Method**

This article reports the first phase of two ongoing research projects, and the data obtained in two questionnaires applied to parents and to professionals involved in the educational/rehabilitative process of children/youth with SN. These data clarify the competences and needs in ICT training and helped us to identify needs for sharing knowledge and experiences by those educational agents. Both questionnaires of the survey are similar, in order to allow the respective comparative analysis. The questionnaires were applied online between February 1 and March 15, 2014. Fully 49 questionnaires were answered by parents and 111 questionnaires by professionals in education and health. Characterization - sample of families of children/youth with SN.

It was found that the majority of respondents were mothers (only 4 parents and 1 grandmother), and a high number with university degrees (n=34). The majority of respondents (n=34) exercise a profession and a part of them are teachers (n=13). The geographical distribution of respondents is varied, the majority being from Portugal (n=45), few from Brazil (n=3) and Mozambique (n=1). The Portuguese districts showing higher prevalence are Lisbon (n=17), Aveiro (n=7) and Viseu (n=7). Concerning the characterization of the child/youth with SN, the following distribution was found: by gender - female (n=20) and male (n=27); by level of education - most frequent the initial levels of the

system education, namely, pre-school (n=15), first cycle (n=10) and second cycle (n=8). It was also found that 5 children/youth no longer attended the educational system.

Regarding the main difficulties of the children/youth, the following were identified: language (n=32), cognitive (n=26), socialization (n=14), psychomotor (n=15), motor skill (n=13); behavioral (n=12). It was noted that language difficulties represent a significant percentage (65%) of the problem signaled by professionals of special education. Specifically, respondents reported very severe and serious difficulties in the areas of production of speech sounds (n=18), construction of oral sentences (n=23) and text reading (n= 13). The majority of parents surveyed reported that students who were being supported by Special Education professionals benefited from speech therapy (n=30), consultations of development (n=28), support for SN (n=28) and occupational therapy (n=24).

**Characterization - sample education/rehabilitation professionals**

This survey shows that the majority of the 111 respondents are female (n=94), and the age group with the largest representation is between 31-40 years (n=40). Geographically, respondents carry out their professional activity all over the country, but the most representative areas are Aveiro (n=38), Viseu (n=20) and Lisbon (n=12). Relating to the respondents' professional activity, 67 are framed as education professionals and 52 as health professionals (8 of them playing roles in both health and education areas). Teachers are very well represented (n=36) (among all the mentioned professions, 14 are SE teachers), speech therapists (n=22), technical psychomotor (n=15) and psychologists (n=14). It was found that the majority of respondents do not have specific professional training in SE (n=60). Regarding the amount of professional experience, the most represented groups are located within the following ranges: "11 and 20 years" (n=34), "5 and 10 years" (n=27) and "less than five years" (n=26). We emphasize that in the present academic year, 91 professionals are supporting, or have included in their classes, children/youth with SN. In this group, 46 indicated that they are supporting fewer than 10 children/youth, 31 support "between 11 and 20 children/youth" and 17 professionals support "between 40 to 50 children/youth".

## **Results and discussion**

According to the collected data, the majority of our sample has knowledge in ICT and this knowledge was obtained mainly through self-education and professional training. It's been evident that most of the inquired professionals have knowledge in the field of ICT for SN (n=68), and uses ICT in the educational/rehabilitative process of children/youth with SN (n=85). ICT used to improve the performance of children with SN (n=89) and to compensate the limitations of children (n=87) are the main reasons and motivations for demanding this training.

Our results also indicate that parents and professionals create/adapt custom materials to their children/young with SN, in the following areas: functional skills (n=47), simulated activities of daily living (n=45) and communication (n=40), using word processing applications and production of presentations. However, a significant number of professional respondents report a lack of digital materials.

Regarding the ICT resources for SN, it appears that most parents and professionals surveyed use Power Point applications and eBooks. However, respecting to educational software for SN we registered a very low level of knowledge and use. Jogos de Mimocas (n=54), Comunicar com Símbolos (n=44) and Boardmaker (n=34) are used by professional respondents.

The level of knowledge and use of ICT resources for SN, cited by professional respondents. Families' respondents showed more interest than professional respondents on knowing/learning about software for SN. The most appealing solutions that professionals would like to know about are the ones related to authoring tools (ex. Jelic) (n =29) and Grid 2 (n=26). Parents' revealed even lower levels of



knowledge and use of educational software for SN, highlighting the most used: Jogos de Mimocas (n=18) and authoring tools (ex. Jclíc) (n=8).

It became evident that surveyed parents also have low levels of knowledge about most software for SN, but compared to the professional's responses, this group revealed more interest in knowing/learning about these specific resources. Parents said they would like to know more about Grid2 (n=21), Comunicar com Símbolos (n=9) and InVento (n=19).

The general perception is that technological resources help children/youth to communicate in a better way and they totally agree that ICT can be an important aid in the educational/rehabilitative process of children/youth with SN.

Concerning the needs for sharing information and resources, the professionals were the more frequent respondents, declaring they search some ideas in web/internet weekly (n=46); but they rarely or never share experiences or doubts (n=68), materials and resources (n=65). We can consider that the answers of parents converge, because most refer never having shared experiences or questions on the web/internet (n=29), and rarely or never share materials and resources (n=40). Regarding blogs/websites dedicated to information sharing in the field of SN, most of the respondents reveal that they know little and use it with a low frequency. "Escola Virtual" (n=48), Facebook Groups (n=45) and "Pais em Rede" (n=26) are among the most widely used by professionals. Parents indicated the same blogs/sites but in another sequence, giving preference to Facebook groups (n=28) and follow referring "Pais em Rede" (n=22) and "Escola Virtual" (n=12). Despite these indicators of sharing, the majority of respondents, both professionals and parents, respectively consider that sharing (n=101, n=38), communication (n=107, n=30) and involvement (n=107, n=42) between different educational agents facilitates the learning/rehabilitative process of children/youth with SN. It is also important to highlight that the majority of professional respondents (n=56) feel a partial lack of cooperation between the different educational agents and, in the group of parents, this perception is even more evident (n=15 strongly agree; n=14 partially agree).

We may consider that parents feel competent to assist their children in the promotion of oral and written language (respectively n=26 and n=42), but a representative group of professionals refers a lack of knowledge in being able to assist their students with SN in the process of learning oral and written language.

The majority of respondents expressed the importance they give to the involvement of the various educational agents in the development of digital processes and strategies (n=72 professionals totally agree, n=26 parents agree) and would like to be involved in projects of sharing (n=58 professionals totally agree, n=23 parents agree).

## **Conclusions**

This study aimed to characterize the professionals' and parents' perceptions about their practices using ICT to intervene in SN children, and the importance of sharing knowledge strategies and resources within the learning/rehabilitative process of children with SN. This data analysis evidences that most of our sample respondents have a positive perception on ICT, and show that these are an important aid in the educational/rehabilitative process of children/youth with SN.

Results seem to indicate that most professionals and parents have knowledge of ICT and use the most common tools in daily practice, although both show a low level of knowledge and use of technologies for SN. These results confirm the main outcomes of other recent studies in Portugal (Antunes, 2012; Rego, 2010; Ribeiro, Almeida & Moreira, 2009; Ribeiro, 2012).

Regarding sharing needs, most educators consider the processes of sharing, involvement and communication is important among all stakeholders in the educational/rehabilitative set, but analyzing exchange knowledge, experiences and skills in web/internet, there is a low level of

development of culture-sharing network. Our results converge with those described in the literature that states that educators have difficulty both in adopting reflective and cooperative practices (Mesquita, Formosinho & Machado, 2010), and also in developing effective communication and knowledge strategies, and material resources sharing among different educational actors (Franco, 2007; McWilliam, 2010).

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## **Inclusion: Cultural capital of diversity or deficit of disability? Language for change**

Timoti Harris  
Secondary School Principal, Ōtorohanga College, New Zealand  
[harristr@otocoll.school.nz](mailto:harristr@otocoll.school.nz)

Lesleigh Henderson  
Resource Teacher Learning & Behaviour, New Zealand  
[lhlesleigh@gmail.com](mailto:lhlesleigh@gmail.com)

### **Abstract**

If we do not change our language to match changes in thinking, we perpetuate what always was. If we keep talking about “special education, disability, dysfunction, disorder”, we focus on the deficit. We have changed theory, we have changed practice, but we haven’t changed the language. In one small rural secondary school in New Zealand (Year 9-13) of 400 students, we have created an environment truly inclusive of ability, ethnicity, culture, gender and language.

**Keywords:** inclusive, equity, language, diversity, holistic, ability, ethnicity

### **Introduction**

Language is a powerful creator of realities and if we as educators change the language we use we can create an environment which truly empowers, embraces and celebrates diversity of all kinds. The model we present where a school community honours the vast range of differences and where the cultural capital of diversity is deliberately sought and included, presents an example of praxis which is powerful and practical. We believe this ‘cultural capital’ lies at the very heart of how we reshape practice and language to bring theory alive; to engender true inclusion and ultimately success for every student. “Success for All” as our NZ Ministry of Education (2010) declaims.

### **Method**

The practice presented is the culmination of a five year journey reshaping a secondary school to be inclusive. New Zealand’s Education Review Office inspects schools every 1, 3 or 5 years depending upon their sustained success in implementing the NZ Education Act (1989) with its attendant amendments. Our school was reviewed at the start of our first year, eighteen months later and again in three years at the end of our fifth. The October 2013 review identified excellence of equity and inclusion, huge upshifts in student achievement of all kinds (cultural, academic, sporting and vocational) and evidence of effective, embedded systems, processes and relationships supporting inclusion.

### **Results and discussion**

The New Zealand Disability Strategy (2001) describes disability:  
We live in a disabling society. The New Zealand Disability Strategy presents a plan for changing this. Disability is not something individuals have. What individuals have are impairments (sic). They may be physical, sensory, neurological, psychiatric, intellectual or other impairments. Disability is the

process which happens when one group of people create barriers by designing a world only for their way of living, taking no account of the impairments other people have. (p. 3).

The goal of creating “a totally inclusive school,” is a personal lifetime commitment for the authors and in line with the New Zealand Ministry of Education vision of “Success for all: every school, every child” by 2014 (Ministry of Education, 2010). We believe for inclusion to live, we must ‘live inclusion’. How do we go about creating a school that ‘lives inclusion’? We begin with a vision which celebrates the uniqueness and value of the cultural capital a person brings, this includes whatever richness is inherent in their difference. In the words of a local Māori proverb or whakataukī: “Kei tēnā, kei tēnā, kei tēnā ano. Tōnā ake ahua, Tōnā ake mauri, Tōnā ake mana. Each and every one has their own uniqueness, life essence and presence.” (F. Kana, personal communication, November 9, 1998). One of the first steps we took was to examine not where the deficits in educational provision lay, but instead to ask who the favored stakeholders in our school community were. By then disaggregating our data by ethnicity, gender and age level we could see who were relentlessly under-served in our school. From there we identified girls, Māori, students with high and/or complex needs, junior year levels and gifted students as being often overlooked and their lack of success either under-reported or not responded to. Our next step was to undertake intensive self-review of many aspects of the school/kura, identifying enablers and barriers to inclusion. One such barrier was differentiated academic targets determined by ethnic designation; lower expectations for indigenous students (Māori) were documented and entrenched in teaching and learning. Terminology which created a concept of “normal” which then manifested an unspoken “not normal” or “less than normal” was another barrier. This language accentuated difference by implying or attributing a deficit to anyone other than the “norm.” The school system recognized and categorized students by ability or disability. This created a school where some students/taura were known for what they could not do rather than for their strengths. The school wide self-review led to identification and analysis of words used in the school, for example “special education, special ed kids, the kid with hearing aids, hostel kids, teacher aides, disabled kids” etc. After identifying deficit language we had to address the issue with the Board of Trustees, the staff and the students and then rewrite school documents using the language of empowerment. The move to use the title “specialized educational provision” for every educational intervention from extension and enrichment to assistive technology was a significant enabler. This action required people to differentiate students by who they are not what needs they carry, as students could no longer be identified by deficit labels or phrases. The effect was to humanize and acknowledge each person in a respectful way. Programs were renamed, designations redefined and the way that staff spoke with and about students changed. Teacher Aides were renamed Support Teachers to give more value to the work they do to support a wide range of educational needs. A lot of work was done to reposition adult thinking about what the ‘dis’ words imply. Students talk about ‘dissing’ people, a corruption of the word ‘disrespect.’ Staff constantly and gently had their attention focused upon the hidden curriculum of the deficit language of disability.

The enabling focus upon the concept of difference as richness, cultural capital as an asset not a barrier, became central to curriculum design decisions, pedagogical discussions and the organizing of events in the school. Diversity as strength and richness became the ‘new normal;’ a reason for celebration. With the consistent integration and embedding of empowering language to describe diversity and difference, gradually attitudes and actions changed to become more inclusive.

Another part of identifying barriers was to invite all staff in their various roles to hold up the mirror of self-reflection and ask themselves “what do we/I do that excludes?” followed by “how will we/I change this to include?” The ensuing enablers included a wide array of approaches both creative and innovative from the school community. Our response was therefore to unapologetically use positive discrimination to redress the balance. Gender, for example, was an area of the school we identified as

not being equally served. Resourcing was distributed inequitably with boys receiving more of the discretionary funding than girls, and of boys it was senior, European boys. This is now changed and our equity provision withstands the closest scrutiny. It is now compulsory for every Faculty and cultural or sporting area of the school to disaggregate data according to gender, ethnicity and ability and to identify and set specific goals against which they report to the Board of Trustees and the Principal twice a year. Every area must include in their management documents a description of what they are doing to support differentiated learning of all kinds for students. There is a huge amount of energy invested to ensure that every student receives a relevant program of study which meets their needs and develops their potentials, whatever they may be.

Another major focus was the introduction of dual cultural heritage practices within school events. This is one way we strive to honor New Zealand's Treaty of Waitangi which pledged a partnership between the British Crown and the indigenous people of our country (Orange, 1987). Around half of our students are Māori, and 90% of our Boarding Hostel of approximately sixty students are Māori. Practices in our school prior to our move to inclusion were mono-cultural and mono-lingual; this is no longer the case. By embracing kaupapa Māori, or Māori ways of doing and being, our school has gradually become more inclusive. This does not mean we ignored or removed European/Pākeha customs and protocols, just that we found a way to include both, thus changing the exclusive practices of the past. We now have representative attendance at school functions, parent evenings, events and celebrations of all kinds. Whilst these claims of vastly improved cross-cultural equity are short statements, the changes involved a huge amount of political, cultural, emotional and spiritual repositioning by our school community to embrace difference of all kinds and include and celebrate te ao Māori, the Māori world view. Correct pronunciation of student names, including learning contexts and content that reflect things of a Māori world, use of Māori words alongside English in the school newsletter, strategic documents, awards certificates, and the inclusion of Māori protocols and customs such as karakia/prayer at school events and the blessing of new buildings, were all part of the shift in our school life to ensure we did not exclude Māori or jeopardise cultural safety. What we did not expect was the 'organic' alignment that soon transpired as equitable educational provision and various opportunities were made available to all students and staff. Within two years of beginning the self-review process our student leadership, our academic achievement, attendance and even our discipline statistics became increasingly representative of our student population without more direct intervention. As students were empowered and expectations raised, participation, engagement, attendance and achievement all increased dramatically. More Māori adults presented themselves for positions of employment at the school and the 'face' of our adult staff became more of a reflection of our community outside the school. Our most recent Education Review Office report (November, 2013) stated that Ōtorohanga College is:

...providing strong and effective leadership for school direction with a particular focus on building authentic bicultural practices and partnerships, and fostering positive outcomes for all students...trustees and senior managers use evidence-based internal and external self-review to inform decision making, set high expectations, and respond to the ongoing needs of students...curriculum leaders and teachers are committed to adapting and designing programmes that best respond to the interests and needs of students...(and) there is a caring and inclusive school culture. (p. 7)

## **Conclusions**

Our school is no different to any other state co-ed school in Aotearoa New Zealand. We get no differentiated funding, we have deliberately not engaged in any government funded interventions for 'target groups.' Over the last five years we have attained a growth in student academic achievement which surpasses that of the average state secondary school anywhere in New Zealand. The school looks like every other state school however the culture, the outcomes, the experiences and the wairua, or spirit, are all radically different to what they were before we embarked upon this five year journey to

create an inclusive school. Our latest achievement data now shows a complete reversal of the deficit results for the target groups in New Zealand education guidelines underpinned by evidence. We acknowledge we still have work to do. Overall our goal is to create a school/kura where every taura/student has an individualised education programme. Such a school will provide a reality where everyone's uniqueness will be catered for. We wish to create a school where process and programming bring alive the metaphor of a ramp; why build steps? Steps will naturally exclude some; a ramp allows all to enter without anyone being made to feel 'other than.' Our dream is for every aspect, every detail and every reality of our school to manifest this concept, a place where no one is excluded and everyone has a place to belong, to stand. For it to truly be a turangawaewae, a place where every person is empowered and connected. Turangawaewae, our foundation, our place in the world, our home.

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## **Classroom Management to Facilitate Community for Learners with Special Education Needs**

Yelena Patish  
University of Washington  
[ypatish@uw.edu](mailto:ypatish@uw.edu)

Elizabeth West  
University of Washington  
[eawest@uw.edu](mailto:eawest@uw.edu)

Charles Peck  
University of Washington  
[capeck@uw.edu](mailto:capeck@uw.edu)

Jacob Hackett  
University of Washington  
[hackett1@uw.edu](mailto:hackett1@uw.edu)

### **Abstract**

Classroom management is more than controlling student behavior. There is a paucity of practical tools that address both the need for novice teachers to establish control and their needs to build a strong community. The classroom management framework we present balances and integrates establishing control with creating culturally responsive classroom communities that support the participation and empowerment of students with special education needs who are members of diverse cultural, linguistic and racial communities.

**Keywords:** Classroom management; teacher student relationships; civic outcomes; pivotal practices; community; behavior management

### **Introduction**

As the research literature indicates, “classroom management is often identified as one of the most influential factors in determining success for first-year teachers and as the most influential factor in students’ academic success” (Monroe, Blackwell, & Pepper, 2010). A number of studies have found that classroom management is an area in which beginning teachers feel under-prepared and those that did receive training found it to be insufficient in meeting the demands of their classroom (Evertson & Weinstein, 2006). The purpose of our proposal is to present a conceptual framework and related tools we have developed and used to integrate concerns about both “control” and “community” in our practice as instructors for a classroom management course in an elementary teacher education program. Our work is organized to prepare teacher candidates to implement management practices that we consider to be pivotal to the development of safe and orderly classrooms at the elementary level. We also consider how each of these practices may be adapted over time in ways that contribute to developmental outcomes that we value for all children.

Framing Literature



Traditional Classroom Management Coursework – Content and Teacher Needs Although teachers distinguish classroom management as one of the essential components of their practice, and despite the importance of it on effective teaching, few researchers focus on the topic and it is often an area overlooked in teacher preparation programs (Evertson & Weinstein, 2006; Wubbels, 2011; Hammerness, 2011; Stough, 2006). The few studies that have examined how classroom management is situated within teacher education programs have found it limited to a couple of sessions in educational psychology, offered as a stand-alone course either as an elective or for one credit, taught as a seminar, embedded in other courses, or not required (Evertson & Weinstein, 2006; Hammerness, 2011). Several researchers illustrate this lack of classroom management content as they examined teacher education coursework. Stough and her colleagues (as cited in Wubbels, 2011) identified that approximately 30% of teacher education programs in the United States offer coursework in classroom management. These findings are similar to Hammerness (2011) who found that 14 out of 31 college preparation and early programs in New York required coursework in classroom management.

Little research exists around what content should be included in a classroom management course (Stough, 2006). Hammerness (2011) identifies classroom management as a misunderstood subject, frequently viewed as a technical skill “encompassing simple tasks such as desk arrangements and managing good and bad behavior” (p.152). While curriculum and instruction focuses on active participation of students, independence, and problem-solving, classroom management in some instances is viewed with a “mechanistic authoritarian orientation that minimizes the importance of positive interpersonal relationships and maximizes control and compliance” (Evertson & Weinstein, 2006, p.4).

Furthermore, many teachers struggle with classroom management and also meeting the needs of an increasingly diverse group of students. Given the increasingly diversity of our schools, a lack of multicultural competence only adds to the challenges that novice teachers have with classroom management (Jones, 2006). Teacher concerns about classroom management are sometimes intensified in urban settings where “students’ languages, experiences, ethnicities, religions, and abilities may be highly diverse and may or may not be shared by the teacher” (Milner & Tenore, 2010, p.561).

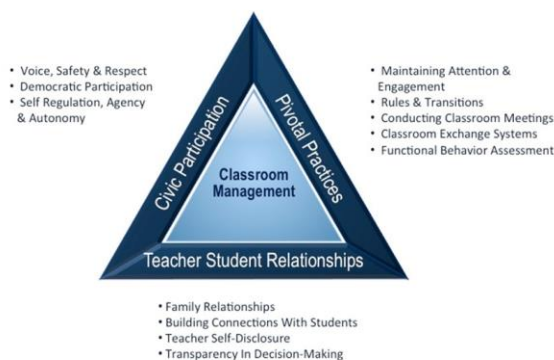
Consequently, the inability of teachers to manage behavior is even more evident in classrooms of “economically disadvantaged students”, and often “contributes to low achievement of at-risk students and to their excessive referrals to special education” (National Center for Teacher Quality, 2007; p.1). Due to a lack of sufficient training in this area, novice teachers often take a more reactive approach when dealing with disruptive behaviors, by removing students from instruction. This act perpetuates the vicious cycle for students who are already at risk, who end up receiving less instruction, and could fall even more academically behind (p.3).

### Conceptual Framework

Classroom management is fundamental to success in teaching. You cannot be an effective teacher of literacy, mathematics or art unless you can create a classroom in which children feel a sense of order, safety and respect. Our approach to this relationship-building process is built around some basic and inter-related assumptions about how children learn, as well as some values about the kind of learning we hope children will experience in school.

Opportunities for learning and development may be strategically embedded in the ways students participate in classroom management routines. The figure below depicts the way we think about the relationship between management practices and this larger sense of the trajectory of children’s development as individuals, and as members of a classroom community.

### Figure 1: Conceptual Framework



## Discussion

**Civic Participation.** We conceptualize our agenda for student development in terms of three (interdependent) kinds of outcomes that can emerge from thoughtful design of classroom management routines and practices. First, we hope that every student will experience a sense of voice, safety and respect in the classroom. We expect every student to learn to express her/his ideas, feelings and needs clearly and forthrightly—but in a way that also supports others to exercise the same rights and responsibilities. Second, we think that classroom management norms, procedures and practices offer an ideal context for the elementary aged student to develop values, dispositions and skills related to democratic participation and decision-making. A classroom management curriculum should be designed to afford opportunities for students to understand these dynamics, and to make collective decisions about how to engage them. Finally, we believe a comprehensive approach to classroom management should be intentionally evaluating their own participation and learning. At issue here are relationships between self-regulation, agency and autonomy—the idea that students can develop a sense of control over their experiences at school, and begin to see education as a means of achieving their own goals.

In the framework above, we describe how each of these three valued “civic outcomes” for the classroom management curriculum may be viewed through a social-developmental lens. The purpose of the framework is not to define, much less prescribe, a scope and sequence for the classroom management curriculum—but to assist beginning teachers to imagine a variety of “possible futures” they may pursue through their classroom management practice.

**Student/Teacher Relationships.** We believe in the importance of teachers building good relationships with students as a critical element in student’s development and success in the classroom. We believe that in order for teachers to be able to develop a strong classroom community, having positive teacher-student relationships is an integral component in establishing a classroom environment conducive to learning. Our framework highlights four outcomes that we feel are essential in establishing positive teacher-student relationships: family relationships, building connections with students, teacher self-disclosure, and transparency in decision-making.

**Pivotal Practices.** Our framework has been organized in such a way to prepare teacher candidates to implement five explicit management practices that we consider to be “pivotal” to the development of safe and orderly classrooms at the elementary level. By “pivotal” we mean that each of these practices can be adapted to a variety of contexts—some version of each will be useful and effective in any classroom. We also consider how each of the Practices may be adapted over time in ways that contribute to developmental outcomes that we value for all children.

Existing streams of teacher development work (Kazemi, et al, 2010; Windshitl, et al 2009; Ball and Forzani, 2010) have demonstrated the value of focusing the curriculum for novice teacher preparation on a highly concrete set of practices which may be adapted to a wide variety of contexts. We propose developing a set of tools for teaching high leverage or “pivotal” practices for novice teachers in the area of classroom management. For each targeted practice, we include a brief review of the literature on the evidence base for its effectiveness, video and print-based “representations” of the practice, protocols for de-composition and analysis of components of the practice, protocols for planning, rehearsing and implementation of the practice, protocols for collecting and collaborative analysis of outcomes of initial implementation, and suggestions for further reading that may be useful for the needs and interests of specific teachers.

We have structured the curriculum for each practice around a specific learning cycle and have relied upon a variety of web-based tools. Technology, specifically video capture, review and annotation, have been integrated within the cycle at key points. This process focuses on supports for novice teachers as they negotiate the enactment of practice and we relied on video to mediate these attempts.

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## **Interdisciplinary therapeutic project for teenagers with low vision or blindness**

Zelia Zilda

University of Campinas – UNICAMP  
[zeliacz@fcm.unicamp.br](mailto:zeliacz@fcm.unicamp.br)

Lourenço de Camargo Bittencourt  
University of Campinas – UNICAMP

Rita de Cassia Ietto Montilha  
University of Campinas – UNICAMP

Maria Elisabete  
University of Campinas – UNICAMP.

Rodrigues Freire Gasparetto  
University of Campinas – UNICAMP

### **Abstract**

The objective of this study was to describe an interdisciplinary therapeutic project for teenagers with low vision or blindness and their families, offered by a university rehabilitation program. The teenagers who took part in the project chose the theme "Around the World: getting to know about some countries". In order to implement the activities, assistive technology resources (optical and non-optical aids and informatics) were used, favoring the teenagers' acceptance of their visual condition and the expansion of interpersonal relationships, improving the academic performance and the daily activities. Assistive technology resources were also used to simulate blindness and low vision for the teenagers' family members and discussions on the role of the parents as facilitators in the process of educational and social inclusion of the teenagers took place. The teenagers' demands were reached through group activities consisting of reading, writing, dancing, feelings expression and knowledge building, besides the preparation and tasting of typical food from the different countries which were explored. The teenagers got involved with the theme and informally reproduced the school activities within the project context, minimizing the visual and academic difficulties.

**Keywords:** Rehabilitation, Inclusion, Visual Impairment, Assistive technology.

### **Introduction**

Data obtained in the 2010 Demographic Census, from Instituto Brasileiro de Geografia Estatística (Brazilian Institute of Statistic Geography) (IBGE, 2010), show that there are 45.6 million people who have some kind of disability in Brazil, which corresponds to 23.91% of the Brazilian population. From this total, 12.7 million (6.7% of the total population) have at least one kind of disability, being the visual impairment the one with the highest percentage: 3.5% of the population.

In Brazil, the educational inclusion process of people with specific educational needs still finds barriers for its complete implementation. Thus, many innovative practices have been developed, not only when

it comes to school, but also when it comes to services that offer specialized support, such as habilitation/rehabilitation (Brasil, 2008).

Rehabilitation programs for visually impaired adolescents are essential to improve their life quality (Bittencourt et al, 2011). Such programs include the actions listed on the health policy and provided by SUS – Sistema Público de Saúde brasileiro (Brazilian Public Health System) – with the objectives of partially or totally reestablish capability in spite of the course of the disease and facilitate the reinclusion of these patients in everyday life and social environment activities (Brasil, 2007).

Nowadays, there are resources and devices called Assistive Technology (Amorim et al, 2010), and people who are visually impaired need to recognize them as strategies that facilitate the learning of daily and reading and writing activities, besides the fact that these strategies can improve the users' performance.

Assistive Technology is about developing services, resources and strategies to help solve functional difficulties of people who have some kind of disability so that they can perform their everyday activities, and may be classified into optical, non-optical and informatics resources (Carvalho et al, 2005). Selecting and indicating these resources is based on the visual alterations and needs and on the activities which will be performed by the adolescents with low vision.

In the educational process, the Braille System is a crucial resource for the blind teenager as in regard to written communication (Oka & Nassif, 2010). Assistive technology resources were also used to simulate blindness and low vision for the teenagers' family members and discussions on the role of the parents as facilitators in the process of educational and social inclusion of the teenagers took place.

Considering these information, the objective of the present study was to describe the interdisciplinary therapeutic project offered by a university rehabilitation project for teenage students with low vision and their families.

## **Method**

This exploratory study was conducted in a Center of Study and Research on Rehabilitation, at a Brazilian University, in 2013 and its subjects were teenage students with low vision or blindness and their families. The adolescents were assisted weekly in interdisciplinary group activities by a team that developed and conducted a therapeutic project based on the needs presented. Meanwhile, another strategy that was used to reach this objective was the group assistance to the teenage parents.

In the group of adolescents with low vision or blindness, a theme project was developed as a facilitator for the proposal implementation. The theme chosen by the teenagers was "Around the World: getting to know about some countries" and the chosen countries were: Egypt, Italy, Mexico, Portugal, Israel and the African Continent. The theme project was intended to show the teenagers the different cultures from these countries, including history and respecting the mode of life of different social groups, recognizing the differences and similarities.

The job of the professionals consisted in presenting the teenagers the geographic, political, cultural and gastronomic aspects of these countries by conducting diversified activities that required the teenagers with low vision or blindness to take part. Besides that, reading, writing and the preparation and tasting of typical food activities were also performed along with the research on music and dance from each country, favoring body expression.

In order to accomplish the tasks, the use of assistive technology resources was made available.

About the project which was developed with the teenagers' families, group meetings were carried out with the objective of sharing feelings, doubts, knowledge and information regarding the teenagers' visual impairment. Fortnightly non-mandatory meetings took place so that the family members would join while the teenagers would be assisted by other professionals of the team.

It is important to mention that the project presented in this article was approved by the University Committee of Ethics on Research, and it is also important to mention that the legal guardians of each teenager signed a consent agreement after being invited to take part in the project and being clarified about both the visually impaired teenager's and the family's roles.

### **Results and Discussion**

Eight teenagers were studied: 75% female subjects and 25% male subjects, with ages varying from 11 to 18, being the average age equal to 16 (sd= 2.32). Among the visually impaired teenagers, 25% were blind and the causes were Leber's Congenital Amaurosis and Retinitis Pigmentosa. Among the teenagers with low vision (75%), the causes were Congenital Glaucoma (2), Corneal Opacification, Congenital Cataracts (2), and Vision Loss due to Parameningeal Rhabdomyosarcoma .

For the patients with low vision, the visual acuity for distance vision activities varied between 20/100 and 20/1200. The most used optical resources were eyeglasses and magnifying glasses on stand. Although the use of the telescopic system and the magnifying glasses on stand were prescribed and recommended to one of the teenagers, some resistance and rejection were verified concerning the use of such resources. It can be inferred that the resistance and rejection were due to social-economical characteristics which are peculiar to this phase of the life cycle, that is, the adolescent need to feel accepted by the group of equals in their search for identity.

It is important to mention that the resources and simple hand-made adaptations, which were made available by the team of professionals, made all the difference in the accomplishment of the Therapeutic Project once they were developed with enlarged and contrasting and also tactile materials which led all the involved people to learn together and share experiences.

Besides the already mentioned material, in order to implement the activities, assistive technology resources were used to increase the acceptance of the visual condition, the expansion of social relationships, and the improvement of the everyday activities.

Despite all the assistive technology which is available by public policies, among the teenage users of our service, it was verified that only two of them reported having received the above mentioned materials, which leads to the conclusion that the implementation of these policies is weak.

As for the assistance to the families, from the 8 teenagers who took part in the rehabilitation theme project, all of them had family members participating (sister, father, mother and grandmother) according to their available time. Eight group meetings were scheduled with the family members, where they could social and educational inclusion.

Experiment a simulation of low vision and blindness making use of eyeglasses and eye covers respectively. In these meetings, the topics were about the use of assistive technology resources of low cost, allowing them to know, experiment and discuss ways of foment the development of visually impaired teenagers by providing aid to reading and writing, games and everyday life activities. Besides that, the role of the family as facilitator in the educational and social inclusion process of the visually impaired teenager was discussed.

This proposal has favored the teenagers' inclusion in their own families, in school and in society, leading to the reflection of new public policies for people with disabilities.

It was observed that the parents and/or relatives of the visually impaired teenagers are in a constant learning process which is full of anguish and grieving over the idealized child. Based on that, the group work with the family members was proven to be a time for acceptance and acquisition of knowledge on the visual impairment.

### **Conclusion**

The theme project “Around the world: getting to know about some countries”, developed by means of group activities concerning reading, writing, music, dancing and gastronomy, and the use of assistive technology resources favored the educational inclusion since the teenagers got involved and, therefore, reproduced the school activities within the project context, minimizing academic and visual difficulties, improving the development of the senses of independence and responsibility. The teenagers reported the positive points and recommended that the project should be continued with other themes chosen by them.

The group intervention in the families enabled and qualified the family members’ behaviors, as they could have their doubts clarified, experiment and know more about the visual impairment specificities and propose small changes to daily routine that favored the teenagers’

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## **High school inclusion: Framing the process**

Zenilda Botti Fernandes  
Universidade da Amazônia  
[zenilda@unama.br](mailto:zenilda@unama.br)

### **Abstract**

This paper presents the process of inclusion of college students at the University of Amazonia ( UNAMA ) , and aims to share the experience started in 2005 with 473 students attended , which include a Core Service Student ( NAE ) , formed by a multidisciplinary team that receives the support of the clinical school , maintained by the University . Two basic considerations have guided the actions: How effective is the process of inclusion in higher education? What are the contributions of the University for intensifying of inclusion inside and outside? Training students with disabilities, has proved a multifaceted process , compared to a fabric , which requires the collective construction of specialized actions , the conditions of infrastructure, support services, opportunities for social , cultural and sporting interaction ; curricular adequacy , and especially , able to create teaching strategies and relationship to include students in the circle of learning teachers . The procedures used are the case study experiences, interviews, participant observation, interventions and actions to promote the professional development of teachers and administrators to better understand the problem of the student. Develop inclusive actions the university is to commit to the contents of the relationship before disability and diversity; denial and acceptance in the existing action of educators and family. The experience of working for nine years in the inclusive perspective has shown that university with all his knowledge and his science , must be at the service of society and those who place hope to develop their potential and have their citizenship rights guaranteed therein to can live good about themselves and others.

**Keywords:** Higher Education; Inclusion; Specialized Educational Services.

### **Introduction**

This article presents the experience of the process of inclusion in higher education in the context of Universidade da Amazônia – UNAMA, which started in 2005 and aims to address the problems involved in accessibility – a condition for use of the space safely and autonomy from the elimination of architectural and behavioral barriers and the full promotion of conditions for access and retention in higher education, the provision of teaching methodologies and alternative assessment, curriculum flexibility, promotion of assistive technology – to enable the learning of pupils with special educational needs, with interface on the activities of management, teaching and family relations with the University.

The inclusion in higher education has been a major challenge throughout the country, confirmed by the 2011 Census of Education showing low insertion of this segment in the academic environment. Out of the 6,739,689 students enrolled, only 23,250 disabled people have access to higher education, representing 0.35% of the Brazilian university population. Of this total, 72% of enrollments of students with disabilities are in private institutions of higher education and only 28% are in public institutions. The Northern Region has 520,274 students enrolled, and 1,979 disabled, which represents 0.38% of the total. In the State of Pará, the Census reports that out of 152,862 students enrolled, 803 are disabled there, representing 0.53



% of the total, an average slightly above the percentage of the Northern Region and the country. Access by persons with disabilities to higher education has expanded significantly as a result of the inclusive development of basic education; however, government affirmative action policies have proved insufficient to meet the ever – increasing demands at home and in the Amazon region and are not consistent with democratic ideals of providing education for all. Therefore, it is of great importance that the University promotes inclusive actions within its scope of action.

## **Method**

For the development of activities and the provision of services to disabled students at the university, the Nucleo de Apoio aos Estudantes (Center for Student Services) – NAE, composed of a multidisciplinary team of pedagogues, speech therapists, psychopedagogues, psychologists and social workers and other required-upon-demand specialties.

The staff at NAE operates in the identification, assessment and review of procedures for the student, since his admission, to express their full potential, avoiding their limitations or difficulties so they do not become the cause of academic exclusion. The service starts during the student selection process, and during the course, in two pathways: the spontaneous, when it is motivated by the student or his family, and directed, when it is suggested by a teacher or the course coordinator - made personally, by phone, by application or by email. In any case, the presentation of a report to identify the needs and do registration at NAE is recommended.

The reference methodology for the development of activities is based on a qualitative approach, the critical reflexive perspective, because it is an experience/research on inclusive practices in development and considers the complexities and specificities of each course, and develop preventive actions, interventional from an educational, academic and financial planning, personnel and infrastructure in each semester in association with other departments of the institution.

The methodological procedures include: case study experiences, interviews, observation and intervention, sometimes planned, sometimes emergency-like; narrative records of appointments, analysis of reports of students by experts, home visits, regular meetings and continuing education of teachers and administrators in each semester, among others, to better understand the problems of each student through a permanent reflection exercise.

## **Results and Discussion**

The theoretical and practical discussions show that the inclusion is made from multiple cross-references, which constitute a real “fabric” of Latin *tessere est*, which means, weaving , fabric making, building , weaving fabrics, yarns (Houaiss, 2001, p. 2.708) . Making a transposition of the term, it can be stated that the inclusion in its broadest sense, to be "woven" by many hands and a set of specialized actions, opportunities for social, cultural and sporting interaction, and teachers are able to create teaching situations so that students have opportunities to be inserted into learning circles, and should cover the entire institution.

Just as a “fabric”, the inclusion is also related to diversity - the Latin *DIVERSITAS* - meaning contradiction, difference, and variety. Attention to diversity presupposes understanding and acting on the difficulties caused by prejudice, discrimination and exclusion. Since it is a democratic environment, the University hosts people with different values, cultures, beliefs, attitudes and capabilities as diverse as the rich possibilities of development.

Given the theoretical framework and the current legal system, the University made the mapping of cases, totaling 473 students since 2005. Of this total, there was a predominance of students with Pervasive Developmental Disorders, which became a majority since 2009. In 2013, of the 91 registered students, they represent 78.7 %. The physical, visual, and auditory, representing 16.2 % of disabled

students who relies on interpreters for the Brazilian Sign Language (Libras); skilled professionals to guide the conduct of academic research, evidence and activities in laboratories, made by the so called readers, and availability of DOSVOX Programs and JAWS (screen readers) at all library computer labs and other premises of the campuses.

In the field of disability, the institution has provided appropriateness of building infrastructure, furniture, and communication equipment by means of a permanent schedule of actions in order to provide accessibility and facilitate mobility, comfort and safety in developing academic activities.

Practice equally important has been the special attention to students with infectious diseases, those suffering accidents, or students who become mothers - these groups receiving home and hospital support from a NAE professional - which counts with the aid of technology, to promote learning at their own pace and in conditions that are appropriate until their full return to the university activities is possible.

The service has been complemented with structural administrative and logistical support of clinical - School of Physiotherapy, Nutrition, Speech Therapy, Occupational Therapy, Nursing and Psychology, Core Laboratory, Coordination of Technology campuses of the Department of Maintenance and Construction the Academic Office and the Library.

Whereas the mode of conducting the inclusion process is not described in the manual and it is not possible to anticipate the list of measures and the use of strategies that are appropriate, unless the subjects are present, and their conditions are fully understood, you can only learn to weave the threads of the inclusion in a collective mode.

## **Conclusions**

This paper introduced the process of inclusion and their "modus operandi" in a higher education institution that is seeking to build roads to the fulfillment of its mission, and to assert its presence in the Amazon region.

This experience has indicated that knowledge about teaching practice with "special students" is not restricted to the University, and there is no contemplating the heterogeneity of the students in their interests, their motivation to learn, without the collective exercise of accountability and awareness that learning in any context and for any human being is grounded in a loving and respectful sense opposite to its potential.

Accordingly, inclusion has been a process comprising the accessibility of physical spaces, from the elimination of architectural barriers, attitudes, and conditions for full access and retention in higher education, and for this, the institutional agenda, has featured in, among others, an intense awareness and professionalism of its staff for monitoring and intervention.

From this perspective one could ask, as Lispector (2004) does: "How would things and people be before we had given them a sense of hope and our human vision?" (p.114). In other words, what would be the university with all his knowledge and his science, if you were not at the service of society and those who place hope to develop their potential and have their citizenship rights guaranteed in it?

More broadly, the inclusion of people with disabilities in higher education must assure them the right to participate in the university community with others, opportunities for personal, social and professional development, and not restrict their participation in certain environments and activities on the basis of disability. Also, the condition of disability should not define the area of their professional interest. For implementation of this law, institutions must provide services and accessibility features that ensure the full participation of students. From our point of view, no other social space is so predisposed to exercise the practice of equality of opportunity and the pursuit of consensus to meet the different demands, such as universities.

Amid this ongoing quest to build proposals to fulfill an inclusive process, starting by graduates who successfully complete the courses they have chosen, one can find evidence of an “inclusive doing” at UNAMA .

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## **Integrated adaptive skills program model (IASP)**

Zoe Bartholomew  
Ed. D. (ABD) ZMB Consulting  
[zoe@zmbconsulting.com](mailto:zoe@zmbconsulting.com)

### **Abstract**

Integrated Adaptive Skills Program Model (IASP) is designed to offer supportive services to disabled students seeking to integrate into a local after-school program. IASP Model focuses on teaching adaptive skills to disabled students that would prepare them to be fully included into an after-school program with their same age peers. The program offers support, training, and consultation to the students and staff involved in the program. A variety of research-methods and assessment screening tools are used to determine eligibility and program implementation. The IASP Model was piloted during the 2011-2012 school year, in California, United States, but due to limited local and state funds the program could not continue. Students with disabilities deserve to be involved in the community and should not be excluded based on funds. Teaching and educating others on how to integrate students with disabilities into programs will minimize and/or eliminate exclusion of participating in recreation programs within residing communities.

**Keywords:** adaptive skills, teaching, support

### **Introduction**

Autism has risen in California with a special interest in identifying the best treatment methods to treat individuals with Autism. Applied Behavior Analysis (ABA) is one of the leading sciences geared towards treating individuals with Autism. While service providers shifted their attention to Autism, they seemed to forget about ALL the other disabilities in need of treatment. ZMB Consulting & Behavior Management, Inc. was established to support individuals with ALL types of disabilities and supporting those without disabilities. ZMB provides eligibility assessments, consultation, training, and support services to children with disabilities seeking to participate in local after- school programs.

The purpose of the Integrated Adaptive Skills Program Model (IASP) is to offer supportive services to clients with developmental disabilities and help these clients integrate into the after-school programs. The ultimate goal is to help the clients become independent in these programs. ZMB's focus is to facilitate, train, and consult with recreational staff on how to fully include children with disabilities into after school programs. Our coaches and trainers work on teaching Disability Awareness, Integration with Peers, Safety Skills, and Behavior Management Strategies. ZMB's philosophy is to facilitate staff and program providers on how to fully include disabled clients into their after-school programs.

### **Method**

The proposed IASP Model is an original model based on integrating disabled clients with typically developing peers with the goal of being independent in an after- school program. ZMB implemented the following research-based strategies into the IASP Model design:

1. SCERTS- Social Communication Emotional Regulation Transactional Supports SCERTS is a multi-method model used to address social communication, emotional regulation and transactional supports for people with autism spectrum disorders. Social communication focuses on functional communication that will build trusting relationships with client and adults. Emotional regulation

teaches people how to maintain self-control and regulate all type of emotions. Transactional support will educate families and professionals on how to develop positive relationships through direct instruction and use of visual supports. SCERTS is a new and effective research based strategy used for client and adults with autism spectrum disorder. (Prizant, Wetherby, Rubin, & Laurent, 2003)

## 2. ABA Methods

Applied Behavior Analysis is a science focusing on observable patterns of behavior and environmental interactions. The techniques used allow the observer to determine the function of undesired behaviors and how to develop positive behavior management strategies to decrease undesired behaviors. Applied behavior analysis is a commonly known research based behavioral approach, which has proven to decrease undesired behaviors. (Lovaas, 1987)

## 3. ABAS II

Adaptive Behavior Assessment System II is a comprehensive assessment of adaptive skills for ages 0-89. The three domains we will be focusing on are conceptual, social, and practical. Conceptual includes communications skills, functional academics, and directions. Social includes social skills and leisure skills that will lead to enhancing the child’s overall recreational skills. Practical domain addresses self-care, home or school living, community use, and health and safety. ABAS II will enhance development of adaptive skills to enable positive peer interaction to support full participation in the program. (Harrison & Oakland, 2003).

## 4. IASP Supplemental Screening Tool (SST)

The SST was created by ZMB to determine if clients are eligible for the IASP program. This tool measures client’s ability to successfully integrate into after-school programs. The tool will be used to measure progress in the program, client’s need for direct support, and termination of services. (Bartholomew, 2011)

## Results & Discussion

The IASP Pilot Program had 3 participants in the program. These participants were eligible based on the assessment results from the ABAS II and the SST. The results identified areas of need with transitions, activity participation, and peer interaction. A training plan was developed for each student to teach them how to transition, participate in activities, and interact with peers. The primary instructional methods used were direct instruction, facilitation, and modeling. Goals were developed to help participants achieve more adaptive skills to be fully included into the after-school program. The data reveals current progress in the identified areas based on IASP implementation. Below are the data results from the full school year implementation of the program:

### ***P1: Adaptive Skills Data***

**Table 1: # of Prompts, Independent Response, & No Response**

Setting Events	Prompts	Independent Response	No Response
Transitions	290	119	42
Activity Participation	104	310	79
Peer Interaction	6	144	146

*\*Note: Transitions means ability to transition into the program and from activity to activity, Activity Participation means ability to participate in activities offered in the after-school program, Peer Interaction means ability to interact with peers in the after-school program*

### ***P2: Adaptive Skills Data***

**Table 2: # of Prompts, Independent Response, & No Response**

Setting Events	Prompts	Independent Response	No Response
Transitions	255	205	6
Activity Participation	98	363	20
Peer Interaction	11	218	48

*\*Note: Transitions means ability to transition into the program and from activity to activity, Activity Participation means ability to participate in activities offered in the after-school program, Peer Interaction means ability to interact with peers in the after-school program*

### **P3: Adaptive Skills Data**

**Table 3: # of Prompts, Independent Response, & No Response**

Setting Events	Prompts	Independent Response	No Response
Transitions	5	301	12
Activity Participation	2	305	15
Peer Interaction	0	82	65

*\*Note: Transitions means ability to transition into the program and from activity to activity, Activity Participation means ability to participate in activities offered in the after-school program, Peer Interaction means ability to interact with peers in the after-school program*

### **Conclusion**

The IASP Model was only implemented for one entire school year. The program was limited to students with Autism and only offered at one school site. This program was designed to meet the needs of all students with disabilities, but the funding agency only allowed entrance into the program for students with Autism. The program appeared to be successful based on the data results, but should not be limited to one disability population. ZMB identified other students with disabilities who could benefit from this type of supportive service. Some of the identified disabilities are students with emotional disturbance, learning disability, and developmental delays. These students were excluded from the pilot program because of the entrance criteria required by the funding agency. We would recommend that all students with disabilities be able to participate in local after-school programs with the appropriate supports.

### **Acknowledgements**

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## **A combined Art-based and inclusive counseling intervention program promoting resiliency in SEN children**

E. Kourkoutas  
University of Crete  
[hkourk@edc.uoc.gr](mailto:hkourk@edc.uoc.gr)

M. Bat-Or  
University of Haifa

E. Vitalaki  
University of Crete

K. Christidis  
University of Crete

A. Papadaki  
University of Crete

### **Abstract**

In this paper the philosophy, rationale, components, methods of implementation, instruments of evaluation, and preliminary results of a six months psychoeducational program in the SEN area will be described and analyzed. The program combined art-based and counseling methods in a resilient inclusive perspective. It aimed at helping children with special educational needs (SEN) and at risk of serious social-emotional-learning problems to better develop their social, emotional, and academic skills and be fruitfully included in their school social, academic life. A prior- post intervention research design was adopted and standardized psychometric scales were used to assess students' psychosocial, academic functioning and evaluate the intervention program efficiency. The results of the qualitative part of the study showed a significant improvement of most students in critical areas of their functioning. Art-based techniques embedded within a wider school-based counseling inclusive project can be a very promising practice in promoting the social and academic well-being of students with SEN and difficulties.

**Keywords:** school art-based practice, inclusive resilient counseling, SEN students

### **Introduction**

Inclusive Education (IE) has seriously criticized traditional Special Education (TSE), as exclusively focusing on a deficit-centered approach which emphasizes an individual correctional (medical) vision in dealing with SEN issues. Based on this premise, we have attempted to develop a holistic psycho-educational model combining Art-based and Resilient Inclusive counseling methods that differentiate in many respects from the classical medical models. On the other hand, critics of the IE have been primarily focused on the lack of evidence and on the ideological and moral aspects of this theory that prove unsuccessful for a wide range of children with social emotional and behavioral difficulties (Cooper & Jacobs, 2011).

Theoretical background and rationale of the program



Overall, the originality of this research-intervention project was the combination of individual (child, parental, teacher) counseling and (child) group art- based procedures to get a comprehensive view of the SEN children internal and external world.

Inclusive resilient counseling is a strengthening-based approach that integrates components from psychodynamic, systemic, positive psychology, problem-solving, and resilient thinking-research in order to promote individual and contextual resources that help children or youngsters develop their hindered potential and skills through the use of various alternative or innovative techniques (Hart, Blincow, & Thomas, 2008; Cefai & Copper, 2008; Quick, 2008; Kourkoutas & Xavier Raul, 2010). An important aspect of this counseling approach is the focus placed on underlying emotional and relational/interpersonal dynamics or conflicts and on exploring and taking advantage of the positive environmental resources, aiming additionally at reducing the associated risks by directly intervening in the child's or youngster's proximal environment (family or school) (Kourkoutas & Xavier Raul, 2010). Many studies have delineated the advantages and positive outcomes of art- based intervention in a psycho-educational or psychotherapeutic perspective for those children who are struggling with internal emotional or social-interpersonal and behavioral problems. As a child-appropriate activity, the Art-based approach offers an opportunity to work in a structured way with various art materials enabling children to experience unique interactions and dialogues and improve their self-concept and communicational skills (Bat Or, 2010; Degges-White & Davis, 2011).

## **Method**

### **Participants**

A prior- post intervention research design was adopted and standardized psychometric scales were used to assess students psychosocial/academic functioning and evaluate the intervention program efficiency<sup>1</sup>. The target sample was 12 primary school students (7-12) (average age= 9; SD=1,5) with SEN (including social, emotional, behavioral, and learning problems). Evaluation interviews with parents, teachers, professionals, and children had also been conducted at the end of the project and 3 months later by two independent researchers to draw conclusions on the strengths and limitations of the program. Three public schools in the area of Crete had been involved in this project.

In this paper the focus will be limited on the results of the qualitative (interviews) part of the study.

### **Procedure**

One group-art based activity which involved at least 4 or 5 children (including children with and without SEN) (two and half hour each one) and individual counseling sessions with SEN students exclusively were taken place every week or every other week within the school setting during six months. Three trained counselors-art-based researchers, part of the intervention process team, conducted both activities and two academic researchers supervised the whole project.

Twenty eight evaluation interviews were conducted that were audio-recorded and transcribed by two external raters. Tesch's systematic open coding process was applied during the data analysis process, which allowed the segmentation of raw data into various themes and categories that were verified by independent coders during a consensus meeting (Creswell, 2009). The criteria of Lincoln and Guba's trustworthiness model were used to determine the findings' congruency and particular constructed reality. This involved using criteria and strategies such as truth value (credibility), applicability (transferability), consistency (dependability) and neutrality (confirmability). Credibility was established by transcribing the audio-recorded interviews verbatim, prolonged engagement in the field, as well as the use of reflective and observational notes. The credibility of the data was enhanced by checking the correctness of the transcripts with each participant after the interviews had been transcribed.

## **Results**

Based on the teachers' and parents' evaluation and on the children's scores in the psychometric tests, the overall assessment of the project was very positive with a considerable impact on the students' functioning in the area of behavioral-emotional regulation/expression and social-academic adjustment. According to most teachers and parents significant progress was achieved in terms of academic and social-interpersonal involvement and behavior, as well as in terms of self-esteem, concentration, and positive behavior strengthening ("Our child for the first time in his life wanted to go gladly to school" P1; "I believe that D. has been really transformed after this course, "inside him" P3; "it is obvious that our son is more confident and active now; we're sure this is due to this program" P7; "I see M. being different now; more positive and more concentrated in the classroom; he also developed a sense of humor; T6; "He is not so disruptive anymore, T5; "He became suddenly very calm and he is still now", P11; "He is more positive and more responding at home", P9; "We realized a positive change, after some time; he was so enthusiastic with this program and his teachers", P10).

Likewise, the entire group of teachers highlighted in the interviews the positive impact of the program on the SEN children's functioning and the way their students changed positively "inside them" but also at "social-academic level". Most of them believed that this was due to the positive impact of the program, as well as a result of the parents' "activation and engagement" on account of the counseling process. Teachers stated: ("It was surprising to see some children who were isolated or so vulnerable to present another picture", T1; "to my opinion my student became a completely different person; he has gradually changed to the better [...]; I can see it more clearly now", T4; "P. is more enthusiastic, less weak now; I can say he is more open emotionally, sometimes too much, but I prefer him now; I just need to posit some boundaries and guide him, that's all", T3; "he is better now, out of question", T10; "my hyperactive student became more cooperative, I can't believe how much he has changed", T5; "I'm much more confident and less concerned or distressed about K. now; before that, there was a fuss in my classroom", T4; "both of my students are much better adjusted now; they also appear more cooperative and communicative; they did a considerable progress, I think" T6; "I see M. more responding in the classroom but mostly with his peers; he became really sociable, more open; I'm surprised; I can't say I did something special for him"; T7; "M. was a victim of family violence; he was victimized in school too; he was nagging all the time being depressive; it was clear, he was suffering; emotionally, he is much better now; he always asks about the counselor and how much he wants to talk with him", T8; "I'm sure his classmates' attitude towards him has changed now; N. has also changed, in a way", T1).

The relational-emotional bond developed with the counselors was highlighted by many teachers, parents, and the same children, as something very positive in the whole process. It actually appeared to have a crucial effect on the children's "self-esteem". Some parents reported that "for the very first time in their life" [...] "a professional and adult believed in them", "spent so much time and energy for them" [and] "trusted their abilities" (P4, P5).

Almost all teachers believed that all those considerable changes within the period of an academic semester were mostly due to the positive impact of the program. They mentioned that "they could never achieve such results in behavior and learning in such a brief period of time without the help of professional involvement- support". They also outlined how stressed and ill-equipped they felt, when they had to deal with students with social, emotional, and behavioral problems, as well as with their parents who often presented serious social or psychological problems and "dysfunctions in parental roles". All of them were convinced that external professional help is needed for these children and the intervention is catalytic when it combines individual with parental counseling and teacher support.

Indisputably, depending on the child's case, some of the SEN students made more considerable and testable progress in some or in all the previously reported areas. According to the counselors and

school teachers, the positive effect of this program was also related to in various degrees by the following: (a) parental positive engagement-involvement in the counseling process which led them to modify their attitude in everyday life towards their child (e.g. by providing a more reliable support at academic or emotional level, by setting boundaries in disruptive behavior, by enhancing or teaching new social skills to their children, by avoiding the negative counteraction with their child, or abandoning coercive and violent practices which usually reinforced disruptive or provocative behaviors and internalized difficulties, by being more sensitive to their child's needs, etc.); (b) teachers' also positive response to the program; (c) the "severity of the child's problematic behavior" and "internal troubles, difficulties, or disturbance"; (c) teacher support of the child and cooperation in the intervention project; (d) the counselors' personal abilities and professional skills in achieving a fruitful cooperation with teachers and parents; (e) the "partnership model" (in contrast to "expert model") used in this project which enabled all stakeholders to participate in creative and meaningful for them ways.

### **Conclusions**

The analysis of data collected by the psychosocial scales and interviews shows very promising results in helping children with various difficulties to develop their own capacities/skills and be better included in the social/academic school environment. Therefore, there is a compelling argument which suggests that, provided art-based and resilient counseling intervention are embedded in best practice, they can play a critical role in meeting the educational, social, and emotional needs of students with challenging behavior or internalized and learning difficulties (Karkou, 2010).

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## **Universal design for learning and adaptive expertise as key frameworks for reforming special educator practice**

Evelyn Reed

Virginia Commonwealth University, USA

[mereed@vcu.edu](mailto:mereed@vcu.edu)

Frances Smith

Virginia Commonwealth University, USA

[fgsmith@vcu.edu](mailto:fgsmith@vcu.edu)

Angelita Arnold,

Mico University College Kingston, Jamaica

[angelcare@cwjamaica.com](mailto:angelcare@cwjamaica.com)

Salomie Evering

Mico University College Kingston, Jamaica

[sal\\_e51@yahoo.com](mailto:sal_e51@yahoo.com)

### **Abstract**

As neuroscience research confirms learner variability across experience, culture, context, development, and disability, Universal Design for Learning (UDL) provides a framework for transforming educational programs to increase learners' engagement, expression, and deep understanding (Meyer, Rose, & Gordon, 2013; Rose & Meyer, 2002). UDL can also promote educators' development as adaptive experts who think flexibly and creatively in response to learner variability (De Arment, Reed, & Wetzel, 2013). This paper describes the creation of an international online community to promote educators' adaptive expertise (AE) within the framework of UDL. Through a web-based process, US and Jamaican colleagues collaborate to study UDL, curate resources, and apply UDL strategies to enhance educators' AE and enrich learning environments for all students.

**Keywords:** Adaptive expertise, universal design for learning, educator development

### **Introduction**

Globally, educators are challenged to prepare their students with 21st century skills, understand student variability, and provide high quality learning environments (National Research Council, 2012). To accomplish these outcomes, educators across cultures and settings can be challenged to see student differences as opportunities. The Global UDL Virtual Classroom is designed to build a rich and sustainable on-line learning community to: 1) engage international educators and doctoral students in building a virtual model classroom to study UDL principles, 2) pilot applications of pedagogical methods, and 3) evaluate the effectiveness of on-line resources in varied educational settings. Using open-platforms, this virtual classroom aims to make learning visible, constructive, and applicable through online dialog, interactive demonstrations, resource curation, and evaluation of applications in diverse cultural contexts.

In spring 2013, a VCU doctoral seminar, Personnel Development in Special Education, was reshaped using UDL and AE as pedagogical lenses. This pedagogical design and student outcomes were

presented at the 2013 DISES Roundtable in Tobago, West Indies, leading to discussions between VCU (USA) and Mico University (Jamaica) colleagues about further collaboration. Ongoing communication initiated a multi-year project about the application of UDL and AE within the Jamaican educational system and simultaneous development of VCU doctoral students as future faculty through online collaboration. This Global UDL Virtual Classroom promotes an online learning community for faculty, doctoral students, and educators to explore core UDL and AE principles, consider resources, develop UDL-enhanced lessons, apply strategies, and evaluate effectiveness in prompting educators' AE.

Two Lenses: Adaptive Expertise and Universal Design for Learning In teacher education, changing realities of practice for new and continuing teachers require conceptual frameworks that engage those realities as impetus for deepening knowledge, developing AE, and sustaining professional commitment (Darling-Hammond & Bransford, 2005). AE, or the interaction of efficient and innovative uses of knowledge, is described as the "gold standard for becoming a professional" (Hamerness, Darling-Hammond, & Bransford, 2005, p. 360). While the development of routine teacher expertise is valuable for standard situations, innovative problem solving based on novel aspects of learning contexts and learners' characteristics is essential for effective instruction. Since innovation and problem solving about individual-environment interactions are the primary purpose of special education, the development of AE through application of UDL is a critical framework for enriching traditional professional education.

Research confirms variability in how people learn (National Research Council, 2000) and the importance of pedagogical practices that harness the flexibility of technology in teaching (National Research Council, 2012; Meyer, Rose, & Gordon, 2013). Through a UDL lens, educators can consider core principles, guidelines and checkpoints to design rich-learning environments where learner variability is anticipated, flexibility is planned, and multiple opportunities are provided to build learners' expertise (Meyer, Rose, & Gordon, 2013). UDL promotes instructional planning that considers curriculum (goals, methods, materials, assessments) to support learning-centered opportunities with (1) multiple means for representing information, (2) multiple means for students to act on this information and express their learning and, (3) multiple means for students to engage with learning (Hall, Meyer, & Rose, 2012; Meyer, Rose, & Gordon, 2013).

The UDL framework promotes understanding of learner variability and the need for teacher adaptability as the center of curriculum reform that meets the needs of all learners (Courey, Tappe, Siker, & LePage, 2012; Hall, Meyer, & Rose, 2012; Kumar, 2010; Ralabate, 2011; Smith, 2012; Williams, Evans, & King, 2012). UDL has been defined and acknowledged as a "scientifically valid framework for guiding education practice that...provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways that students are engaged" (20 U.S.C. § 1003(24)). Through applying a UDL framework, teachers' AE can be fostered through an online community of practice where dispositions are challenged, learner variability is considered, and innovative instructional materials are produced (De Arment, Wetzel, & Reed, 2013).

Morris & Hiebert (2011) proposed using the web to create opportunities for educators to build knowledge about instructional methods by sharing their teaching experiences across different contexts, and building shared understanding about how to improve instruction over time. They argue that shared construction of knowledge can improve educational equity across settings, and that the process is enabled by educators' shared problem-solving, testing incremental changes to instruction, and using multiple perspectives for innovation. On-line social learning communities can provide important digital spaces that build participatory learning experiences for exchanges of information (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006). Collaboration about UDL applications that facilitate learning

are important ways to incorporate these frameworks into varied settings and build shared understandings across teacher education and professional development.

### **Method**

To illustrate the value of AE and UDL, educators are exploring this dual lens model and web-based approach for expanding understanding and application in instruction. Through on-line collaborations, Jamaican and US faculty and doctoral students are studying UDL application in Jamaican educational settings while promoting educators' adaptive expertise. To launch this initiative, VCU doctoral students generated key questions for Jamaican meetings, while Mico faculty identified key educators to build support for using UDL and AE for Jamaican educational priorities. Jamaican leaders included the Minister of Education and team, Mico University deans and chairs, Mico clinical staff, as well as community school and agency representatives. While in Jamaica, VCU faculty met with Mico-identified leaders to discuss UDL and AE frameworks in relationship to their programs, gathered information about specific interests, and introduced the virtual classroom. Upon return, the VCU team reviewed needs assessment data, and confirmed Jamaican educators' interests with Mico project directors. As doctoral students engage on-line with Jamaican educators to explore applications, work-groups and digital repositories are built to focus on specific interests. Students curate web resources and develop on-line instructional materials leveraging open-source UDL tools such as UDL Studio<sup>1</sup>, Bookbuilder<sup>2</sup>, and UDL Exchange<sup>3</sup>. Mico University team members are supporting Jamaican educators' application of UDL strategies, and providing feedback to VCU partners. Advanced doctoral candidates are engaged through evaluation of the on-line model.

### **Results and Discussion**

The following table illustrates the groups established across educational sectors and specific focus areas for the on-line community.

1 UDL Studio supports development of instructional models that include digital scaffolds and technologies to infuse features of the UDL Guidelines.

2 UDL Book-builder is a program for building digital books or text-rich materials that include digital scaffolds and technologies to infuse features of the UDL Guidelines.

3 UDL Exchange is a program that provides resources and templates to guide educators in developing UDL-rich lessons and collections of lessons.

The immediate outcome of the project is the initial design, pilot, and evaluation of an online platform to support a growing learning community of Virginian and Jamaican educators representing higher education and urban-rural schools. Doctoral students are sharing leadership in online platform development, with faculty, Center for Teaching Excellence, and UDL consultant support. Jamaican educators identify priorities, apply UDL strategies, and collect data. The mid-range outcomes focus on formative evaluation, model refinement, and dissemination.

To build their competencies, doctoral interns support the model refinement, and doctoral candidates lead the evaluation as the basis for dissemination.

### **Conclusion**

The UDL framework is based on a well-established conceptual model, curriculum tools, and classroom-based applications (Meyer, Rose, & Gordon, 2013; Rose & Meyer, 2002), and AE is a promising conceptual model for revising special educator preparation (De Arment, Reed, & Wetzels, 2013). Practitioner evidence from this international collaboration demonstrates the utility and effectiveness of the frameworks. The anticipated long-term outcomes include the sustained participation of VCU students and faculty, and Jamaican educators in the development of this virtual

online classroom. As doctoral students and faculty develop publications about online learning communities and global collaboration, program graduates will be better prepared to lead the next generation of faculty for 21st century learning. Overall, these outcomes also hone our leadership in building virtual and global learning communities for teacher education in UDL and AE across diverse cultural contexts.

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## **Individualized Education Programs in Brazil**

Gabriela Tannús-Valadão  
Universidade Federal de São Carlos – Brasil  
[gabytannus@gmail.com](mailto:gabytannus@gmail.com)

Enicéia Gonçalves Mendes  
Universidade Federal de São Carlos – Brasil  
[egmendes@ufscar.br](mailto:egmendes@ufscar.br)

### **Abstract**

The Individualized Education Plan (IEP), whose purpose is to ensure the monitoring of the course of the students in a situation of disability throughout their schooling process is made in the legislation of many countries, but in Brazil there is no such federal law. The research objective was to develop, implement and evaluate a program of continuing education for professionals of Special Education focusing on PEI in a municipal school. A methodology based on collaborative action research. The results indicate that before the program, were not developed individualized plans for all students identified as target of Special Education in the municipality, and that the planning documents of the existing individual referred to only in the special education resource room, with few indications for the teaching of the common class, and often the plans are incomplete and repetitive. During the program participants made collectively and collaboratively planning 12 cases of students in disability situation facing the entire school career of the student. At the end the participants indicated that they appreciated the training program. At the end of the research were discussed the limits and possibilities of the program focused on the need to introduce the practice of individualized educational planning team and developed collaboratively.

Considering that the proposed of school inclusion requires not only access, but also the guarantee of permanence and learning student in disability situation, enrollment of these students alone will not allow us to assess the impact of school inclusion policy. Is necessary to investigate strategies that enable a step forward in the results of such a policy. (MENDES, 2006).

The Brazilian educational policy provides that the education of children in situations of disability made on regular classes in common schools and these students are entitled to "specialized educational services." (SES) in classes of multifunction capabilities. (CMC) (BRASIL, 2013).

The statistics of Brazilian school census data 2010 have indicated that most students of the target population of Special Education was being educated in public schools and in elementary school (702,603 thousand), and in a smaller proportion students attending higher levels (secondary school - 27,695 and above 1,096) (BRASIL/INEP, 2011). This data compared to the population census of 2006 described the population of people experiencing disability 0-24 years as being approximately four and a half million, indicates that most of these students probably lies outside of school and those who can access has not been able to move forward on the path of education.

Actually, in countries where it presently sees an intention of implementing policies enrollment of students in situations of disability in public schools, the Individualized Educational Program (IEP) has been a legal device to ensure monitoring of the course students. This planning has the function of ensure that students not only the presence in school, but they successfully complete the course in school life (TANNUS-VALADÃO, 2010). However, in Brazil there is no requirement on a national scale, that these students assessed, or have an educational plan based on their peculiarities, and enables



continuous monitoring of their school careers. Importantly, the planning reference for the target audience of Special Education in Brazilian law made by the SES scheme in Resolution 4 of 2009. This plan refers only to the student's actions in CRC and not related to any educational path of the student as IEP provides.

The objective of the study was to develop, implement and evaluate a program of continuing education for professionals in Special Education focusing on the development of the IEP for students in disability situation.

This research based on a collaborative research that, in its original definition means doing research "with" professionals and not "on" them (Lieberman, 1986). Collaborative research is part of a set of research practices of participatory character and has received different names in literature, such as action research, action research, collaborative, participatory research, research partnerships, etc. (DESGAGNÉ; et al 2001).

In the municipality studied the variations found in the identification of the target population of students in Special Education process, and the possible conclusions based on data are summarized below:

a) The forwarding seems to pass largely screened by the teacher of the common class, that is who does the triage. Possibly, there must also be directly identified children on health systems, but in this case they are where a child whose disability is assumed to be of moderate to severe degree and high visibility.

b) Whereas it the highest proportion of students is the age group of elementary school, it is concluded that the identification process occurs mainly after enrolling the child in school, other words from the age of six.

c) The results of the identification process also show that the proportion of students identified in comparison with the school population is minimal, ranging from 1.42% (2011) and 1.74% (2012), and, furthermore, much of the student body has questionable eligibility, considering the narrow definition of the Ministry of Education of the target population of Special Education.

d) A large proportion of students considered "borderline" (20% to 40%) in the school population of the municipality indicates the difficulty as to the identification in general and in particular in relation to obtaining a medical report for all students.

e) The eligibility of teaching practice defined by the teacher of Special Education, by pedagogic evaluation.

f) The identification ensures the eligibility of services, but this is not the case for students with high ability, since the network in question over the two years surveyed registered no registration for such pupils.

g) The majority of students identified are male and intellectual disabilities, which indicates the existence of gender bias in identification.

h) In certain cases, the common school seems unable to show identification and forwards to health services and special school and make the identification with the aim of ensuring a medical or psychological appraisal report.

I) Generally, identification processes vary greatly from one agency to another which indicates a lack of guidelines on the identification of students from the target population of the Special Education process. Since the students identified, it found in relation to the planning of education that proffered unto them, the following considerations:

1. Despite lack of obligation of individualized education program, two of the three cases investigated had in effect established some form of planning, suggesting that professionals saw the importance of this procedure. However, such practices represent diverse personal initiatives of some professionals, yet without any institutionalized and mandatory practice;

2. Planning practices found were introduced, from continuing education courses made by some of the professional institutions that seemed to still try to spread this practice;
3. The practice of planning seemed to more formalized, although not yet available generally for students who attended the common school, through the "individual development plans" (IDP). However, it following noted that only about one third of the students enrolled in the CRC municipality had annual IDP.
4. The prevailing model of planning that still centered on the institution and not the individual. The IDP, for example, solely referred to what done in the CRC, or a maximum of the resources to be made available in the standard class, without necessarily made reference to curriculum goals and teaching accommodation in the common class. In addition, the IDP were, overall, similar according to the teacher responsible for the CRC student, but with large variations between the other IDP prepared by other teachers of CRC, even the student taking the same school year, age and type of disability.
5. The existing planning practices possibly were not widespread, and not necessarily maintained, due to lack of mandatory IEP and mechanisms of accountability imposed in relation to the outcomes of schooling of students in Special Education target audience.
6. After the entry of students in school and guaranteed SES, the definition of what to do with them in the common class as the CRC, still looks matter subject to much speculation, the arbitrary and subjective decisions of his teachers due to lack of guidelines.

A description of the assessment for the identification and planning of the professional process of the three institutions have revealed that some practices have existed before, but these could be improved, especially if the latter to involve collective and collaborative practices and planning centered on the student, not the institution or service. Therefore developed a program tailored for these two purposes.

Study participants were 34 professionals of whom 12 were teachers' lounge; eight were teacher's multifunctional resource room, three coordinators were a director, a monitor to include six teachers of a particular school and 3 professionals from the rehabilitation center, (a physical therapist, a speech therapist and a technician on social development). The program involved a theoretical part and a practical part, which led each team to build a planning proposal for a public target of the Special Education student. In all, the program developed in 14 meetings with about two hours, which together with the practical part resulted in about 40 hours of formation.

The meetings designed to offer the opportunity to acquire knowledge about models of individualized education program, the collective construction of a shared planning and discussion of all plans developed by each team.

In building planning, participants chose the existing model in the regular network in the city that based on the individualized development plan protocol. Therefore, despite knowing other models indicated by the literature, the option was the development of an educational plan, possibly because the other models were not viable

for that context of course, they involve mandatory participation of families as well as professionals of the interdisciplinary team, and the latter poorly represented in the team.

Therefore, the model set, the teams would build a collective and collaborative way the schedules of students. One issue highlighted was the fact that the participants made a kind of planning and continuous evaluation, because other between meetings they have assessed what been planned at the previous meeting and has modified the current planning for the next. The process of planning and evaluation proved so dynamic that you could barely keep up if the modifications were even justified. In one case, for example, proposals and speeches were made so that at the end of the training program, the team concluded that the student does not need more individualized educational program therefore was watching the planning of the common class.

Accompany the planning of all 12 cases throughout the construction process during the training program proved impossible task. The teams discussed their cases presented to the group that offered suggestions that may or may not be incorporated by the team responsible for a particular case. Whether or not these suggestions put into practice at school, if they were tested, maintained or abandoned, or even in the form of records contained in the plan was not always possible to observe due to the dynamics of the whole process. Professionals seem to demand quick decisions and results and often do not devote much time to a more detailed analysis about the importance of teaching objectives, selecting the most effective strategies etc.

In the present study, the solution was to try to compare the planning that went before and after the program and these data indicated that of the 12 cases studied; only five of them had previous IDP. The other students did not have any formal document that register what been planned for them. At the end of the program built collectively IEP for 12 students.

The content analysis of the 12 IEP showed some progress in virtually all teams, although progress has not been uniform. The teams consist of the professional special school showed greater difficulty in building the IEP of their target students. Teams composed by professionals from the health center, on the other hand, showed a more enriched plan, for example, the introduction of new teaching resources, assistive technology resources that previously not provided, possibly by lack of teachers.

However, it is noteworthy that much could still improve in more student-centered and less in the service or the institution, the more complete filling of standard protocols and appropriate IEP resulting educational plans. Which suggests that the continuing program of formation could have continued as an initiative of the Department of Education. So that the practice could be consolidated and become part of the daily life of schools and institutions.

After the program, participants asked about the social validity, and, in general, one can conclude that the rate obtained for each of the six items ranged from satisfactory to very satisfactory. What is expected because, in general, studies of GP- FOREESP1 evaluating training programs invariably indicated that the opinion of participants in these studies, in general, was very positive, which does not necessarily mean that the program was necessarily effective.

When finalizing this study believe that their goals met because their results allowed:

- Characterize the process of educational planning for students who are disabled and.
- Develop, implement and evaluate a continuing training program for professionals focusing on the development of the IEP for students in disability situation.

The literature of Special Education has recommended that the route of the student enrollment target of the Special Education population is continuously monitored and evaluated. One of the instruments used for this purpose is the IEP and in many countries have been required to produce educational plans individually tailored to meet the specific needs of each student in the audience of Special Education.

Lack of legal provision, the special school and the health center had no teaching plans as a reference or standard and therefore could not be parsed. On the other hand, public schools, even without obligation, possessed the PDI. Therefore, the first highlight being done is the recognition of the initiative that municipality to institute such a procedure which attests greater seriousness in the local politics of school inclusion.

The literature on school enrollment in the country to conclude that seems still lacking much so that the Brazilian education systems provide quality education, both for students disabled, as their peers. In this sense, the argument put forward in this paper was that one of the essential aspects to advance the education of students in a situation

of political disabilities in regular class would undoubtedly be the imposition of the 1 “GP-FOREESP – Formação de Recursos Humanos e Ensino em Educação Especial”, directed by Professor Enicéia

Mendes, which integrates the activities of teaching, research and extension of some teachers, students of various courses Undergraduate and Postgraduate in Special Education of th UFSCAR and the “Observatório Nacional de Educação Especial – ONEESP requirement for the IEP. So that in future educational activities directed toward this population defined with less arbitrariness towards to offer better quality education.

Clearly, the importance the IEP is not restricted to students who are being educated in regular classes in regular schools, but extends to all public target of Special Education students. However, as the emphasis in the current national policy is to promote educational inclusion printed highlighted the IEP due to the need to reconcile the demands of the regular classroom curriculum and SES that is supposed to jointly respond to the specific needs of students. The need for individualized planning how these needs can be very varied arises so that we can ensure the quality of education for such students.

The study also demystifies the teacher as an expert in a specialized institution of the student enrollment in disability situation, because this group did not perform the planned teaching, nor did reviews of diagnosis, teaching and learning. One possible explanation is that the teacher excluded from any type of formation.

It is hoped that the results of this study contribute to the Brazilian authorities recognize the importance of ensuring the IEP for students in disability situation as a legal requirement. Mainly offering the advantages Education as awareness that describe educational background of the student is essential through evaluation and re-evaluation of the teaching and learning process and mechanism to support the teacher optimizing time eliminating strategies that did not work in another IEP and demonstrating the student's enrollment. Therefore, it would be advisable to assure legislation requiring the preparation of the IEP for people suffering from disabilities at school age.

How to limit the study, pointed out the lack articulation and collaboration between education and health. Characterized as personal aspect of the individual, which may not necessarily reflect the practice among these professionals. Little time for research participant reflect on the formation due to workload, because the IEP considered a complex document that encompasses the entire school career of the student's disability situation requiring decrease workload and increase training time. Furthermore, studies with the participation of parents with the preparation of the collaborative IEP conducted.

Future studies may also be conducted with the aim of increasing knowledge about the IEP is being implemented in practice in other countries.

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## **Global special education teacher preparation: The SCSU-GINUE model**

Kyounghee Seo

St. Cloud State University Department of Special Education School of Education

[kseo@stcloudstate.edu](mailto:kseo@stcloudstate.edu)

Mary Beth Noll

St. Cloud State University Department of Special Education School of Education

[mbnoll@stcloudstate.edu](mailto:mbnoll@stcloudstate.edu)

### **Abstract**

This presentation describes the Short-Term International Field Experience program between St. Cloud State University, USA and Gyeong-In National University of Education, Korea. Program and student outcomes are discussed in the context of global teacher preparation issues, which include the need to (a) address USA teacher shortages in special education, math, science, and ESL; (b) increase global awareness of mild disabilities; and (c) improve cultural competency through global teaching experiences.

**Keywords:** Teacher shortage, special education teachers, STEM teachers, global education, international special education.

### **Introduction**

Education involves the ever-changing responsibilities of transferring the necessary knowledge, skills, and values to younger generations who live in a multicultural and global society (Suarez-Orozco & Sattin, 2007). To ensure that we meet these responsibilities, elementary and secondary classrooms must be staffed with qualified teachers. Unfortunately, a recent report published by the U.S. Department of Education (2013) indicated that teacher shortages in all states have increased substantially since 1990, particularly in the areas of special education and science, technology, engineering, and mathematics (STEM). Although teacher preparation programs graduate sufficient numbers teachers in most of these areas, insufficient numbers are willing to remain in the teaching profession (Ingersoll & May, 2011; Ingersoll & Perda, 2009). For example, approximately 27,000 science and mathematics teachers resigned after the 1999-2000 school year, and these teachers were not yet eligible for retirement (National Education Association, 2000). This rate of turnover affects STEM areas more significantly because fewer new teachers are available compared to fields such as elementary education, social studies, and English.

To address the teacher shortages in these areas, some public school systems have imported overseas-trained teachers, primarily from the Philippines and Barbados (American Federation of Teachers [AFT], 2009). These teachers, recruited by for-profit agencies, are typically not mentored and are often exploited by being placed in difficult teaching situations. In addition, one very important factor is consistently overlooked: cultural considerations. Although they may have the knowledge and skills in specific subject areas, they do not possess the cultural competence needed. Without educational preparation in the United States to prepare them to teach in our K-12 schools, it is predictable that the efforts to import teachers have not produced the desired results.

However, it does seem logical to prepare foreign teachers to assume teaching positions in the United States in critical need areas. This approach can provide mutual benefits for home and hosting countries. In this paper, we provide a global collaboration model developed between universities in the United States and Korea that is designed not only to address teacher shortage areas in the United States, but also to prepare educators in both countries to develop a multicultural global attitude toward the teaching profession.

In Korea, there is a surplus of secondary teachers in STEM areas (Seo, 2009). These are the critical shortage areas cited persistently in the U.S. (Flynt & Morton, 2009). Another shortage area in the U.S. is secondary special education teachers, who often lack a solid understanding of the secondary content area material they need to align their instruction successfully with grade-level standards (Brownell, Sindelar, Kiely, & Danielson, 2010; Greer & Meyen, 2009). Due to the lack of special education teachers with science and mathematics training, special education students are being taught by the teachers who are less qualified in these specific subject areas.

In the United States, there is a surplus of elementary teachers—an area of shortage in Korea with regard to native English speakers. Korea also has a need for teachers who are skilled in working with students who have mild disabilities. Due to the country's priority for high academic achievement, mild disabilities are under-recognized (Seo, 2009). Mild disabilities such as learning disabilities and emotional disabilities have been considered as a weakness of the student rather than a disability that needs to be addressed. These students fall through the cracks or are provided with private educational services--whether the families can afford it or not. Due to the high expense of private education, many families have become "education poor." Although they have stable well-paid jobs, they become poor due to the excessive private education expenses. Public educational neglect of students with mild disabilities has been compensated by parental fear of their children's failure in educational setting as well as in society (Seo, 2009).

Furthermore, due to the lack of awareness of mild disabilities, teacher education programs also lack the special education preparation components in their curriculum

To resolve the issues on both side of the Pacific, a global problem-solving approach is required. The SCSU-GINUE program will hopefully provide Korean teachers \with teaching positions while also providing more highly qualified teachers in the U.S. Concurrently, the approach can raise awareness of mild disabilities in Korea and provide more cultural experiences for the U.S. students. It is hoped that they are more likely to go to Korea to fulfill the need for English-speaking teachers and also to gain more cultural competence that will benefit them in their teaching career.

## **Method**

The SCSU-GINUE model was initiated in 2008 and now involves six licensure programs at SCSU, as well as faculty and student exchange programs. Three teacher education programs are currently in place: an international field experience (i.e., Short-Term International Transfer program), an undergraduate exchange program (i.e., Long-Term International Transfer program), and a dual-degree program. An essential component of the student and faculty exchange an programs is a weekly Korean language and culture course. Korean students from the long-term program teach this course, which is offered free of charge to the St. Cloud community over the course of the fall and spring academic semesters

Given the time constraints for this presentation, we are presenting only the Short-Term International Transfer (i.e. International Field Experience) program. In this program, two cohorts of students from Gyeong-In University (GINUE) are hosted each year at St. Cloud State University (SCSU): one in the fall semester and one in the spring semester. Each cohort is composed of 15-22 undergraduate students who have been an elementary education program more than 1 year. A total of six cohorts of 99 Korean

undergraduate teacher candidates have now participated in the 4-week program in the upper Midwestern small city of St. Cloud, Minnesota.

The participants are selected based upon their GPA, language proficiency score (more than 61 of TOEFL or equivalent score of other language proficiency measurement), and interview in English. The selected participants are provided with a scholarship toward the international field experience, which is funded by the Korean government.

When students are selected they must go through several steps before they actually meet American students in the field. The international field experience is composed of (a) pre-departure cultural orientation and language screening, (b) after arrival orientation and cultural experience, (c) language coaching and lesson preparation sessions, (d) special topics lectures, (e) a 3 full-week field experience, and (f) presentation and evaluation session.

The first stage of the international field experience is pre-departure cultural orientation and language screening. When they are selected, SCSU faculty members provide a full day session of pre-departure orientation in Korea at least 1 month in advance. The content of these pre-departure orientations is professional attitude, an overview of American culture and customs, lesson preparation, and aural-oral language practice. During their full-day orientation, several English teachers from Minnesota who are currently working in Korean schools are introduced. Each teacher from Minnesota works with a group of three-four participants and meets them at least once a week to converse in English and to learn about American customs—particularly Minnesota culture. These Minnesota native teachers conduct the language screening while they are meeting the group. An educational agency hires English teachers for language coaching in Korea and in St. Cloud, provides travel planning, on-site transportation arrangement, home stay management, and plans cultural experience opportunities. GINUE contracts with this agency to provide these activities and services to ensure the participants' smooth adjustment and safety. The agency constantly communicates with the participants for at least for 2 months via social networking and Facebook (a month prior to departure, during the 3-week field experience, and a week after returning to the home institution).

During the first week, students participate in after-arrival orientation, language coaching, lesson preparation, and special topics lectures. The topics of special lectures include a wide variety of subjects, some of which are not included in traditional teacher preparation programs in either the U.S. or Korea. Topics have included classroom behavior management strategies; grief and loss education; lesson planning; sexualized children—awareness, identification, and treatment; presentation skills; learner engagement; poetry writing and storytelling; coaching/athletic training, and others. The participants evaluated the special topics lectures and suggested topics they needed during their field experience. The next cohort's special topics lectures are developed in response to the previous cohort's evaluation. During the orientation week, students also visit a faculty member's home for the day to enjoy a meal and season-specific lakeside activities. For example, in the early fall students picnic, boating, fishing, and swimming by the lake. In January, students participate in winter activities such as snowshoeing and ice fishing.

After a week of preparation, the participants are placed in elementary and middle school settings at Stride Academy in St. Cloud for their 3-week field experience. The GINUE students follow the same field experience procedures as the SCSU special education teacher candidates. Specifically, they conduct two observations of targeted student behavior, prepare lesson plans and teach individual and large-group lessons in science and mathematics, assist with classroom activities, and complete a weekly journal. Both university supervisors and cooperating teachers observe the students during the field experience and provide feedback immediately following the observation.

During the final week of their experience, students stay with American families for 1 week to obtain the maximum cultural experience. The home stay families are recruited by the educational agency

through the school newspaper at Stride Academy. All the host families are the volunteer teachers or families who send their children to Stride Academy. Host families provide transportation to and from the Stride Academy when they come to work or bring their children to the school. To compensate the cost of food, lodging, and transportation, small stipends are provided to the host families.

At the completion of the field experience, students use their journal entries to prepare a presentation that reflects upon their entire field experience. University supervisors, cooperating teachers, special education faculty members, and the participants' home stay families are invited to celebrate their learning at this presentation. The university supervisor, cooperating teachers, and university faculty members evaluate these presentations. After the presentation session, the participants complete evaluations, which are used to enhance future field experiences.

When students return to their home institution, students are interviewed by the pre- departure language and culture coach and the same person who conducted the initial selection interview. The interview is designed to ascertain the impact of both the educational placement experience and immersion in the English-speaking environment.

### **Results and Discussion**

The experience for the students was overwhelmingly positive in many respects. Students demonstrated an increased understanding of the U.S. educational system, cultural aspects, and topics of which they had little previous knowledge.

With regard to the orientation topics, students were most positive about grief and loss education and sexualized children. They also responded positively to the topics of presentation skills and leadership training. This has implications for teacher preparation programs and the need to educate 21st century global teachers.

Students reported the experience made them realize how privileged they are. The participating students were academically highly achieving students in Korea –these students are within top 5% of high school graduates. Their experience of being less competent in language and culture gave them opportunities to think about their future students when they become teachers.

The interviewers of students and faculty members reported a significant increase in the amount of students' responses and improvement of speech skills. The interviewers reported the students communicated better and--more importantly--they spoke louder and more clearly. This reflects their increased confidence after teaching in the U.S.

Feedback from the students indicated the need to be engaged in activities that require more physical movement. As a result, coaching/teaching athletic activities, such as basketball, hockey, canoeing, and dancing were added seasonally.

The teacher candidates' realization of the presence of mild disabilities and the difference in treatment of children with disabilities was far more than anticipated. Students also expressed more understanding of low-achieving children. This indicates that providing opportunities have a significant impact on their future decisions. The participants said, "We were so much impressed with the students' facial expression. They wear smiles all the time and appeared to be really happy to be in school. We are also impressed with the teachers' attitude trying to include students with disabilities in every activity even though they don't appear to be in the same level of performance as other students."

Faculty members of special education department began hosting students in their house initially because of a special event in a faculty member's community, which turned out to be striking cultural experience. Participants expressed that faculty members were different in the two cultures. Seeing faculty members in their home setting made them feel much more welcomed and allowed them to be less nervous in their experience in the schools. The feedback revealed that one of their favorite



activities was the day they spent with other students and faculty members at the faculty member's home.

### **Conclusion**

The Short-Term International Transfer program exposed Korean teacher candidates to an environment in which they are a minority. This provided them the opportunity to understand their future students who are in unfamiliar environments. The students increased their awareness of mild disabilities and unequal educational opportunities for Korean students with mild disabilities. They compared and contrasted two different educational systems and critically analyzed components of each. In addition, it opened their eyes to the possibility of being a teacher in the United States. Although they had always planned to be a teacher in Korea, after their experiences with children in the U.S. they realized they can teach anywhere. They also realized in retrospect how difficult and unfair it was that some of their classmates in grade school were allowed to sleep in the corner and not participate. Although they did not think much of it at that time, they now can see that instructional programs should have been designed to include them and meet their educational needs. This is what we can call the beginning of the "change within."

This program mutually benefits both educational communities. While the participants are staying in St. Cloud, they also joined an all-day Saturday class so that they have a chance to interact with undergraduate students in the U. S. Students discussed their college life and differences in discourse based upon their perceptions of culture and values. They often built friendships and remained connected through social media and Internet. These are experiences that will enable them to incorporate more global perspectives when they become educators in near future.

More and more students who participated in the short-term program come back to SCSU for the long-term program, which reflect their needs to learn about different ways of teaching. Whether or not they decide to pursue special education licensure in the United States, they will become teachers with many more global competencies than the teachers who do not have these opportunities. If these teacher candidates decide to teach in the United States, we will provide the American education community with special education teachers with STEM skills. If they decide to stay in Korea, we will provide the Korean education community with teachers who have an awareness of mild disabilities. This will be a leading force of change in creating teacher preparation programs for students with mild disabilities.

### **Acknowledgements**

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## **Differentiated literacy instruction in the content areas**

Lori Severino, Ed.D.  
Drexel University  
[las492@drexel.edu](mailto:las492@drexel.edu)

### **Abstract**

Literacy instruction is everyone's responsibility; however, many secondary content teachers feel unprepared to teach reading skills. Often the special education teacher is required to have the expertise in this area. In secondary classrooms, students are increasingly expected to read more complex informational text. Participants who attend this session will learn specific strategies to use in content area classrooms to help all students, especially students with learning disabilities, improve reading comprehension. Specific strategies on scaffolding, summarizing, text complexity, and close reading will be addressed. Results from a year-long professional development plan in an urban school setting that implemented these strategies will be shared.

**Keywords:** differentiated instruction, Professional Learning Communities, Reading comprehension, Informational Text

### **Introduction**

Teaching literacy in the content areas is becoming an expectation of many general education and special education teachers. At the secondary level, students are increasingly being asked to understand more complex informational text. Providing instruction for comprehension during only the Language Arts class is not sufficient for students to get the practice they need. With the increased need for students to tackle complex text, what strategies can teachers implement to scaffold instruction to improve student's comprehension of informational text?

### **Method**

One way of having students demonstrate understanding of information text is to require them to write a summary of the text. Often, teachers assume students know what is meant by writing a summary; yet, the results of the summary typically do not meet the teacher's standards. Students with learning disabilities need to be explicitly taught how to write a summary. This should be done through a scaffolded process: presenting an exemplary model with the teacher modeling metacognition (thinking aloud), walking through the process as a class, having students work in groups in additional practice, and finally having students complete a summary on their own. Students with disabilities also need to be taught the content of a summary and what you expect of them.

First, the teacher will provide an exemplary model. This could be something another student has submitted previously in another class or if you do not have a student model, it is suggested that you provide a summary of informational text that you wrote which contains all of the required elements you expect of your students. This will vary depending on age and topic. To provide differentiation, the teacher could provide multiple models of what is acceptable at the different levels of current students. It is important for the teacher to "think aloud" while reading the model summaries to the class. As you are going through the read aloud of the summary for example, discuss what makes the topic sentence exemplary, how the detail sentences support the topic sentence, how the conclusion covers the same information as the topic sentence/paragraph, but is written differently.

Next, the teacher will need walk the entire class through the process of writing a summary of an informational text. It is extremely helpful to provide students with a graphic organizer describing the requirements for a summary. This would vary based on age level and length of the summary. For instance, for younger students or students that have not been proficient in writing summaries, may require a one paragraph summary. For older students, you could require three or five paragraphs, depending on what the student can currently do independently. For a one paragraph summary, a requirement of a topic sentence, three detail sentences that support the topic sentence with evidence from the text, and a concluding sentence is required.

As a class, a piece of informational text would be read aloud. At this point, since you are explicitly teaching students how to write a summary, making sure the students understand the text would be a critical piece. Using metacognitive strategies again at this point is an excellent way to make sure students hear how you think when you read a piece of informational text. The teacher will want to point out details that might be important to the piece. After reading aloud, the teacher and class should discuss the main idea of the article. The teacher is using this time to assess which students are struggling with finding the main idea. The assessment should be sure to involve all students. You could use exit tickets or have them write a sentence that identifies the main idea. If more than a few students are having difficulty identifying the main idea, this is an opportunity to have a lesson on finding the main idea. This skill is essential in being able to write a summary. Your focus is on providing explicit instruction when necessary. Monitor your current students to help you identify if you are proceeding too quickly with a lesson or if you are boring your students by moving too slowly. If you have a mixture of students with some ready to move on and some not, this is a perfect opportunity for co-teaching. One teacher could work with each group of students. If only a few students are still having difficulty, those students absolutely need more explicit, intense instruction, but it may benefit the class to provide that instruction on another day/time. Perhaps you could request the assistance of a special education teacher or a paraprofessional. You will need to provide the teacher/paraprofessional with information on what you want the student to be able to do.

Once the class is able to identify the main idea, discuss how you would turn that main idea into a topic sentence or topic paragraph depending on age and level of your students. The topic sentence should include: the author's name, the title of the article, and the main point. By providing students with a template to follow, they can use this to practice until they become proficient enough to do it on their own. After the class decides on the topic sentence, send them back to the text to look for three details to support the main idea. Follow with a class discussion that includes taking students' suggestions and discuss which details best represent what the topic sentence states. Once the details of the article are identified, demonstrate through metacognition how to turn the details into sentences. Demonstrate using transition words and why they are important. Demonstrate vocabulary choice and how a good writer thinks about choosing words. Demonstrate age/grade appropriate grammatical skills. Focus on a specific standard or trouble spot for students.

Lastly, to complete a paragraph summary, walk the students through restating the topic sentence into a concluding sentence. Metacognition is extremely important in the last step. Often students with learning disabilities or intellectual disabilities have a difficult time rewording something. A class discussion on different ways to state the same content followed by a teacher think aloud is an important step in this process.

Once the summary is written for everyone to see (could be on chart paper, on an overhead, or on a Smartboard®), the teacher can use this time to read aloud and in unison with the class similar to a Language Experience Approach (LEA) process (Stauffer, 1970). This is a written piece that the students have created. Differentiation for editing and revising can occur as an entire class; students working in small groups to edit/revise; or some students working individually while the teacher works

with a group of students that have difficulty with editing/revising. This will depend on the ability of your current students.

Modeling and providing metacognitive strategies for students is often a missing step for older students. Teachers of adolescents expect that students will know how to do this based on instruction provided in previous years; however, by demonstrating expectations and modeling thinking, the teacher provides a pathway for the student to be successful.

Once students have seen models and have been through the process with the teacher, the next part of the process is to have the students work in cooperative small groups to follow the same process with their peers. Students can learn a tremendous amount from listening to peer interactions and peers providing assistance (Simmons, Fuchs, Fuchs, Mathes, Hodge, 1995). The decision on how to group students is going to depend on the levels of students in your classroom. This is not a time to let students choose their own groups. Be strategic in how the groups are formed. Think ahead and plan ahead for which students need to work together to get the best results.

After students have completed the entire summary process in small groups, it may be time to have students try a summary independently. If there are still a few students that may struggle with the independent task, there is nothing wrong with letting those students work in a small group with the assistance of the teacher while the students that can do an independent piece.

Before completely releasing a new article and independent summary writing to your class, it may be appropriate to use the same article and class read aloud for the small group work and the individual work until the students have had enough practice to then read an individual article and write a summary of the article independently. For students that continue to struggle with reading, it would not be appropriate to expect them to read an article independently and produce a writing piece of the quality expected unless supports for reading were implemented. Often teachers tie a writing assignment to a reading assignment and are disappointed when the writing is below standard. It is important to understand the reading abilities of your students and supports that can be put in place to help them achieve independence in writing. Some supports for reading: pair the reader who struggles with an advanced reader to read and discuss the article; the teacher can work with a small group of students to read the article together while other students in the class are working independently; a special education teacher can read with one or a small group of students; a paraprofessional can read with one or a small group of students; or an audio recording can be made of the article for the students who struggle to listen to while they read along. The idea is for the readers who struggle to also be provided reading strategies to help them understand the informational text. One such way is to explicitly teach the structures of informational text.

## **Results and Discussion**

These techniques have been taught to content area teachers in grades seven through twelve in an urban school district. The techniques and strategies were explained in large group settings in professional development workshops. The workshops were then followed up by smaller learning community sessions. In these sessions, teachers discussed the strategies and how to apply them in their own classrooms. The teachers were assigned to learning communities based on content area. A local university professor in each of the four main content areas (Math, Language Arts, Science and Social Studies) led the learning communities. The response from the teachers involved has been positive. Teachers state that they feel supported and are provided with useful strategies they can implement in their classrooms immediately.

Student writing after using the explicit teaching strategies has improved for students who typically struggle.

## **Conclusion**

With the inclusion of reading and writing in the content area standards in the Common Core, students of all ability levels benefit from direct instruction and practice in reading an information text, identifying the main idea and supporting details and being able to transfer that information into a written summary. Many of our students are experts in writing narrative summaries since they have been doing that with narrative text since early elementary school. Our students, especially those with disabilities included in the general education classroom, will become just as adept at understanding informational text as they are with narrative text if we provide explicit instructions in the process and practice in multiple content areas.

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## **Learning difficulties – What are they in success stories?**

Margarida P. Morgado  
Instituto Politécnico de Castelo Branco, Portugal  
[marg.morgado@ipcb.pt](mailto:marg.morgado@ipcb.pt)

### **Abstract**

The topic of ‘learning difficulties’ is very relevant to the concept of ‘special education needs’ since it is the learning difficulties of children that will most often identify them as in need of special educational support. This paper offers an analysis of the cultural discourse of success stories collected in five countries: Belgium, Italy, Greece, Portugal, Romania, Spain, and Turkey by a European project entitled “School Safety Net” (SSN), <http://schoolsafetynet.pixel-online.org>, funded by the EU for 2013 and 2014 on preventing early school leaving.

The success stories about learning difficulties were collected among head teachers, teachers, students and parents in schools in the above-mentioned countries (a total of 34 narratives) and focus on how learning difficulties were successfully overcome. They are part of a bottom-up approach to disseminating best practice on preventing early school dropout. As such they will be used as materials for the (content) analysis of what is considered a ‘learning difficulty’ and how it is overcome and for the analysis of the cultural discourses on ‘learning difficulties’. The main point of interest is that these stories represent a bottom-up perspective carefully constructed to represent helpful information for practitioners and researchers, as well as parents and students themselves. The discourse and content analysis that is proposed focuses only on stories collected from the teachers’ point of view. The aim is to understand their concept of ‘learning difficulties’, its relation to special educational needs, the solutions envisaged and the notion of successful outcomes across the countries mentioned as a cultural discourse that should be taken into account when dealing with this particular topic in education. As such they promote a transnational understanding of predominant discourses and practices that may be very useful for reflexive practitioners.

**Keywords:** learning difficulties; cultural discourse; success stories in education

### **Introduction**

The topic of ‘learning difficulties’ is very relevant to the concept of ‘special education needs’ since it is the learning difficulties of children that will most often identify them as in need of special education. Not all learning difficulties at school, however, result from a child having a disability, but they are, by definition, impediments for children to learn the information and skills as other children do and may constitute a cause of school dropout. Rather than just addressing the special education needs of children who have disabilities, this paper explores the concept of ‘learning difficulties’ broadly, i.e. inclusive of both disabilities and other situations in schools that equally require change to be introduced in instruction, unique attention to a student’s needs, support services and assistance. It does so from the perspective of unveiling a cultural discourse shared across a series of European countries by educators, students and their parents. Despite existing typologies of children’s special educational needs in school (Hampshire County Council, 2014), do head teachers, teachers, students and parents agree on what are special educational needs? What are the stories told from their perspective and what do they consider to be a successful story of overcoming a learning difficulty? How does a story of success tell the audience about feelings, obstacles, and convictions? These are the topics covered by this presentation, which

uses data collected for the School Safety Net project (SSN) (available on <http://schoolsafetynet.pixel-online.org>) a project on the prevention of early school dropout in Europe. One of the areas of data collection for this project, which was undertaken in 2013, was success stories related to the issue of early school leaving in several European countries (Belgium, Italy, Greece, Portugal, Romania, Spain, and Turkey) and specifically, among three other areas, on 'learning difficulties'. These success stories were collected among head teachers, teachers, students and parents in all those countries (at least 1 story each in each country), according to specific scripts, through oral interview or written down by the narrators themselves, and later translated into English and made available on line. These 34 narratives from very different European education systems offer an interesting resource for exploring the kinds of learning difficulties identified; they also highlight the perspectives of head teachers, teachers, students and parents of what constitutes a learning difficulty; which are the main features of the success stories they chose to tell; and their measures for 'success'.

What is the use of success stories in educational contexts? The US Division of Adolescent and School Health (Division of Adolescent and School Health, 2008) has produced a leaflet which highlights the importance of success stories as narratives that capture progress over time, that give end users an idea on how successful their actions were and as shared best practice that may be used for improvement (p.1). Success stories are relevant as both middle-term outcomes and long-term outcomes of a particular program (p.2), they may address multiple audiences and be used both as best practice and as triggers for engaging the target audiences in explaining how their experience is different from the one they hear or read about (p.4). Success stories are also narratives that describe positive change of individuals that can be used by other individuals to learn from the results presented, that are easy to read and to understand and that can be shared. More important than all of these, these success stories convey the voices of those that work in school, exhibit their know-how and their impressions on the terrain, they are localized and collaborative practices. They may be used to nurture and support good practices, to identify and address weaknesses and strengths. On the whole, success stories told by all the school stakeholders reinforce their shared responsibility and highlight success in education as a collaborative effort of many.

## **Method**

In the School Safety Net project the project partners cooperatively gathered a collection of success stories on students with learning difficulties as part of an analysis of evidence for the success and highlighting possible reasons for it, such as training, internal procedures, specific developed activities, communication patterns, etc.

The project partners in each country (Belgium, Italy, Greece, Portugal, Romania, Spain, and Turkey), which were vocational schools, higher education institutes and universities, and teacher unions and associations, initially identified a cluster of five primary, secondary and vocational schools as associated partners, from which they invited head teachers, teachers, students and parents to produce success stories. These were either interviewed (which was often the case with students) or asked to write down their success story according to specific guidelines, in their own language. Thus, all these stories follow a common narrative construction.

The script for collecting the success story comprised the title of the success story; identification of the country where it was collected; the category of the author (anonymous), namely whether a teacher, a student, a parent or a head teacher; the school level (primary, lower secondary or high secondary) where the critical incident or story occurred; a script for the description of the success story: main actors involved, when, where and how it developed; the reasons why the story can be considered successful; the starting point of the student so



that a clear measure of success can be understood and the social and economic background of the student’s family.

The tellers/narrators of the stories were also asked to provide a critical analysis of the success story provided by giving evidence of the possible explanation for the success, analyzing the interaction between the different actors involved, describing the action of educational policy, either a local, a regional or a national level, and identifying and describing the transferability potential of the experience. When these items were left unanswered (as often happened with students and parents), the project partners (namely researchers, teachers and teacher trainers) did this analysis by interpreting the story. A word limit was set for the description of success stories at 500 words and of 300 words for the critical analysis. All the 34 success stories collected are included in the School Safety Net portal database on line at [http://schoolsafetynet.pixel-online.org/DB\\_sstory.php?ta=3&cou=&aut=&tip=&q](http://schoolsafetynet.pixel-online.org/DB_sstory.php?ta=3&cou=&aut=&tip=&q)

**Table 1: shows titles of the success stories collected by teachers per country.**

Belgium	Co-animation teaching
Greece	I believe in disabilities
Italy	A lost boy A Strange Boy Art helps to overcome communication difficulties and increases self-confidence
Portugal	Crossing frontiers Emotional Balance
Romania	Abandoning is not the solution Getting up and going on How to become a medical student Let all flowers bloom
Spain	We all find our way
Turkey	There is Always A Hope of Light in Life

Although several types of content analysis could be produced (per country or per group of teller), this presentation chose to analyze how each of these narratives defines ‘learning difficulty’ from the critical incident narrated; and how it was solved in terms of who were the main school actors and which were the measures of educational policy that supported the resolution presented.

The categories for theme-based approach to content-analysis were obtained by combining skimming the narratives for predominant themes and types of ‘learning difficulty’ described according to the Hampshire County Council categories for special needs education (Hampshire County Council, 2014), namely: learning difficulties in acquiring basic skills; behavioral, emotional and social difficulties; specific learning difficulties; speech and language difficulties; communication difficulties; physical disabilities, medical and health conditions, hearing impairment and visual impairment; and the categories set out by the script to collect the success stories themselves.

This presentation is an experiment with organizing the content of the collected success stories into meaningful categories, such as used by Critical Incident Technique, a qualitative open-ended data technique that encourages description of experiences, developed by Flanagan in 1954 (O’Neill, 2013). The important thing is to understand that these data do not provide solutions to the problem of learning

difficulties, but essentially they can “assist with collecting information that is directly relevant to important questions of problems” (Flanagan 1954 quoted by (O'Neill, 2013).

### **Results and discussion**

Teachers' success stories highlight “learning difficulties in acquiring basic skills”, such as that of a third vocational class (3P), in Belgium, with big differences between the students' levels, some of which have not achieved basic skills (from: Co-animation teaching). There are also stories about behavioral, emotional and social difficulties: This is the case of the girl in “Abandoning is not the solution”, who dropped out of school because of bad companies and, on reentering it, was marginalized by her peers and needed help to change her ‘image’ and communicate with the others. She had to learn how to fight back preconceptions of others about her. This is the case also in “We all find our way” and “There Is Always a Hope of Light in Life”. There is also the story of “a student with learning and integration disabilities in class, diagnosed in the 6th year, with cognitive/affective deficit and integrated into the Special Education (from: Emotional Balance); and the story of another student, who was shy, “with poor communication and socializing skills, as well as learning difficulties” and a victim of sexual abuse.” admitted, on several occasions, in the hospital for attempts at suicide.” (From: Getting up and going on). Three stories narrate specific learning difficulties: the student “didn't like the curriculum subjects. The first year was a real tragedy as he had very bad marks” in higher secondary vocational school (from: A Lost Boy); Or the student “had some problems in writing, but, in addition to this, he didn't want to read or study the different subjects that required reading either” He had (...)”serious difficulties in reading accurately and fluently, and his scarce writing skills.” He was eventually diagnosed, after some insistence from teachers to parents, with “Specific Learning Disabilities (DSA).” (From: A Strange Boy); or: “He has got learning disabilities (DSA), in particular in reading and calculus, and an opposed-provocative disturb and severe difficulties of attention.” (From: Learning difficulties). Communication difficulties are also part of these stories narrated by teachers; In: Art helps to overcome communications difficulties and increases self-confidence, a girl who was unable to communicate with others eventually “managed to speak and have good relationships with her classmates at the end of school, even if her social life ended at the ring of the school bell. Physical disabilities are mentioned in only one story, about a girl diagnosed with infantile spinal paralysis, who eventually came to school to meet other children, though she had been recommended home schooling (from: Let all flowers bloom). Medical and health conditions are referred to in the story “Crossing frontiers” on “a 6th grade 12-year-old student with an obsessive compulsive disorder, integrated into school in a Special Needs Education Program, who frequently displayed crises of aggression and violence in school.”

The main school actors involved in proposing solutions are the students themselves, their parents, their teachers, and sometimes the student's peers (for example: girlfriend or boyfriend). The class tutor and the teacher class councils also seem to play an important role that determines success. Some cases require teams of specialists that collaborate with special education teachers and head teachers: psychologists, psychiatrists, social workers at school, other technical staff in special education, speech therapists, psycho-pedagogues, etc.

In terms of measures of educational policy that supported the resolution presented as effective, narrators mention an experience with co-animation, which means “two teachers in class, two teachers “on an equal footing”, who can assist students who need further tutoring (from Co-animation teaching); special needs provision in schools; educational dispensatory and compensatory measures for students diagnosed with ‘specific learning difficulties’ in place in schools; a center of information and advice in schools; and discussions in teacher class councils. Some vocational schools also have projects in place that alternate school-job, which is presented as a great resource against school leaving. Other teachers

mention that support to projects (such as that of co- animation) is only achievable because the school is recognized as an “*encadrement différencié*” (differentiated supervision) by the Ministry of Education (in Belgium) and therefore have “additional human and financial means and involve synergies with local and regional associations operating in the area where the school is located” (“ From: Co-animation teaching)

In their critical analysis teachers highlight as key factors for success the teachers’ interest and affection, individualizing students and developing situations of mutual trust with students. They seem to be great believers in adapting the curricula to students own needs and capabilities: Relevance is given to so-called “support teachers” who intervene in school with specialized didactic interventions. Teachers also comment on the parents’ role as not the most adequate, as they tend sometimes to ignore their children’s discomfort.

### **Conclusions**

The way the collection of stories was designed to emphasize the fact that these stories were supposed to attribute particular meanings to experience and constitute editions on past identities so that they yielded stories of success. There may be some problem here in the way particular contexts and circumstances may affect the ways in which subjects reconstruct their past experiences.

Given the size of the sample and the narrative inquiry and content analysis used, these stories can but be considered individual stories of life experience of a small number of individuals. The interpretation of the stories and its content analysis are a way of thinking about experience which results from the interface between the interpreter and the stories. There may be some ambiguity in this shifting away from the original voice of the storyteller.

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## **Assessment of implementation of inclusive educational practice in southwestern Nigeria**

Adeniyi Samuel Olufemi  
Federal College of Education  
[safeadeniyi@yahoo.com](mailto:safeadeniyi@yahoo.com)

Adeyemi Akinkunmi Oluwadami  
Lare Glorious Hope Resources Internacional  
[akinkunmiadeyemi@yahoo.com](mailto:akinkunmiadeyemi@yahoo.com)

### **Abstract**

This study assessed the extent of the implementation of inclusive educational practice in southwestern Nigeria. The study employed descriptive survey research design.

Samples of 131 teachers, 51 parents and 51 head teachers/principals were selected from State Grammar School, Eric Moore, Ipakodo Junior Grammar School, Ikorodu (Lagos State) Methodist Grammar School, Bodija Ibadan, Ijokodo High School, Ibadan (Oyo State) and St. Peter College(Ogun State) all in Southwestern Nigeria. Three research questions were answered. A questionnaire tagged inclusion assessment inventory with reliability coefficient of 0.71 was used to collect data. The data collected were analysed using frequency counts and simple percentage. The results revealed positive attitude of teachers and negative dispositions on the parts of government and parents. Strong advocacy and re-orientation were recommended.

**Keywords:** Inclusive Education, Implementation, Practice, Assessment

### **Introduction**

A major problem often encountered by exceptional child in the regular education programme is that of acceptance unto group relationships (Ojo & Adebisi, 2012). The problem of acceptance is often prevalent as a result of some myths attributed to the existence of special needs persons in many societies, especially in Africa. However, the last three decades have witnessed international debates particularly in developing countries like Nigeria on inclusive education that is educating students with special needs and non-special needs in the same classroom (Fakolade & Adeniyi, 2009). Inclusion is an educational practice based on a notion of social justice that advocates access to equal educational opportunities for all students regardless of the presence of any visible or obscure challenges. In this regard, inclusion represents the belief that students with special educational needs should be fully integrated into general education classrooms and that their instruction should be based on their abilities, not their disabilities (Al Zyoudi, 2006 & Alkhatteb, 2003). For inclusive education to succeed, there are numbers of factors that must interplay. These ranges from family, school partnerships, collaboration between general and special education teachers, government disposition, well-structured and constructed individualized education programme plan, parental involvement and disposition as well as societal perception.

Researches by Arif and Grad, (2008); Fakolade and Adeniyi, (2009) and Jung (2007) have in various instances and locations investigated attitude of teachers towards inclusion. There were some research evidences that reported that positive attitude of teacher could predict successful inclusion of students with disabilities in regular classroom (Sharma, Florin, Lowerman & Earle, 2006, Al-Khatteb, 2004

& Mowes, 2000).

Furthermore, Desforges and Abouchaar (2003) have submitted that pupils' achievement and adjustment are influenced by parents, family, peer groups and the neighborhoods. Early studies often showed strong positive links between parental involvement and students' academic progress (Desforges & Aboucharr, 2003).

Another critical concern on the implementation of inclusive education is government disposition to the policy statements. With the world declaration of Education for All (EFA) 1990 in which it was mandated for all countries to provide basic education to all children. To this end, basic education services of quality should be expanded, and consistent measures must be taken to reduce disparities (UNICEF, 1998). Hence, Nigeria government came up with a declaration of universal basic education for all Nigerians not minding their disadvantages in 1999. The expectation is that, with the proactive implementation of the policy statement, Nigeria government would have moved toward achieving millennium development goals.

However, since the declaration of Universal basic education for all, implementation of this policy statement is far below the expected target now that 2015 is fast approaching in view of deadline set by Millennium Development Goals (MDGs). It is therefore imperative to assess the level of implementation of inclusive education in Nigeria, especially in the Southwestern zone that has been setting pace in the educational development programmes in Nigeria.

Research questions

- i. Do attitudes of teachers in inclusive schools in Nigeria favour successful implementation of inclusive educational practice?
- ii. Do attitudes of parents in Southwestern Nigeria favour inclusive education practice?
- iii. What extend has government in Southwestern Nigeria encouraged inclusive education practice?

## **Method**

### Research Design

This study employed a descriptive survey research design to assess implementation of inclusive educational practice in Southwestern Nigeria

### Population

The target population for this study were parents, teachers directly involved in inclusive education practice and Head/Principals of schools where inclusive education is being practiced in the six states of southwestern Nigeria.

### Sample

The samples comprised 131 teachers, 51 parents and 51 head teachers/principals purposively selected from State Grammar School, Eric Moore, Ipakodo Junior Grammar School, Ikorodu (Lagos State) Methodist Grammar School, Bodija Ibadan, Ijokodo High School, Ibadan (Oyo State) and St. Peter College, Abeokuta (Ogun State), Nigeria.

### Research Instrument

The instrument used was a structure questionnaire tagged Inclusion Assessment Inventory (IAI) that is subdivided into four parts (ABCD) Section A was used to generate demographic data. Section B measured teachers attitudes, C measured parental disposition toward inclusion while D measured the extent of government participation in inclusive education practice. The instrument was prepared in four

(4) Likert scale.

#### Data Collection and Analysis

The questionnaires were distributed among participants that cooperated with the researchers and thereafter, their responses were collected, analysed using simple frequency count and simple percentage.

### Result and Discussion

R.Q 1 : Do attitudes of teachers in inclusive schools in Southwestern Nigeria favour successful implementation of inclusive educational practice?

S/N		SA	A	D	SD
1	Inability of the teacher to have positive attitude towards inclusive education has great effect on the policy implementation	61(46.6%)	37(28.2%)	14(10.7%)	19(14.5%)
2	There is nothing wrong in introducing inclusive education services in schools	55(42.0%)	56 (42.0%)	6 (4.6%)	14 (10.7%)
3	The inclusive education services in the school are those I like in the Nigeria educational system	25 (19.1%)	53 (40.5%)	21 (16.0%)	32 (24.4%)
4	If I have my way, inclusive education practice would be given more priority than any other practices in the educational system	46 (35.1%)	38 (29.0%)	16 12.2%	31 23.7%
5	Apart from time wastage, there is also wastage of fund on inclusive education practice	16 (12.2%)	18 13.7%	36 27.5%	61 46.6%
6	The fund spent on inclusive education practices/services could have been used on other aspects of educational systems	21 16.0%	23 17.5%	34 26.0%	53 40.5%
7	It is difficult for teachers to cope with the amount of work that inclusive education practice entail	30 22,9%	32 24,4%	33 25.2%	36 27.5%
8	Inclusive education is difficult to practice because it requires more specially trained teachers	65 49.6%	40 30.5%	17 13.0%	9 6.9%
9	It is difficult to cope with inclusive arrangements because of lack of specialized equipment for teaching children with special education needs in my school	70 53.4%	40 30.5%	9 6.9%	12 9.2%
10	Government does not motivate teachers in inclusive settings, so many teachers left inclusive setting for conventional arrangement	84 64.1%	27 20.6%	7 5.3%	13 9.9%

Summarily, from all the responses, it can be inferred that teachers' attitudes favoured inclusive education in Southwestern, Nigeria.

R.Q 2 : Do attitudes of Parents in Southwestern Nigeria favour inclusive education practice?

S/N		SA	A	D	SD
1	I will allow my child with special needs to attend non-special schools	6 11.8%	4 7.8%	33 64.7%	8 15.7%
2	If my child with special needs attend non-special school, it will aid his/her psychological wellbeing	3 5.9%	3 5.9%	17 33.3%	28 54.9%
3	If my child with special needs attend conventional school, his/her academic performance will improve	3 5.9%	2 3.9%	7 13.7%	39 76.5%
4	I believe if my child with special needs attend non-special school, it will change his/her orientation about society	2 3.9%	3 5.9%	13 25.5%	33 64.7%
5	I believe that teachers in conventional schools will attend to the needs of my special needs child	2 3.9%	3 5.9%	16 31.4%	30 58.8%
6	I believe that other students that are non-special needs will not maltreat my child with special needs in conventional school	3 5.9%	3 5.9%	18 35.3%	27 52.9%
7	I believe that inclusive education will build inclusive society	3 5.9%	2 3.9%	16 31.4%	30 58.8%
8	Societal orientation about special needs children will change if special needs children are allowed to attend conventional schools	4(7.8%)	2(3.9%)	20 (39.2%)	25 (49.0%)
9	I believe that my child with special needs will achieve his/her full potentials if allow to go to conventional school	6 11.8%	- 0%	21 41.2%	24 47.0%
10	I will not support the idea of allowing children with special needs to attend conventional school	2 3.9%	2 3.9%	23 (45.1%)	24 (47.1%)

It can be generally inferred from the responses that parents' attitudes to inclusion may not favour successful implementation of inclusive education.

R.Q 3: To what extent has government in Southwestern Nigeria encouraged inclusive education practice?

S/N		MA	SA	RA	NA
1	We practice inclusive education in our school	32 62.7%	17 33.3%	2 3.9%	- 0%
2	Government sponsors our teachers on training for quality inclusive education services	7 13.7%	22 43.4%	11 21.6%	11 21.6%
3	Government recruits staff for inclusive education practices	9 17.6%	20 39.2%	14 27.5%	8 15.7%
4	Government monitors/supervises inclusive education programme by constantly visiting schools	8 15.6%	11 21.6%	21 41.2%	11 21.6%
5	Our schools are properly consulted during problem identification associated with inclusive education	4 7.8%	7 13.7%	19 37.3%	21 41.2%
6	Government buys materials / books needed in our school for inclusive educational services	6 11.8%	8 15.6%	18 35.3%	19 37.3%

7	Government equips schools with infrastructure and other learning materials needed in our schools for inclusive education	8 15.7%	6 11.8%	11 21.6%	26 51.0%
8	Government extends financial subsidy for us for inclusive education	7 13.7%	1 2.0%	15 29.4%	28 54.9%
9	Inclusive education practice is considered crucial by government	6 11.8%	6 11.8%	12 23.5%	27 52.9%
10	Non-government organizations assist the schools in promoting inclusive education service	6 11.8%	8 15.7%	8 15.7%	29 56.9%

Summarily, government disposition towards inclusive education in Southwestern Nigeria is not encouraging.

From the above results, research questions two and three revealed the negative stand of parents and government to inclusive education in Southwestern Nigeria. By implication, inclusive education has not enjoyed the needed attitude and support which might be the reason for the less popularity of the programme. Obviously, students with special needs in this region are socially and emotionally stigmatized by parents who are supposed to provide the necessary support for them. It must be noted according to Desforges and Abouchaar (2003) that there is positive link between pupils' achievement and parents' support. The evidence of lack of support may constitute major barrier to academic success of these individuals. Also, government inability to provide necessary assistant may be a major barrier to inclusive education in Southwestern Nigeria.

On the other hand, the positive attitudes demonstrated by teacher as revealed by the result of research question one provides hope because positive attitude and disposition are needed by caregivers to implement the programme of inclusion. This result is in line with Jung (2007), Shippen, Houchins, Ramsey & Simon (2005) and Campbell Glmored & Cuskdily (2003) who all believed that positive attitude is needed by teachers on training and the ones on the job for successful integration of students with special needs in regular classrooms.

### **Conclusion**

Inclusive education is a programme of action for total integration of persons with special needs. This has been advocated for by UNESCO, UN and other international bodies as reflected in various international conferences and conventions. However, major setbacks to this in Southwestern Nigeria are perception and attitude of parents and level government participation which are inimical to the success of the programme.

### **Recommendation**

In view of the results of this study, the following are recommended:

- Parents of special needs as well as public should be reoriented.
- The implementation of the right of people special needs as recommended by United Nation should be advocated for.

### **Acknowledgement**

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## **Curupira Project: From Inclusive education to the subjectivity of disabled people.**

Dalmir Pacheco  
Instituto Federal de Educação, Ciência e Tecnologia do Amazonas  
[dalmirpacheco@gmail.com](mailto:dalmirpacheco@gmail.com)

Liliane Brito de Melo  
University of Minho, CIEd  
[lilianebritodemelo@gmail.com](mailto:lilianebritodemelo@gmail.com)

Maria Lúcia Tinoco  
Instituto Federal de Educação, Ciência e Tecnologia do Amazonas  
[lutinoco@ig.com.br](mailto:lutinoco@ig.com.br)

Elaine Guerreiro  
Instituto Federal de Educação, Ciência e Tecnologia do Amazonas  
[em-guerreiro@uol.com.br](mailto:em-guerreiro@uol.com.br)

Yani Evangelista  
Instituto Federal de Educação, Ciência e Tecnologia do Amazonas  
[yanisayonara@gmail.com](mailto:yanisayonara@gmail.com)

### **Abstract**

The principle of Brazilian educational system “Education for all” it’s taken by the Curupira Project (Group for Accessibility and Inclusive Education) as premise for the actions of internal community sensitizing , as well the establishment of partnerships with governmental and non-governmental organizations to strengthen a solidarity network which providing significant results. With eyes in the excellence, the prime actions became to training teachers, staff and students on the attendance of disabled people, offering tools and strategies essentials to the educational intervention and to the good conviviality. With this background, it is realizing workshops and courses of: Mobility and orientation; construction of adapted tools; use of synthesized voice software; LIBRAS – sign Brazilian language; and Braille. Furthermore, creation of dancing group for wheelchair users, classes of singing, of caregiver practice, of basketball on wheelchairs, and more. This disabled sport and the cultural and artistic activities it is aiming to achieve the subjectivity of the disabled people, which is one of the goals for to get the total inclusion. We understand people needs to be encouraged to seeking qualification to increase their physical, cogitative and emotional potentialities. The initiatives are based on the breakdown of attitudinal, pedagogical and architectural barriers, through the establishment of a culture of valuing human life.

**Keywords:** Inclusion Education, Disabled people, Impairment people, Accessibility.

### **Introduction**

The Group for Accessibility and Inclusive Education, in Federal Institute of Education, Science and

Technology of Amazonas (IFAM), entitled CURUPIRA PROJECT aims to develop activities that promote the social inclusion of people with disabilities (DP), causing the breakdown of barriers , whether architectural, educational, communication and / or attitudinal.

The CURUPIRA project is led by professors and students of IFAM, six years ago, with the financial incentive of the Program “INCLUIR” by Ministry of Education and Culture in Brazil. Primary objective: promotion of accessibility and inclusive education with the academic community IFAM, through education and counseling of teachers and professionals, and encourage the development of educational tools and integrated solutions. The achievements include the inclusion of projects in undergraduate courses, guidelines that provide diversification and flexibility of the process of teaching and learning in the school curriculum.

CURUPIRA Project activities are guided by a mission to provide a condition of education for coexistence and equal, acting in pursuit of autonomy and equality in diversity. The project also promotes the training of DP courses offered through its own methodology and the use of assistive technologies that provide facilities for the education of students with special educational needs.

### **Method**

The Brazilian educational system has as a principle of education for all, knowing respect and live with differences. According Bartalotti (2006), the basis of the inclusive paradigm, therefore, is the belief in society for everyone, not just to accommodate people with disabilities to integrate into society, but it is also necessary that the society also becomes headquarters of all its citizens. To do this, it is expected that the level of understanding of what inclusive education goes beyond the teacher-student relationship. We must understand as a principle of education for all and valuing differences, involvement of the entire school community.

The training course offered by CURUPIRA project was conducted in classroom modules for the development of the components of the curriculum, each with the appropriate course work load.

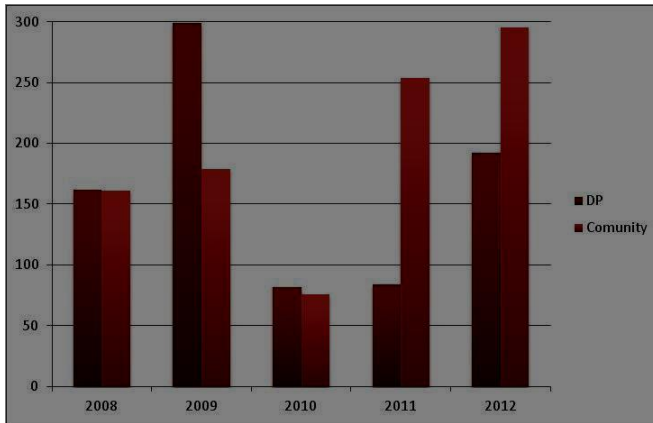
The methodology focuses on the discussion of the problems considered teaching as a human action that allows the establishment of relations of freedom of the course participants in order to discuss their own positions, be open to criticism and change, the pedagogical space effectively recognized as formation of citizenship and democracy space. Therefore, our action research methodology has a systematic nature in which training occurs with a dialogical action that allows the course participants be a mediator of the knowledge acquired by the modules.

The course is offered the use of technology to facilitate the teaching-learning process through the projections of films with the help of the media, the production of support materials made available by electronic and paper route, and practical resources laboratory.

Each module is taught by a professional with proven experience in inclusive education practices intended. For the development of the activities of the organization is the administrative body formed by a teacher-coordinator, two administrative and educator to develop the monitoring, supervision and support for teachers and activities for students and teachers.

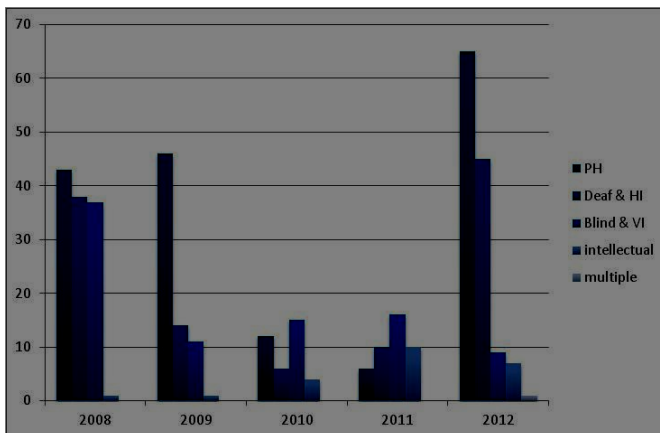
### **Results**

Over the past six years the CURUPIRA project reached a total of 819 DP entries and 965 members of the academic community with an excellent brand DP 299 recorded in 2009, which can be seen in Table I.



**Table I - Number of attendance by year**

IFAM is a federal institution of higher education that also works with the technical education integrated to the high school, therefore, the project is dedicated to offering technical, such as basic electronics, basic metrology, sales techniques courses, among others. This category of courses trained 397 DP, ie, achieved approval by successfully completing the courses. 172 of them are physically handicapped (PH), 113 hearing impaired (HI) and deaf, visually impaired 88 (VI) and blind, 23 intellectual disability (intellectual), and one with multiple disabilities. See Table II.



**Table II - Number of DP trained in technical courses**

Choosing appropriate to the individual needs of the course participants to promote knowledge and understanding to facilitate their learning, along with a qualitative assessment of student learning, methodologies are reflected in the success and define a systematic and strategic dynamics to promote educational and professional inclusion of DP. The validation of this process is demonstrated by the high adoption rate of PD in our technical courses, reaching in 2011 and 2012 at around 90%, as shown in Table III.

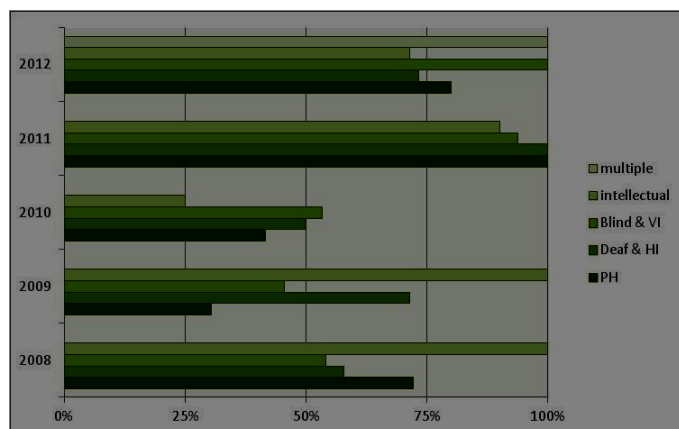


Table III - approval rate DP trained in technical courses

The outcome measure was established from the assumptions of inclusive education in recognizing that every child / adult has different learning abilities, but effective, and these same differences and diversity should be respected, whether age , gender, ethnicity or disability, including physical, hearing, visual, motor, intellectual.

### Conclusion

According Caiado (2003), it is understood that human learning occurs based on social relations, ownership of the activities designed by men, for the internalization of social meanings. Thus man knows the world symbolized by activity in social relations. So we went to the understanding on a smaller scale and we moved to a broader concept of social inclusion, a process which society is reorganized to create conditions for inclusion. Therefore, the inclusion is presented as a broader more comprehensive action, where people with disabilities, taking the social parameters as references, can take their social roles.

The Curupira project provided an opportunity to the IFAM community to exercise true tolerance for diversity. The activities offered by the project, from courses to awareness raising, allowed the coexistence and interaction between people with disabilities and the academic community. Currently Curupira project besides acting internally, has become a reference in the care and attention to handicapped person in Manaus. The training courses offered by the project have renewed hope for our students to acquire the status of employment.

The figures shown in our statistics could be sufficient, but we emphasize how much subjectivity is involved in our actions. It is significant to note the importance of coexistence, interaction, friendship, respect, solidarity, affection and integrity among our students.

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## **Urban accessibility and inclusion factor for students with disabilities or reduced mobility: a Case study of Campus Manaus-Center IFAM**

Elaine Maria Bessa Rebello Guerreiro

Instituto Federal de Educação, Ciência e Tecnologia do Amazonas – IFAM  
[em-guerreiro@uol.com.br](mailto:em-guerreiro@uol.com.br)

Ana Kalina Moura de Paula

Instituto Federal de Educação, Ciência e Tecnologia do Amazonas – IFAM  
[ana.kalina@ifam.edu.br](mailto:ana.kalina@ifam.edu.br)

Inalda Tereza Sales de Lima

[inaldalima@ifam.edu.br](mailto:inaldalima@ifam.edu.br)

José Ribamar de Abreu Cardoso

Instituto Federal de Educação, Ciência e Tecnologia do Amazonas – IFAM  
[ribacardoso@ifam.edu.br](mailto:ribacardoso@ifam.edu.br)

Liliane Brito de Melo

Instituto Federal de Educação, Ciência e Tecnologia do Amazonas – IFAM  
[lilianebrito@ifam.edu.br](mailto:lilianebrito@ifam.edu.br)

### **Abstract**

Topics such as social inclusion and accessibility have been discussed in several media and communication spaces and it has been stated that they are conditions to which everyone has a right. In this context, the rights of those excluded from the education system are part of the debate on school inclusion. The Federal Institute of Education, Science and Technology Amazon (IFAM), has an Assistive Technology Group, named Apoema, working with four aspects of accessibility, namely: educational, architectural, virtual and communicational. The Architectural Accessibility group conducts research with the goal of promoting improved accessibility to and mobility in the institutional spaces in order to promote academic success of students with special educational needs. Based on this premise, a quantitative exploratory research was conducted, with the aim of tracing the profile of students at the IFAM/Campus Manaus-Center, using the following search variables: mode of transport, the suburb/place of residence, and the existence of students with disabilities or reduced mobility. Participants were 531 students enrolled in secondary education, technical education, higher education and other modalities. We identified 12 students with disabilities or reduced mobility, most of them with visual impairment. In general, the main means of transport used by the students was the bus. These preliminary results will help to achieve the corporate goals of access to, and permanence of these students at the institution.

**Keywords:** Accessibility; Urban mobility; Transport, Disability people

## **Introduction**

Since the beginning of this century, the topics of social inclusion and accessibility have been debated in all the media outlets and communication spaces, and have been stated to be conditions to which everyone has a right, particularly disabled persons. According to Guerreiro (2011), one cannot have one without the other; that is to say, social inclusion also involves accessibility. The rights of minorities, who find themselves excluded from the education system, form part of the debate on education inclusion. This has materialized in the form of laws, decrees, resolutions, administrative rulings, and norms, among others.

However, there is a discrepancy between that which is in the body of legislation and norms and that which exists in reality. The construction of a society for all requires places that serve everyone, however, the process is not simple. The good news is that there have been an increasing number of academic studies about the question. Studies about the inclusion of disabled persons in teaching institutions have shown an emphasis on the questions of accessibility and physical barriers that may compromise the student's right to come and go.

The Brazilian government has launched affirmative action programs with the object of reducing inequality and promoting opportunities for all, including disabled persons. Decree No. 7.612 (BRASIL, 2011), instituted the National Plan of Disabled Persons' Rights (Plano Nacional dos Direitos da Pessoa com Deficiência – Plano Viver sem Limite), a plan to live without limitations – with the purpose of promoting the full and equal exercise of the rights of disabled persons, by means of the integration and articulation of policies, programs and actions.

In the area of the Ministry of Science, Technology and Innovation (Ministério da Ciência, Tecnologia e Inovação – MCTI), the Plan to Live without Limitations foresaw the creation of the National Reference Center in Assistive Technology (“Centro Nacional de Referência em Tecnologia Assistiva – CNRTA”. The strategy adopted by the MCTI for the promotion of research in Assistive Technology was the creation of a network of Assistive Technology Nuclei, coordinated by CNRTA. The Nuclei, mandatorily of a multidisciplinary nature, must include research groups that are interested in conducting research, development or innovation projects directed towards improving the quality of life of disabled persons.

The Federal Institute of Education, Science and Technology of Amazonas (Instituto Federal de Educação, Ciência e Tecnologia do Amazonas – IFAM) was contemplated for the implementation of the Assistive Technolog Nucleus. The headquarters of this nucleus is on the premises of the Manaus Center campus. The purpose of this nucleus is to encourage research for the development of products, physical and human resources, strategies, methodologies, practices and services, with a view to the autonomy, independence, quality of life and social inclusion of disabled persons. There are four groups in the nucleus: Pedagogical accessibility; Architectural accessibility; Virtual accessibility; Accessibility to communication and information.

The Architectural Accessibility group, which aims to provide safe, comfortable and independent transport for all persons, particularly those who are disabled, to the premises of the institution in question, began its actions with a survey of the transport modalities used by the students, and their profile. This article deals with the results of this activity, which serve as a diagnosis and proposal of interventions.

## **Method**

This research was conducted by means of applying an on-line questionnaire to the students of IFAM, inserted in the virtual environment of academic control of the institution. The goal was to identify the suburb where the student lives, his/her academic level, the main transport modalities (coming and going), the main points of embarkation and disembarkation for access to the institute. The research also

served to verify the existence of students with some type of disability. This information is relevant to enable us to meet the specific requirements of these students. The questionnaire was made available for two months (March/April, 2013). To enable the student to participate, the Term of Free and Informed Consent was made available in the questionnaire itself. Participation was on a voluntary basis.

## **Results and discussion**

According to the Institutional Statistics and Research Coordination, there were 594 students enrolled in secondary education, 1,213 in technical education, 583 in higher education and 1,322 at another level or learning modality, on the Manaus-Center campus in the first semester of 2013. Participants in the questionnaire were 134 (22.56%) secondary education students, 174 (14.34%) from technical education, 207 (35.51%) from higher education and 16 (2.21%) from other modalities (extension, post-graduation, subsequent studies, professional education for youngsters and adults, totaling 531 students. As regards the student population (3,712 students), the sample of 531 students represents 14.30% of the total population.

In accordance with Municipal Law No. 1404 (MANAUS, 2010), which provides for the creation and division of suburbs with their respective limits, the city of Manaus is divided into 63 suburbs. According to their geographical position, these suburbs are inserted in six zones, namely: Northern Zone; Southern Zone. Eastern Zone; Western Zone; Center-Southern Zone and; Mid-Western Zone. IFAM is located in the Southern Zone, in the suburb denominated Center.

In the item students' residence [*italics added*] it was verified that our students reside in 60 suburbs of the 63 classified; that is, our presence as an institution is represented by IFAM students in 95.24% of the suburbs. In the sample, the suburb with the largest number of students is Cidade Nova (Northern Zone), with 66 students, which represents 12% of the sample in question. The Northern Zone presented the highest number of students, with the

As regards the means of transport, 82.49% responded that they used the bus (438 students), with 70 (13.18%) coming by car, seven (1.32%) using motorcycles, two (0.38%) using bicycles; two (0.38%) indicated other means (bus route of the company where they worked, for example); and another 12 (2.26%) came on foot. For the return journey the result was similar, but there was an increase in the use of the bus (451 students), reduction in the use of the car (probably some were given a lift), with those who used motorcycles and bicycles remaining the same.

As regards the most frequent point of embarkation and disembarkation of the bus stop, car or other transport modality, in the vicinity of IFAM, the students indicated Avenida 7 de Setembro (42%), Rua Visconde de Porto Alegre (35.97%) and Rua Duque de Caxias (10.55%), as may be seen in Figure 4. These are streets that surround IFAM and have a flow of busses. Nevertheless, 61 (11.49%) responded another road, indicating that some students probably have to go IFAM on foot after getting off the bus, or walk to a bus stop to go home or to work.

With regard to whether or not there were students with some type of disability of difficulty with mobility. 12 students indicated special needs. Of these, four (33.33%) indicated that they had visual impairment, four (33.33%) had hearing impairment, one (8.33%) had physical disability, one (8.33%) had difficulty with mobility and two (16.67%) had other unspecified needs. This percentage represents 2.26% of the sample, however, there are other students with disabilities, who did not wish to participate in the research.

Of the students who indicated some type of disability or difficulty with mobility, six (06) were from technical education, five (05) from higher education and one (01) from secondary education (medium and technical). Another interesting item of information taken from the sample is with regard to the type of transport used by these students specifically for traveling to and from IFAM. On both to and from



journeys, 83.33% of these students make use of collective transport (Figure 6). This information is important to enable us to claim improvements in public transport, both from the quantitative and qualitative aspects.

### **Conclusions**

Considering the aim we proposed in this study, we concluded that we attained the goal established. The fact that we are represented (by means of students) in 95.24% of the suburbs and in 100% of the zones in the city of Manaus shows the physical and social reach of our institution. This demonstrates the importance of accessibility between the students' residence and the institution, without which it is not possible to realize inclusion. The existence of students with some type of disability or difficulty with mobility, leads us to reflect on the means and resources of accessibility of these students to have access to, and remain at the institution. It is vital to know the students and their needs, so that an institution may indeed be inclusive.

Transporting the student up to the place of learning is the first step toward presential educational inclusion. Therefore, in order to have educational and social inclusion, it is necessary for us to understand this phenomenon. In possession of this information, we start on the next stages that include seeking other means to efficiently and effectively identify the entire population of students with specific educational needs at the institution. This is a question of rights and citizenship.

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## **Teaching Work and Pedagogical Practices: label and diversity in special education**

Fátima Elisabeth Denari  
Universidade Federal de São Carlos – Brazil  
[fadenari@terra.com.br](mailto:fadenari@terra.com.br)

### **Abstract**

This study aims to investigate how is daily teaching practice of basic education teachers in public school with pupil with disabilities. The analysis of meaning units, resulting from the conversations and discussions between researcher and teachers, has shown there is an increasing concern about: the perception of initial training fragility, not technical preparation to work with the differences, and the political-educational model, implemented by the official agencies responsible for education.

**Key Words:** diversity, teaching, special education, deficiencies

### **Introduction**

As educators we are continuously confronted with the limitation of our methodologies and the concepts that we teach; with the intricate and at the same time fascinating human functioning; with the available categories to understand of our students. Clashes of this magnitude force us to ask: how to act in order to respect the differences in an institution whose structure reflects deeply homogenizing aspects? How to transform, competently, the school in order to meet the needs of the modern world? How to ensure that training programs (even in its most elementary levels) include pedagogical content / curricula focused on the study and understanding of the differences?

The answers to these and other issues that we tried to contemplate in our professional practice involve a political and pedagogical discussion which, invariably, the teacher – professional which we will talk about later - is excluded. The discussion and decision-making, as a rule, are restricted to government technical sectors and representatives of international organizations and business.

However, the challenge that presents itself more effectively refers to the need to provide knowledge that can trigger new attitudes by teachers, so they can responsibly and successfully play their role as a transforming education agent, as proposed by Nóvoa (1991, p. 109):

“Educate means developing the students” integration as agents in their appointed place in a social group, of which neither they nor their teachers have control. It means to assure at the same time the promotion of those students and, therefore, their educators, in actors of their own individual history and collective history in progress”.

Thus, the history of the teaching profession is not dissociated from the place that its members occupy in the relations of production and the role they play in maintaining social order. As soon as the school stands as a privileged instrument of social stratification, teachers also become invested with unlimited power: they can promote the rise (inclusion) of the different student or the stagnation (exclusion). In this tangle of interests sometimes they are perceived contradictory: they embody, concomitantly, the reproduction of dominant social order and represent the hopes of social mobility of certain sections of the population. In this ambiguity, there are cultural agents and also undeniably political agents. It is verified, therefore, the increasing importance of the political game, through the control of teachers, the

State ensures that the school functioning will be given as a factor of political and social integration. How, then, do the school and the State justify the students' exclusion from the observation of differences, not always reliable but almost always questionable? As written by Perrenoud (2000, p. 10) "...despite these evidences and the analyses gradually more precise of the manufacture of inequalities and the failure of the 60s, the dominant mode of schooling organization has not changed much: the students are grouped according to their age (which presumably indicates the level of development) and their knowledge from school in classes that are falsely believed to be homogeneous enough so each one has a chance to assimilate the same program during the same time".

It is evident therefore that all people with special needs, between these, the disabled, have the right to quality education, public and free, which should be appropriate to their needs and should be given in a way, the least restrictive possible, preferably in the common teaching classes, providing the resources and specific arrangements for cases that require so (Brazil / MEC / SEESP, 1994). With these agreements, the objective of this study is to investigate, among a group of elementary school teachers, how it has been going his daily teaching practice in inclusive classrooms (with pupils with special educational needs).

## **Methods**

In an attempt to learn such meanings, we have been covering tracks that lead us to subsequent (re) interpretations of the world and experiences that have been occurring in various formal meetings (study and texts discussion, in-service training) and informal discussions of research, which shows unique persons - the researcher and teachers of common teaching. Thus, as the researcher, it seemed that an important contribution could be given based on understandings suggested by Giorgi (1985), especially when it aims to capture a phenomenon while it occurs: in the case of this research, to uncover teachers' understandings on their training and teaching work, in diversity of the classroom.

The option for comprehensive description, despite the little tradition of its use in psychological and educational research, in our reality, occurred due to its fertility for the construction of new issues (Denari, 2008). With this agreement, the analysis and interpretation of data are settled in the methodological procedures proposed by Giorgi (1985): transcription and reading of the recorded facts (magnetically recorded tape and field diary); full reading, with the aim of discriminating meaning units (lower part of a thought or speech, whose meaning is always combined with other units), ordering the meaning units, fully maintaining the language expressed by the participants, transforming these expressions in scientific reports language of a consistent summary with the phenomenon researched.

This work, with qualitative matrix and based on the phenomenological understanding "and, therefore, operates with the category of intersubjectivity, focusing on situations of encounter"; (Bernardes, 1989, p. 58), is always marked by expressions of affection, interest, exchange of experiences, providing information and making positions. The teachers of common teaching (around 17), of a elementary school have students with disabilities (hearing, visual, mental and physical, in that order of prevalence) included in their rooms; their initial formation (pedagogy) occurred in the 80s (without any information about the categories of disability), and finally, all of them have over 15 years of professional performance. The weekly meetings with 90 minutes, in their own school, and have been taking place in an atmosphere of warmth and responsiveness, which is permeated, sometimes, by subtle suspicions, externalization of fear, discrimination and controversy.

## **Results**

First reports stress the equality of opportunity, a process in which the whole society, in terms of services, activities, information, documents, would be available to all citizens, representing a major contribution to the mobilization for well-being of all in the equalitarian society that we hope build. In this sense, equal rights means that the needs of each person have the same degree of importance.

Then, because of their peculiarities, each student should receive different cares, not constituting demerit or favoring the beginning of a marginalization process. Such cares are justified by the recognition that all people differ from each other, and can live in unison, from this differentiation. And this coexistence should not be interpreted as a concession from a particular group to another, but as a recognized right by society which everyone has, without discrimination.

Creating an educational environment which is positive for the learning process of all students, with or without special needs, seems to be other source of concern and challenge for teachers: concern with the development of unique experiences that place students in situations of great learning; and challenge considering the inclusion policy of pupils with special needs in the regular classroom based only on the legality requirement.

This leads to say that teachers have been found the fact of having students with special needs in their classrooms give them the chance to interact with their peers, which may represent a better preparation for life in society. Other students, when make contact with their classmates with special needs, realize the complexity and diversity of human characteristics, leading them to the understanding that sharing common issues and needs exceeds the (mis) understandings of the differences.

As a result, we begin to think about a school from the perspective of a man, who is critical, creative, independent, curious, investigative, speaks different languages in the world, which is addressed to enable the creation, expression of values and knowledge. Therefore, we must be clear that changes in concepts derive not only from personal attitudes, but also involve the construction of an educational project that celebrates freedom, society and educational institutions culture and distribution of responsibilities in the professional practice.

It is also necessary to think in a project whose characteristics not labels are reinforcing that, once assigned, exclude people from their environment, preventing them to a school, social and employment life. In search of possible meanings it is necessary to consider two basic conditions: the chronicity of the aspects that determines the special needs and the historical evolution of care to these needs, conditions which are not always familiar to the teachers' knowledge, which is "a plural knowledge, formed by the amalgamation, more or less coherent, of a knowledge derived from professional graduation, disciplines learn, curricula and experience" (Tardif, Lessard and Lahaie, 1991, p. 213).

Therefore, the teacher's knowledge, appointed by the participants, is a prerequisite for the emergence of another paradigm: the teachers' professionalism. It should be noted that the term professionalism has its use as an expression of a social-occupational position and insertion into social relationships of production and work process. Thus, the teacher as a professional should have characteristics such as competence, as the product of his graduation, vocation, independence and self-regulation (Enguita, 1991) that remains mainly as a personal and local process, under the dependency of momentary circumstances, available resources and also interest of those involved.

As a result, we can venture to consider the understanding that the professionalization of the teacher is the heart of educational reforms. So, to become differentiated instruction is

"Make every learner to experience, as often as possible, fruitful learning situations. To perform this simple idea it is necessary to change deeply the school. In addition, adapt the pedagogical action to the learner is neither, resign to instruct, nor give up essential goals. To differentiate is, therefore, fight for the mitigation of school inequalities and, simultaneously, for the rise of education level" (Perrenoud, 2000, p.9).

With this look, we understand that each person expresses a tendency to be perfect, to be educated, under such conditions that constitute normative principles of moral and which are necessary for the exercise of his dignity. Deprive a person of education, may mean to act contrarily to human nature, also robbing his most legitimate rights. It is through education that man can perfect himself and transcend, to increase his knowledge of the world, to become responsible and to gain independence and self-sufficiency.

Students with special needs shall be oriented to optimize all their possibilities, in this way, their

education should provide a continuum of development: personal, social, cultural, cognitive, not a single process but as a process of self-construction over their life. Considering the student in his entirety, regardless of his physical or intellectual conditions, it is assigned to each person the opportunity to develop according to his attitudes and skills aimed at his integration into society. As part of the education system, his existence is closely linked to values and virtues, such conditions that make education an enriched form to improve the life quality.

This understanding leads us to reflect a new identity in teacher graduation that includes initial training, which makes the continuous training a vector of professionalization, rather than a simple contribution and teaching techniques, which introduces specific devices of creativity, responsibility, trust and constructive evaluation.

Maybe then, it will lead to an understanding that we cannot solve the inequalities and differences problem without before accelerating professionalization and increasing the teachers' professional skills. But even with this understanding, there is no guarantee we can get to obtain the desired consequences. However, one must note that pedagogical and didactic skills would allow teachers to cooperate on a common basis, rational, that would solve problems together. This would be the first step towards a change, quality one, both for Education and for Special Education.

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## **Applied analysis of behavior and family empowerment: a case study**

Iasmin Zanchi Boueri  
Federal University of São Carlos (UFSCar)  
[boueri.iasmin@gmail.com](mailto:boueri.iasmin@gmail.com)

Andreia Schmidt  
São Paulo University (USP-Ribeirão Preto)

Dhayana Inthamoussu Veiga  
Federal University of São Carlos (UFSCar)

### **Abstract**

Empowering parents of children with disabilities during interventions has proven to increase learning. Literature shows beneficial effects of family members' involvement in their children's learning process (they present teaching opportunities when needed). The present study aimed to assess the repertoire of a 3-year-old boy with developmental disabilities and to elaborate and implement a teaching program for poorly installed or absent skills. The program was implemented at home with the child's parents. Brazilian standardized instruments were used to assess the child's repertoire. Reviewed Psycho-educational Profile (PEP-R) indicated delays in all assessed areas: imitation, perception, fine and gross motor skills, sensory integration, cognition, verbal behavior, and general development. Target skills were selected by the parents: eye contact, verbal behavior and social behavior. Each skill required specific teaching procedures. The researcher served as a model to parents during sessions demonstrating how procedures could be applied at home environment. Results demonstrated learning of all skills trained. Eye contact (initially absent) increased throughout the sessions; Verbal prompts were initially used and gradually removed until independent eye contact was presented during play activities. Environmental arrangements were planned to increase verbalizations to obtain preferred items and to access activities. Verbalizations increased in frequency and complexity (like reporting events from school to family members). Higher levels of demand for social behaviors of the child facilitated learning of greeting peers and initiating play activities. Applied Behavior Analysis seems to increase the empowerment of parents of children with developmental disabilities, providing technology of learning to be used in their children's everyday environment. Hence, parents' empowerment seems to extend the possibilities of learning and its maintenance.

**Key-words:** Applied behavior analysis, family empowerment, developmental disabilities, children.

### **Introduction**

The concept of empowerment has become more relevant in a current tendency to strengthen the positive aspects of family, and it has gained special importance in family support services (Nachshen, 2004). Anarudha (2004) integrates the conceptual structure of empowerment and the strength perspective in the work with families of people with disabilities, suggesting that every person is resilient, and the empowerment is a part of their strengthening process.

In Turnbull e Turnbull's (2001) model of empowerment, instructors must understand the role of the

family and the context in which they work; they must capacitate families as working partners; and also search for new collaborators. Empowerment involves family and professional resources together, both related to motivation, knowledge and skills; and resources from the education context, which provides opportunities to reliable partnerships and alliances, all based on collaboration. The empowerment process is useful to every family, because it occurs in different ways and contexts, provided that all parts fulfill their role in the process.

The empowerment process can be understood as an improvement of the instructional resources which directly affects learning efficiency. In Behavior Analysis (Skinner, 1953), behavior is comprehended as a relation between the activity of an individual and his/her environment. The crucial role that environment plays over learning is the base upon technology is developed for treating socially relevant behavior. A scientific description of behavior requires an analysis of the environmental variables to which the behavior is a function. To produce learning of any operant behavior (behavior that changes according to its consequences) that can be naturally sustained and generalized requires the arrangement of contingencies of reinforcement that are preferably in accordance to the individual's natural environment (Matos, 1993; Skinner, 1968). The empowerment process of families of people with disabilities seems to successfully fulfill this educational requirement.

Teaching contingencies must be arranged several times until behavior is learned, strengthened and generalized, either to children with typical development or to those with greater behavioral deficits (Skinner, 1968). The difference is that to those with greater difficulties teaching must be structured in more gradual and fragmented steps, like in shaping and stimulus fading (Matos, 1993). For those individuals, many behaviors would not be learned with natural contingencies; the arrangement of teaching contingencies is necessary and adequate conditions can be created instead of relying only on occasional events (Bernardes, 2004; Skinner, 1968).

An efficient teaching programming requires a complete initial assessment of the individual's repertoire with which the program is elaborated. The educational objectives are described in terms of the student/client's behavior. Target behaviors must be immediately reinforced (to produce a consequence that increases behavior) and opportunities for the occurrence of the behavior during sessions must be arranged. The construction of the individual teaching program has to take into consideration all aspects observed in the evaluation, as well as to select suited strategies keeping the teaching process flexible and dynamic (Matos, 1993). All these elements constitute the fundamental aspects of the Applied Behavior Analysis, which "is the science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior and experimentation is used to identify the variables responsible for behavior change" (Cooper, Heron, & Heward, 2007, p. 20).

### Objective

The present study aimed to assess the repertoire of a 3-year-old boy with developmental disabilities and to elaborate and implement a teaching program for poorly installed or absent skills based on Applied Behavior Analysis and Family Empowerment.

### Method

Participants: one 3-year-old boy with general developmental delay, diagnosed with autism spectrum disorder; and two adults, man and woman, parents of the child.

Setting: All procedures were conducted at the family home facility.

Instruments: Reviewed Psycho-educational Profile (PEP-R), which evaluates areas of imitation, perception, fine and gross motor skills, sensory integration, cognition, verbal behavior, and general

development.

Intervention/Teaching Program: - EYE CONTACT 1) Procedures with child: procedure initiated with objects of the child's interest (toys, noisy boxes, colored clay) to attract his attention. As soon as he looked at the object at the instructor's visual level, the object was instantaneously withdrawn and, at the same time, the following instruction was presented: "Child's name, look at me". When eye contact was established with the instructor, the object was delivered. In further trials/sessions only the instruction was presented; then, the child's name was presented as prompt for eye contact during playing activities. Initially, every eye contact produced object delivery; gradually, the delivery became intermittent. 2) Procedures with family members and teachers: family members and teacher were instructed to require eye contact every time they talked to the child, requested anything from him or delivered objects to him. If the child did not respond spontaneously to them, they instructed: "Child's name, look at me". Only after eye contact (even with very short duration) the ongoing activity was continued.

- SOCIAL BEHAVIOR: greeting people when arriving and leaving. 1) Procedures with child: When arriving at the participants' home, the instructor greeted the child and shaped his response to hug. This procedure was always finished with eye contact and the deliverance of a red box which contained all preferred items to be used in the session. When instructor was leaving, "goodbye" procedure was implemented in several steps: "distant goodbye", "distant goodbye with eye contact", "goodbye with hug and eye contact", "goodbye with hug, eye contact and kiss on the cheek". 2) Procedures with family members and teachers: family members and teacher were instructed to approach the child, when they saw him for the first time in that day, and to say "good morning" or "good afternoon", establishing eye contact. It was also instructed that family members and teachers informed the child when some acquaintance was approaching him and he was encouraged to greet the person.

- LANGUAGE: saying phrases. 1) Procedures with child: asking the name of known objects, colors, letters and numbers, pictures of animals and objects. Present unknown objects and their names. Asking about activities (what does the child like or not; what does he want to do; which activity does he pick). Response criterion was gradually increased from letters to syllables, words, nouns or verbs, until simple phrases were requested. Complexity of instructions presented and response requested was gradually increased and time to respond was carefully arranged; 2) Procedures with family members and teachers: the child initially pointed or pulled the adult to indicate what he wanted. Since, it was observed a repertoire of words in the initial evaluation, family members and teachers were instructed to request verbalizations. If he only pointed to objects of people they asked "What do you want?", "Do you want this?", "What is this?". Family members and teacher then presented opportunities for the occurrence of verbalizations. If the child demonstrated lack of vocabulary, instructors should provide imitative prompts, such as "Do you want to turn on the TV? Say 'TV'".

## **Results**

The initial evaluation showed delayed in all assessed areas: imitation, perception, fine and gross motor skills, sensory integration, cognition, verbal behavior, and general development. The intervention/teaching program was elaborated based on the initial assessment and the parent's preferences. Target behaviors were: eye contact, verbal and social behaviors. The instructor during the sessions served as model to family members so that the procedures could be replicated in the absence of the primary instructor.

Six sessions were conducted at the family home (one session per week). General results show an increase of all target behaviors after six weeks of intervention (six structured sessions and the



collaboration of family and teachers). Each of the structured interventions will be separately described for didactical purposes as follows.

**EYE CONTACT:** The child did not present eye contact during initial assessment. During intervention, the child started to establish eye contact with the presentation of visual stimuli (toys) and vocal prompt (“look at me”) and then with vocal prompt. He started to present eye contact spontaneously during activities.

**SOCIAL BEHAVIOR:** greeting when arriving and leaving. The child did not greet the instructor when she arrived and started to cry when she left the intervention setting. No eye contact was established. With intervention, the child started to walk in the direction of the instructor and to establish eye contact spontaneous and independently, and to say “hello” when arriving and “goodbye” when leaving with vocal prompts.

**LANGUAGE:** saying phrases. Before intervention, the child already recognized and said letters, syllables, pointed to what he wanted, or pulled the adult to indicate items or activities. Along the sessions, the instructor increased the complexity of the requested behaviors: from words to phrases and from simple to more complex phrases. The number of vocal interactions and their complexity increased each session. Although he presents some pronunciation errors, his vocalizations are comprehensible.

## **Discussion**

The Applied Behavior Analysis has demonstrated positive results of parents’ empowerment in the use of teaching procedures. Family members have facilitated intervention assisting in the maintenance of previous behavioral learning and promoting new learning opportunities for people with disabilities.

The participant of the present study showed improvement in his repertoire with the implementation of a functional and individualized intervention/teaching program. Target behaviors (eye contact, social and verbal behavior) were learned along six sessions, which were conducted once a week during six consecutive weeks. The child was exposed to much less sessions than the number of sessions recommended in the Applied Behavior Analysis’ literature (three times daily). Nevertheless, relevant changes in the child’s repertoire were observed. This data can be attributed not only to specific contingencies that were arranged and applied in structured sessions but also to the collaboration of family members and teachers. This represents one of the main advantages of empowering family members and teachers in the behavioral intervention with people with disabilities, especially when the instructor cannot carry out an increased number of sessions every week.

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## **Effective practices for teaching children from diverse ethnic & language backgrounds**

Jannis V. Floyd

Mansfield University, Mansfield, PA, USA

[jfloyd@mansfield.edu](mailto:jfloyd@mansfield.edu)

Jesus R. Lucero

Mansfield University, Mansfield, PA, USA

[jlucero@mansfield.edu](mailto:jlucero@mansfield.edu)

### **Abstract**

In 2014, it is somewhat hard to believe that we still have to discuss the importance of including multicultural education and diversity education into the general classroom curriculum. But when you teach in an area that is primarily all white, to pre-service students who themselves have had little interaction with students and individuals of color, you see why we must continue to incorporate this information into their teacher preparation program.

**Keywords:** Instructional practices, diverse ethnic and languages

### **Introduction**

Mansfield University is located in North Central Pennsylvania and is considered very rural. The county in which Mansfield is situated, has a population of about 30,000 and is primarily made up of farm land and national forests. Of those 30,000 less than one percent of the population represents individuals of color. Most of our students come from this region and also the southern tier of New York. At Mansfield University we have made a commitment to teaching our students the benefit and value of teaching their future students a multicultural education and understanding that diversity goes beyond race.

### **Method**

Mansfield University Education and Special Education Department has adopted a conceptual framework that focuses on the teacher as a reflective decision-maker. In our handbook (<http://www2.mansfield.edu/edspeced/upload/2012-Handbook.pdf>) we indicate that as reflective decision-makers, graduates of our program will be able to provide effective instruction to their students and use their skills in assessment, reflection, and self- evaluation to make positive changes in their own teaching and curricula. To become reflective decision-makers, students must develop and engage thinking skills and positive dispositions, the two central elements that form the core of the conceptual framework (page 9).

These elements also serve to strengthen four essential functions in teaching, as presented by Charlotte Danielson (2007). The materials used to create this framework are developmentally appropriate teaching and learning, diversity, and technology.

Danielson also has common themes that run through the different domains. They are equity, cultural competence, high expectations, development appropriateness, attention to individual students including those with special needs, appropriate use of technology, and student assumption of responsibility

(Danielson 2007).

### Diversity is more than race and ethnicity

As a program we have endeavored to incorporate diversity within our courses. With this in mind we introduce our students to various aspects of diversity. Using James Banks' (2001) model of "microcultural" groups and individuals to describe the diversity within each individual (p. 72). Banks describes how each individual is influenced by microcultural groups such as gender, social class, race, ethnicity, disabled or nondisabled, religion, and region. As he states, "Individuals are not just African American or White, male or female, or middle or working class...individual belong to these groups at the same time. Each variable influences the behavior of individuals" (p.76).

These components are also fluid, depending on one's environment, opportunities and experiences. For example, one of this paper's authors—a person of color—moved from a region where there was a large population which supported his language, food, and music to a region where there was little cultural comfort. This made the areas of race, ethnicity and region from the Banks model more important than when he lived in a community where these issues may have been taken for granted.

We have modified the Banks model to meet the needs in our region. Because of the different dynamics in our region, we included family structure and one's physical/bodily awareness as having important influence on the individual's view of themselves. Based on an education and special education department teacher survey, family structure was the second most obvious difference teachers see in their classroom and physical/bodily awareness ranked above ethnicity and race. Within our course instruction we emphasize the importance of each component as an independent variable and how each variable can work in concert with other variables (Carico, Minetola, Lucero and Gee, 2007).

James Banks (1991) developed a process of curriculum reform that progresses from the "Mainstream Centric Model (Model A) to the "Ethnic Additive Model" (Model B) continuing to the "Multiethnic Model" (Model C) and concluding with the "Ethno-National Model" (Model D) (p. 17). Our goal is to have our students develop curriculum and lesson plans that address Banks' "Model C" which takes into consideration the contributions of different groups focusing on a social or historical event. We also ask our students to look beyond historical concepts and to also include academic content and the contributions of diverse populations to the event or concept being studied.

### Approaches to development of inclusive lessons

We first look at how the elements of diversity, described above, impact the classroom. Then the students develop lesson plans which include these diversity elements. Students are encourage to look at the content and then include contributors from the various diversity elements which are appropriate to that subject or content area being developed.

Recognizing that you "can't teach what you don't know" which is a paraphrase from Gary Howard's book, *We Can't Teach What We Don't Know: White Teachers, Multiracial Schools* (1999), we must provide our students with content knowledge and skills necessary for them to include the contributions of diverse contributors within the focus of the lesson. This will allow the pre-service teacher to demonstrate the multiple diversity perspectives related to the theme, concept and/or event that they are planning to introduce. We have created several assignments that allow them to research and develop information on various diversity categories.

1. Diversity Timeline: Students are required to create a diversity timeline. They must identify at least three diversity groups and research contributions, in multiple areas (ex. military, medicine, education, government, etc.) in the development of the "American culture".
2. Self-Awareness Paper: Students are encouraged to write a self-awareness paper based on the

diversity elements- gender, race, language, socio-economic status, religion, etc. Students must reflect on these elements and also respond to how their identity could impact the relationship with their students.

3. Lesson Plans: Students are to choose a curricular area of interest and demonstrate how they will include various diversity elements within their lesson plans. They are encouraged to research the content thoroughly, to identify possible contributors from the diverse elements.

4. Lecture(s): To address the concern that our students typically only include diversity content related to holidays, food, language and dress we share with them during lecture several cautions of a tourist approach curriculum (Darmen-Sparks 1989). Darmen-Sparks cautions the reader of the tourist approach of curriculum. She identifies five areas that should be recognized – Trivializing, Tokenism, Disconnecting Cultural Diversity from Daily Classroom Life, Stereotyping and Misrepresenting American Ethnic Groups ( URL: [www.neiu.edu/~circill/F131D.pdf](http://www.neiu.edu/~circill/F131D.pdf)). Within our lectures we provide examples of each area and ask students to go beyond the “lip service” given to diversity but to look deeper at the contributions of those who may have and have had an impact on the content being taught.

### **Results and Discussion**

Our students are required to complete a portfolio at the end of their pre-service training. They must include information about diversity experiences as well as instructional plans that include diversity. Many of our student teachers are going beyond a “tourist” approach and developing rich interesting curriculum within their content areas. Our goal is that our students will have a better understanding of themselves and others so that their future students from diverse backgrounds can see themselves as contributors to our American culture and for others to see them as contributors.

### **Conclusion**

Faculty in the Education and Special Education Department envision our students will be able to develop knowledge and skills to include multicultural issues into their curriculums in a way that is inclusive for all individuals in the classroom. Our pre-service students will understand how to incorporate the makeup of the classroom (gender, social class, race, disability, religion, region, etc.) in creating culturally sensitive lesson plans. The diversity of the classroom can be seen as a catalyst to ensuring that all individuals will be recognized for their contributions in and to the content of the instruction.

Some of our pre-service students find it difficult to break away from the “tourist” approach. This may be that they may not have had experiences with diverse populations and do not have a strong understanding of the contributions of many of these groups, understanding this we continue to encourage them to research their subject areas and search out the contributions of those from diverse populations to enrich their lesson plans and curriculum.

### **Acknowledgements**

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## **Needing to communicate: In search of best practices in education student with disabilities**

Leila Regina d'Oliveira de Paula Nunes  
Universidade do Estado do Rio de Janeiro  
[leilareginanunes@terra.com.br](mailto:leilareginanunes@terra.com.br)

Patricia Lorena Quiterio  
Universidade do Estado do Rio de Janeiro

Catia Crivelenti de Figueiredo Walter  
Universidade do Estado do Rio de Janeiro

### **Abstract**

Nowadays, in the Brazilian elementary regular classrooms there is an increasingly stronger presence of students with physical and oral communication impairments. The literature has emphasized that both creative use of assistive technology / AAC resources and teacher preparation programs are viewed as benchmarks of teacher effectiveness in inclusive education. As university teachers at Universidade do Estado do Rio de Janeiro - Brazil, we have had the responsibility to provide both pre service and in-service teacher's preparation to work with normally developing students as well as those with disabilities. The purpose of this paper is to present a contribution of our research group on AAC to elementary school teacher training that is provided in higher education settings. More specifically, we published a book with 16 chapters about suitable teaching procedures and material resources, based in our previous research projects on pedagogical practices and AAC, which provided initial and continuing teacher education courses.

**Keywords:** teacher training, students with disabilities, AAC resources

### **Introduction**

The debate over the paradigm of educational inclusion of people with disabilities has been present in parents, professionals and researchers' agenda in the last two decades. Too often the discourse about inclusion expresses dogmatic and uncritical thoughts, disregarding what scientific research is revealing about this process is at the heart of schools. If we conceive the school as the locus par excellence for the pupils' assimilation of cultural elements and processes and not just as a socializing environment, significant changes in the school system ought to occur (Downing & Peckham-Hardin,2007). These days, in the Brazilian elementary regular classrooms there is an increasingly presence of students with both physical and oral communication impairments (Pelosi & Nunes, 2010). The literature has emphasized that both creative use of assistive technology / AAC resources and teacher preparation programs are viewed as benchmarks of teacher effectiveness in inclusive education.

As university teachers at Universidade do Estado do Rio de Janeiro we have being responsible to provide both pre service and in-service teachers preparation to work with normally developing students as well as with those with physical and oral communication impairments (Nunes, Schirmer & Walter,

2013). The purpose of this paper is to present a contribution of our research group on AAC to elementary school teacher training that is provided in higher education settings. More specifically, we published a book about suitable teaching procedures and material resources, based in our previous research projects on pedagogical practices and AAC, to provide initial and continuing teacher education courses (Nunes, Quiterio, Walter, Schirmer & Braun, 2011).

The content of the 16 chapters are summarized as follows; In the Chapter 1 Initial training of teachers - from research to practice both planning and implementation of a preservice teachers preparation course to work with Assistive Technology and AAC are described. The second chapter, In-service training of teachers for the use of AAC and assistive technology in the classroom, provides a description and an analyze of an interdisciplinary support team procedures to help a special school teacher to introduce AAC resources in her classroom composed by non-vocal students. The text on Assistive Technology presents in detail the features and the services offered to people with physical, sensory, cognitive, and communication impairments. In the chapter entitled Giving voice to non-vocal students through AAC and providing social opportunities through social skills training the author demonstrates how to assess social skills in speechless students. In The partner's role in the process of interacting and communicating with non-vocal children; a case study presentation highlights the importance of teachers and family members' social abilities to be effective partners of people who need AAC.

The text entitled The importance of mediation in the context of inclusive school discusses the mediation process that took place in a regular classroom containing non-vocal pupils. Strategies employed to highlight and discuss the importance of AAC resources to non-vocal students' classmates in regular classrooms were the focus of the chapter Introduction to alternative communication education in regular classes. The chapter entitled The challenge of diversity in the classroom: accommodation / adaptation practices and the use of low-tech resources represents the outcome of lived experiences to teach pupils with intellectual disabilities in regular classroom settings.

The objective of the study reported in the chapter Using low-tech materials to promote communication in activities in the classroom was to analyze the effects of AAC in the non-vocal students interaction with peers and teachers in a special school classroom. In Multifunctional resource rooms chapter the author outlines the resource room teacher attributions in a regular school. Adapted book: a multifunctional resource text reports the experience of devising adapted books suitable for students without articulated speech. The description of a program delineated to teach non-vocal children with autism to use AAC resources is presented at the chapter entitled Adapted PECS (Picture Exchange Communication System) in regular education: an alternative communication option for students with autism. In Educating students with Asperger Syndrome: classroom tips, the author indicates evidence-based strategies to intervene with this population in the school context. Still on the same theme, the author of Conversation with the teacher of students who have autism and Asperger syndrome chapter provides suggestions of strategies, materials, resources, and activities tailored for this special population. Finally " Very silly classroom " - the process of inclusion of a student with cerebral palsy in a regular classroom is the chapter where the author presents an interesting experience that highlights the teacher's role as a mediator of educational interactions considered critical to the professional practices focused on interpersonal relationships.

Even though the target population of this book is the elementary school teacher, other professionals as occupational therapists, speech pathologists, psychologists, as well as school administrators and families might benefit from the research-based knowledge presented in it. The ultimate purpose of this book is to enhance non-vocal people life quality, by presenting AAC as the window to let their dreams run free!



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## **Interaction between students with and without deafness: Best practices**

Liliane Brito de Melo  
University of Minho, CIEd  
[lilianebritodemelo@gmail.com](mailto:lilianebritodemelo@gmail.com)

Maria João Gomes  
University of Minho, CIEd  
[mjgomes@ie.uminho.pt](mailto:mjgomes@ie.uminho.pt)

Anabela Cruz-Santos  
University of Minho, CIEd  
[acs@ie.uminho.pt](mailto:acs@ie.uminho.pt)

### **Abstract**

Students with deafness belong to a bilingual community that defines their cultural and linguistic identity and has influence on their understanding about the world. Brazilian studies (Bisol et al., 2010; Cruz & Dias, 2009; Manente et al., 2007; Massini & Bazon, 2005) have shown that social interaction with peers at school is indeed at utmost challenge to the deaf students. So, one challenge at inclusive settings consists in planning and using strategies to overcome these obstacles at school. Teachers need to use more evidence-based practices with these students to increase social skills, such as (Lacerda, 2006): a) establishing a culture of collaboration between deaf students and typically developing peers; b) adequate role of sign language interpreter in class and other school contexts, whose actions have a direct impact on the understanding and interpretation of written and spoken language; c) adopt collaborative tools such as forum and wiki in virtual learning environments. These are some examples that can be applied and can help overcoming the challenge of sociability of deaf students in school. A relationship between peers in school enables diversity experiences and respect for others as participant citizens in a networked society. This paper will present a Literature Systematic Mapping in practice considering inclusive education for deaf students in Brazil supported on educational uses of technology.

**Keywords:** deafness, technologies, virtual learning environment

### **Introduction**

The convergence of knowledge is an important factor in the learning process at school and when it comes to school inclusion is essential for practices seeking to improve teaching, learning and interaction in school. Educational technologies can contribute effectively in the process of developing inclusive school practices for people with special educational needs, in a society that is more and more digital. An education technology approach involves the analysis of the interactions of the constituent elements of facilitating learning through technological resources (AECT, 1975).

The challenges presented to those people with special educational needs many times involves communication problems which impact in their school life, and are an important factor that influence the success of these students in the school environment.

Blanco, Silva and Oliveira (1999) emphasize the importance of the dynamics of individual and social aspirations of the actors in the educational action. Moreover, participation of new actors such as sign language interpreters, as well as understanding and interpretation of written language has a direct influence on the process of teaching and learning and school life. In Brazil, about 9.7 million people report having hearing impairment (5.1% of the population), of these, approximately 344,000 are deaf. These are important numbers that asks for all the educational approaches we can think about, and educational technologies can be an important part of the strategies or helping schools and education in general for being more inclusive.

Deaf people are taken as a bilingual community, since they are using the language of signs recognized in many countries as its official language. This linguistic differentiation defined as people who communicate and interact with visual effectiveness, and cultural and linguistic identity is reflected in a different way of understanding the world around them. In schools, this nuanced understanding is shown in questions submitted to the teacher, tendencies to study with groups of classmates also deaf, and some difficulties to interact with normal hearing colleagues and teachers.

We have to improve these social relationships in school life, as these have a strong influence on the reduction of barriers to coexistence between deaf and hearing people, allowing an experience in diversity and to respect others as participant citizens in a networked society.

Studies in Brazil shows that school life is the greatest challenge of the deaf people, some of them say that it is the transition between the world of the people with and without deafness (Bisol, Valentini, Simioni & Zanchin, 2010; Cruz & Dias, 2009; Manente, Rodrigues & Palamin, 2007; Massini & Bazon, 2005). So, one challenge at inclusive educational settings consists in planning and using strategies to overcome these obstacles at school and help to promote not only school content learning but also promotion the relationships between deaf and normal hearing students.

In order to promote the educational uses of technology, particularly information and communication technologies it is important to develop studies about how the use technology to promote teaching and learning practices in inclusive schools and classes. It is also very important to disseminate these studies and practices to teachers and educators in general.

## **Method**

To achieve knowledge about the inclusive education practices for students with deafness, a Literature Systematic Mapping (LSM) was carried out, in order to get an overview of an investigation area to determine the evidence of research on a specific topic.

The research question of "LSM", usually applied to observe the methods used in the studies and the evidence from studies in the sub-themes. The result of the "LSM" helps to identify works for future Systematic Literature Review (SLR), or areas where there is a shortage of primary studies (EBSE, 2007; Kitchenham, 2010).

The mapping process identifies the amount and type of research and results available within it, in order to organize them in sufficient detail to answer the questions of the broader exploratory research. These categories are generally based on the information such as author names, publication type and date of publication and work methods used to carry out the research, obtained in literature selected on the basis of several criteria defined by the researcher (EBSE, 2007; Budgen, Burn, Brereton, Kitchenham & Pretorius, 2010).

Our initial question was, "What research has been carried out between 2009 and 2013 on the subject of the use of educational technologies to improve learning for deaf students and their interaction with students without deafness?"

Through this initial question the association of keywords used for searching was Deafness + Interaction + "Educational Technology" with a view to a comprehensive coverage of data collection.

The search focused on the period between 2009 and 2013, and focus on scientific papers and research thesis supported on studies carried out in Brazil. The mechanism for searching chosen was the Google Scholar.

## Results

The search process on Google Scholar retrieved 332 scientific documents to analyze. Although selected by the online search engine, some work was excluded after reading and analyzing summaries that did not directly address to the research question. Furthermore, papers that reported to other disabilities, or hearing and deaf problems that report to elderly or clinical practices were considered out of the scope of the LSM.

This selection process results in 8 articles published in conferences papers, seminars and scientific publications, including 5 thesis. The figure 1 shows the distribution by years and highlights the number of papers published in 2012.

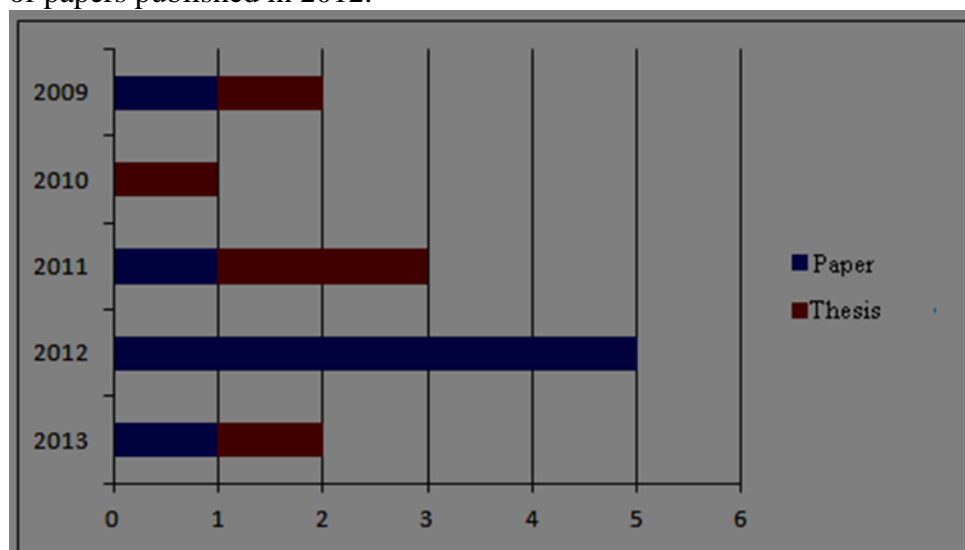


Figure 1 – Number of scientific studies between 2009 and 2013.

In table I are listed all the documents that we considered relevant to our study. After the LSM (literature systematic mapping), the next phase of our work will be the SRL (systematic review of literature) in order to identify and report the content of these studies, in order to contribute to disseminate the identified studies and evidence the need of educational technology studies aiming to promote inclusion of deaf people.

Table 1 – Studies that focus on the use of educational technologies by deaf people in Brazil.

Authors	Original Title	Translated Title	Type	Affiliation	Year
Boscarioli, C. Salles, C.G. Baqueta, J.J. Colling, J.P.	Avaliação e design de interação de jogos voltados ao aprendizado de crianças surdas.	Evaluation and design of interaction games for deaf children's learning.	Paper	State University of Oeste Paraná	2012
Moreira, L.R. Sant'Anna, N.F.	As redes sociais e o desenvolvimento da comunicação dos estudantes surdos incluídos na escola pública.	Social networking and the development of communication of deaf students included in public school.	Paper	State University of Oeste Paraná	2012
Souza, C.H. Baqueta, J.J. Boscarioli, C.	Uma discussão sobre o papel das tecnologias no ensino aprendizagem de alunos surdos.	A discussion of the role of technology in teaching and learning of deaf students.	Paper	State University of Oeste Paraná	2011
Souza, C.S.	Blogging <a href="http://www.englishnowhere.blogspot.com">http://www.englishnowhere.blogspot.com</a> : ensinando inglês (sem distância) para surdos.	Blogging <a href="http://www.englishnowhere.blogspot.com">http://www.englishnowhere.blogspot.com</a> : teaching English (no distance) for the deaf.	Master thesis	Federal University of Uberlândia	2009

Medeiros L. P. Elia M. Santos, M.P. Silva, L.C.	Estratégias para auxiliar o processo de aprendizagem da leitura e escrita de alunos surdos. As contribuições do curso lettras-libras, modalidade a distância, para a formação do sujeito surdo.	Strategies to help the learning process of reading and writing of deaf students. The contributions of the course of "Letras-Libras", e-learning, at education of deaf people	Paper Master thesis	Federal University of Rio de Janeiro State University of Paraíba	2013 2013
Santarosa, L.M.C. Conforto, D. Basso, L.O. Nogueira, J.L.F	Eduquito: ferramentas de autoria e de colaboração acessíveis na perspectiva da web 2.0. O software hagáquê na educação da pessoa com surdez: o discurso dos sujeitos.	Eduquito: authoring and collaboration tools accessible from the perspective of Web 2.0. The software hagáquê in the education of deaf people: the discourse of the subject.	Paper Paper	Federal University of Rio Grande do Sul -	2012 2012
Saito, D.S Ribas Ulbricht, V. Monteiro, J.H.S.	Learning Managent Systems and Face-to-Face Teaching in Bilingual Modality Libras/Portuguese). O ensino de biologia e química para alunos surdos no ensino médio da rede pública da cidade de Fortaleza: estudo de caso	- The teaching of biology and chemistry for deaf students in public high school in Fortaleza: case study	Paper Masters thesis	Federal Institute of Santa Catarina Federal University of Ceará	2012 2011
Favoreto da Silva, R.A. Silva, R.C.J.	Educação a distância e estudos surdos: Experiências de acadêmicos surdos com as tecnologias. A formação de professores de alunos surdos: concepções, dificuldades e perspectivas.	Distance education and deaf studies: Experiences of deaf students with technologies. Training for teachers of deaf students: concepts, problems and prospects.	Masters thesis Masters thesis	Federal University of Paraná Federal University of Brasília	2011 2010
Amorim, J.A. Silva, M.R.C.	Produção de multimídia e acessibilidade em cursos de aprendizagem a distância.	Multimedia production and accessibility of distance learning courses	Paper	State University of Campinas	2009

## Conclusion

In general, the selected papers report studies that use technology to improve the learning process of deaf students, included in high school classes. Techniques and technologies used include the use or design of educational software for deaf people; adaptations of virtual learning environments for incorporating sign language, using web 2.0 services as blogs and social networks, which is used to enhance the communicability of people with hearing impairment, and usability analysis of technology resources.

Also noteworthy is the large number of master's thesis on the subject, most of them reporting discussions that demonstrate concern for the future of inclusive school and the search for solutions that reduce attitudinal barriers still existing. All this emphasize the concerns of the academic community with the subject and the process of inclusive education in schools.

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## **Autism spectrum Disorder: Concerns, needs and resources of families**

Lúcia Isabel da Silva Magalhães  
University of Minho  
[lucia.magalhaes.tf@gmail.com](mailto:lucia.magalhaes.tf@gmail.com)

Ana Paula da Silva Pereira  
University of Minho  
[appereira@ie.uminho.pt](mailto:appereira@ie.uminho.pt)

### **Abstract**

Families of children with Autism Spectrum Disorder (ASD) face a series of daily challenges, from which emerge a number of concerns and needs, inherent to the reality of living with a child with ASD. This reality implies the assessment and coordination of resources and support networks by professionals, yet always including a family-centered approach. With this investigation, we have attempted to gain profound knowledge of this matter, by evaluating the concerns, needs and support networks of parents with children with ASD, from the age of 3 to 6 years old.

**Keywords:** Autism Spectrum Disorder; Concerns; Needs; Resources and Supports; Family-Centered Practices in Early Intervention

### **Introduction**

Autism Spectrum Disorder is a neurodevelopmental condition characterized by deficits in social communication, and a presence of restricted, repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2013).

According to recent literature, ASD is one of the most problematic disorders, posing the most challenging difficulties for parents that reflect in all aspects of life for both the family and child alike.

The vast majority of studies show a relevant connection between ASD and the parents' physical and psychological health. Depression, stress, feelings of disbelief, pain, anxiety, fear, guilt and anger are quite common in these cases (Bloch & Weistein, 2009; Gray, 2002; Hoogsteen & Woodgate, 2013; Meltzer, 2011).

Domingue, Cutler and McTarnaghan (2000) state that it is common practice for professionals to conduct an intervention completely focused on the child, instead of involving the family. In fact, professionals also have a disposition to making a subjective examination of the family's needs, instead of evaluating the real needs of the family unit (Murphy & Tierney, 2005). This reality calls for awareness regarding the matter by all the professionals that cope with children with ASD.

Recent research has demonstrated the importance of Early Intervention in the area of ASD (Corsello, 2005). Many authors confirm the advantages and efficiency of Family-Centered Practices for both professionals and the family unit (Dunst, Trivette & Hamby, 2007).

For the child with ASD, it is fundamental to perform an early application of answers in an intervention focused on the child's development and on fulfilling the needs of the family. This intervention must also carry out an assessment of resources and support networks for the continuous adjustment of the family effort, facing the inherent challenges that come with a child with ASD (Gomes & Gerales, 2005).



At a national level, research concerning ASD is insufficient. Apart from the existence of some studies (Gomes & Geraldes, 2005; Marques & Dixe, 2011; Ribeiro, 2012), there is still much more specific and contemporary knowledge to be evaluated and described by joining researchers and parents together. The uncertainty of the national economy raises a wealth of new concerns, needs and challenges that earlier studies have not yet embraced. Another important change was the creation of the National Early Intervention System, transposed into Portuguese Law through Decree- Law 281/2009 October 6th, with new principles, procedures and answers for the parents of children with special educational needs, including ASD, up to the age of 6.

This study's main objectives are: 1) to identify and recognize the concerns and needs of families with children with ASD; 2) to identify and recognize the required means of supports those families need; 3) to understand the adequacy of the support networks given to these families, in light of their concerns and needs.

## **Method**

The present research comprises the qualitative interview method. The interview represents an essential instrument of data collection in the process of field research, when the knowledge of a certain phenomenon is scarce (Lincoln & Guba, 1985).

In this investigation, the interview assures that the identification of the needs and concerns of the parents of children with ASD is constructed and based on the true life experience of each one of the participants, so that their concrete reality will be exposed with detail in the study.

In this research, the selection of the participants will be performed with criteria of intentional choice by the researcher, who will decide which participants will bring more valuable information to the investigation. The results of this study cannot be generalized as their meaning has value within the family context of the parents that are integrated in the study (Lincoln & Guba, 1985).

According to these authors, in the qualitative research, it is not possible to define in advance the number and type of participants. Therefore, the selection of subjects is emergent and built during the course of the investigation. In this study the selection of the participants will be sequenced, that is, their selection will depend on the information given by the previous subjects, and whether a clarification on the matter is still missing or not. When the answers obtained commence being redundant or repetitive, a saturation level is reached and the selection ends.

In this study, the participants are parents of children with ASD, with ages between 3 and 6 years old. There will be a customized interaction with the families, and in the initial contact, a brief presentation of the investigation, its goals, methods, rules of the participation, as well as the confidentiality agreement will be explained to the participants. In this stage, we will be counting on the cooperation of other professionals who follow other families with children with ASD, and who also meet the investigation criteria.

The semi-structured interview gathers more understanding of the subject of study, as it allows the interviewees the freedom to add new information, or even to develop new questions unpredicted by the researcher (Kvale, 1996).

The interview guide will contemplate a set of questions, properly connected to the objectives of the study, but with flexibility in their order of sequence, according to the individual course that each interview takes (Kvale, 1996). In this stage, the informed consent of the participants is considered and the protection of the confidentiality of the information is assured for all participants (Bogdan & Biklen, 1994).

Following the qualitative analysis of the interview guide, a panel of specialists with scientific knowledge regarding the matter of ASD, as well as the qualitative investigation methodologies will be consulted.

At this stage, we will also consider of great importance, the interviews of a group of parents with children with ASD, which will enhance the critical analysis of the question arrangement and content, the type of language used, and the guide's efficiency in obtaining relevant information that coincides with the purpose of this study (Kvale, 1996).

### **Results and Discussion**

Data analysis will be performed with the transcription of all interviews by way of the collection of recording units that translate the necessary and pertinent content required for the objectives and theoretical framework of the investigation, therefore representing the basic units for its categorization (Bardin, 2011). In this stage, regular patterns in the obtained information will be searched, with the intent of defining coding categories (Bogdan & Biklen, 1994). The recollection of context units representing the text fragments where recording units are may be necessary, and also putting them in context with the interview will be carried out, always assuring the perception of the meaning (Bardin, 2011).

After this phase, the results will be interpreted in the light of the objectives of the study, the research questions and the theoretical reference framework of the researcher.

### **Conclusions**

This future investigation seeks to fully understand the concerns and needs of families with children with ASD, with ages between 3 and 6 years old, as well as to supply a guideline for professionals who collaborate with these families.

This study has the expectation that a better and profound knowledge of this matter will contribute to the improvement of Early Intervention practices, regarding the identification of concerns and needs, and the implementation of well-adjusted strategies for the child, the family and their ecological framework.

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## **Recognition through indicators precocity student in early childhood education**

Maria da Piedade Resende da Costa  
Universidade Federal de São Carlos  
[piedade@ufscar.br](mailto:piedade@ufscar.br)

Danitiele Maria Calazans Marques  
Universidade Federal de São Carlos

### **Abstract**

Students in kindergarten who shows signs of precocity, they deserve to have access to an educational service that meets their needs and develop their skills and competencies. For this to occur it is necessary to call the teacher to have knowledge about the precocity. In this perspective, this research aims to provide information to guide the teacher from kindergarten to recognize signs of indicators that characterize the precocious child. The study included 46 students from kindergarten aged three and four years, four parents and eight teachers who taught in a Municipal Center for Early Childhood Education in a city in the interior of São Paulo. This study was developed as a qualitative approach, and it was characterized as a case study. The information for the development of this research was obtained through the following instruments: questionnaire indicators of earliness, directed to parents and teachers; characterization form teacher participant and socioeconomic questionnaire answered by the parents. The results showed that of the 46 children observed by teachers only four showed 50% of the indicators proposed by the instrument. Regarding to teachers sort, we found that there are still many myths about who is the talented child. These erroneous ideas are reflections of a formation that has large gaps regarding to the identification and discussion of the talented student attendance. We found that the study focused to the precocity is still barely discussed in academia. Thus, the relevance of this research is to provide a valuation of the potential development of children since kindergarten.

**Keywords:** Special Education, Early Childhood Education; Precocity; Teacher Education.

### **Introduction**

The importance of choosing the theme "Recognition by early indicators of the student in early childhood education " come the problem that until now has been little discussion about early in infancy in the field of Special Education. This lack of information and generates many popular myths about the child with signs of early beliefs, thus preventing the recognition and even the care of these students.

Mendes (2010) reports that educators in early childhood education can perform the screening and the early detection of children who require additional interventions. And if they had quality training, identification could be more precise this could accelerate the routing for the provision of support and prevent worsening of special educational needs.

In this perspective, we see the need to study on the design of teacher versus student with high potential, because this topic is seldom discussed in our universities, you end up producing a gap in the training of these professionals.

Rodrigues (2011) warns of the need to rethink the proposed curriculum of universities in teacher training courses, it is great to insufficient approach to content related to the High Skills / Gifted. And is getting professional early childhood education, this reality is troubling because there is no initial training properly trained to deal with this inclusive perspective.

Given this discussion, the following questions arise: Is it possible to identify the child in early childhood education? The teacher is able to recognize signs of precocity in the classroom? What is the design of teacher education on early childhood child? The initial teacher training helps us recognize the early signs of child?

To answer these questions, the research presents general objective is to provide information to guide the teacher from kindergarten to recognize signs of early indicators that characterize the child. .

Being the recognition of early student pedagogical action, composed of a range of care options, increases the importance of the teacher's role in this process. This reinforces the need for a solid foundation of essential training to operate efficiently and effectively.

Rodrigues (2011) developed a survey that aimed to question the qualifications of the professional nursery and check how is working on the inclusion of students with high ability / gifted curricula of training courses for teaching. Thus the analysis of curricula was conducted two courses degree in education with specialization in early childhood education and teaching elementary school in the early series of a public university and a private one, and also a high school (teaching) that shape and enables professionals to educate children on the level of education child , all of a city in the Rio Grande do Sul.

Alencar (2001) points out that in the case of early childhood education teacher, this should be informed about strategies to observe and meet the early learner , knowing differentiate it from other students and thus guide you on how to use their abilities to build new knowledge . The teacher with awareness can help the student in a more stimulating and motivating routine, thus arousing the child's interest in activities that provide you with greater educational attainment.

Virgolim (2007) warns teachers of students with high potential that the result of the success of learning depends on three key factors: information, motivation and safety. Thus, educators must put into practice such factors, as follows: i) acting as a source of information, ii) developing the child's natural desire to learn, and iii) providing you with a safe environment where she can exercise and improve their mental abilities. And in addition to all this, encourage children to keep an open mind. (Virgolim, 2007, p.15) .

Guenther (2009 ) describes a program to form the " good teacher " , from a humanist thought , not only teaches the " know " , but rather challenges the teacher to know the concept of " do and live " knowing translate knowledge in order to " use his person " as a mediator of learning. The author emphasized the importance of some principles for humanistic education that happens.

Pereira (2007) supports the idea that quality education is one that prepares the teacher to be creative, and it is necessary that it has not only a creative knowledge, but also the domain and the training of their own abilities and creative skills.

Being a creative teacher does not imply having indicators of talent and high capacity as their talented students. The creative teacher is one who has a posture assessment and reflection on their own practice, is one that has a multidisciplinary training, linked to a socio-cultural context, allowing the school and its agents, that success is achieved. Finally, the teacher who adopts strategies to promote creativity in the classroom without doubt are more likely to act in a competent manner, thereby assisting their students discover and achieve their potential and talent (Pereira, 2007).

Assis (2007), the conception of who the professional early childhood education has undergone transformation over the educational trajectory, due to the fact that early childhood education, focused on serving the child was related to the care process and educate assigned exclusively women.

The issue of care and education in early childhood education is a subject that raises many discussions, it was rooted to the myth that the act of caring was minor, so it was not necessary to be a teacher to

accomplish it (Pereira, 2007).

The lack of social visibility of children's institution and its teachers reinforces a disqualified the type of work the company image as it is not recognized the importance of its educational character, the construction of care-education-play, key factors for cognitive development and social child.

In this sense, the teacher must provide a horizontal interaction of these concepts can be developed at different levels of complexity and depth in the stages of child development.

The construction of the identity of the teacher of early childhood education aims to demonstrate the importance of training specific to the exercise of children's teaching. Teaching Early Childhood Education serves to educate and care for the child in an integrated manner in the range of zero to six years old.

We emphasize that the teacher's role is linked directly to an initial training that gives you sufficient to meet the educational needs of children conditions. However, many undergraduate programs still show gaps in the training process. Thus, faced with the insecurity of teachers regarding the student to present a high potential

Given these assumptions, we believe that the teacher of early childhood education feel prepared to understand the learning process and develop appropriate identification, we must first of all begin by changing the curriculum of higher education in initial training, thus providing a pedagogical action receiving the different among them talented.

## **Method**

This research adopted a qualitative approach. Was developed from the case study that according to Asiss (2007), aims to describe precisely the behavior of an individual, group, family, community, collective, among others, and this guy should be the center of attention investigator in the case of this research is Professor of Early Childhood Education.

Data collection was performed at a School for Early Education, located at the Municipal Secretariat of Education of the city of São Paulo.

The criteria for inclusion were that participants: i) teachers - be teachers of students selected for the study and agree to participate in the study, ii) student - be enrolled and attend school and have chronological age between 3 and 5 years, and iii) parents - responsible for the selected teacher who presented early indicators of child.

Of the eight teachers only 13% were male, this confirms our discussion in the previous chapters that the professor of early childhood education is also related to the concept of caring, being unique role of women.

In relation to academic training, we found that 38% of participants have only initial training, 13% teaching and 25% with a university degree, and 62% invested in the continuing education studying certain specializations.

The age of teachers is between 23 and 34 years of teaching and the time is between five to 11 years. As for the number of students in the classroom, the research institution has appointed a number of 20 students per class, and only one has 19 students. Of the eight teachers only P7 has disabled student.

Each teacher received a number of indicators of early Questionnaire regarding the number of students in the classroom. Importantly, the researcher allowed teachers to choose whether they would with all students in the room or just those who submit the most outstanding potential in the classroom.

Data were grouped qualitatively and quantitatively treated.

For teachers who analyzed all students in the room, used as a criterion for cutting children who achieved indicators above or equal to 50 % of respondents "always" the questionnaire, it represented 20 or more indicators. For teachers who observed only the students who most excelled in the classroom do

not hear cutoff criterion.

Four students between four and five years showed signs of precocity in some areas of the field were selected. .

Observed the same questionnaire was used by teachers to be answered by the parents or guardians of these children selected.

To relate the proportion of agreement and disagreement among the indicators observed by teachers and parents of children with the early warning signs, we used the McNemar test.

A total of 160 students CEMEI only 46 (29%) were observed by teachers, while 117 (71%) were not observed.

To protect the identity of students and teachers use codes to represent them, as well as participating teachers had: P1, P2, P3, P4, P6 and P8 and the students were classified A01 through A46.

## **Results and Discussion**

Of the 46 students observed, 56% had one to five indicators, which represent 26 children, 17%, which corresponds to eight children, had between six and ten indicators, 9% of children observed were between quarter past eleven indicators, corresponding four children, were also observed by teachers 9% corresponding to four children, who were between four twenty p.m. indicators; 6% of children observed, represented by three children, were between nine twenty-five p.m. indicators. There was no child who has presented twenty to half past six indicators while a child, representing 2% of total students observed had between thirty-one and thirty-five indicators, and no children had thirty to six forty indicators.

To clarify what features each indicator, we will make a more detailed analysis of the indicators observed by the teachers participating in the research on 46 children in early childhood education, for it is from this analysis that we can map which indicators predominated, and using the proposed Gardner, Feldman and Krechevsky (2001, 2001b, 2001c) and Vieira (2005), we analyze which areas observed by teachers are related to the Main Themes of the Curriculum Reference Childhood Education (Brasil, 1998 a,b and c) We present the analysis of indicators based on the eight intelligences proposed by Gardner in 1994. But it is important to emphasize that the intelligences do not directly map the eight areas proposed by Viera (2005).

### **Work style**

Indicator 1: Makes things earlier than expected for their age: it was observed in two children;

Indicator 2: Adds unique qualities to a task: scouted two children;

Indicator 3: Like to join "things" to experiment with interest in finding out what happens to them, observed in four children;

Indicator 4: This study highlights the group because he works alone, not needing help observed in 6 children;

Indicator 5: Presents similar behavior to other children of the same age: was observed by teachers in 39 children rated as the most observed indicator, present in 12% of the participating children. This is the only indicator in the instrument proposed to have a negative understanding the characteristics of gifted children. Thus, students that teachers identified as gifted were not marked on this item. This happened with one of the teachers surveyed that of the 19 students observed, 16 had only this bookmark. The other three students presented beyond window other five features proposed in the observation questionnaire.

Indicator 6: Look closely and retains information about things that observes, was observed by teachers in 10 children;

Indicator 7: Express ideas through drawing facilities: was indicated as present in 10 children;

Indicator 8 : Starts conversations spontaneously differentiated bringing matters to their age : observed in three children;

Indicator 9 : Express ideas with ease oral or written, obtained from six children;

Indicator 10 : Uses advanced vocabulary for her age : it was little noticed by teachers was indicated in only two children ;

Indicator 11 : Describes an object in several ways : index also had little observation :only three children had to have this feature ;

Indicator 12 : Has facility to represent an object or idea in several ways : it was observed in four children;

Area Mathematical Logic :

Indicator 13 : Understands the significance of numerical concepts beyond the numbers

1-10 : was little noticed by teachers , present in only a child ;

Indicator 14 : Build a strategy to solve a problem : this indicator was present in three children ;

Indicator 15: Asks questions to understand how things work ; was observed in five children ;

Indicator 16: Has facility with puzzles , used by children older than their age : No child had this indicator, because according to the teachers all toys and games at school that there are proper for the age group of three to five students years.

Indicator 17: Demonstrates ability to use the computer: No child had this feature . This result was expected because the CEMEI researched children do not have access to the computer.

## **Conclusions**

In order to provide information to guide the teacher from kindergarten to recognize signs of indicators that characterize the precocious, this research has developed from discussions and reflections.

The first consideration regarding this study is related to the narratives in which teachers describe their knowledge and insights gained with their practice in the area of early childhood education. Involving theory and practice which we analyze the concepts that these teachers had in relation to the gifted student. So, be the reported child with high potential, those who excel in academic and creative areas. Only a small percentage of the participants pointed out that the student is the talent who excel in all areas of knowledge. This statement confirms that some teachers bring their concepts rooted in the talented student the myth that high capacity is synonymous with academic intelligence, hindering the identification of indicators of talent.

Few participants who had their training contents aimed at inclusion of students with high potential. This is to emphasize the gap curricula of Pedagogy and other degrees that do not show oriented training to a pedagogical action that benefits the needs and potential of the student.

Regarding the instrument used to verify the main indicators presented by the children, we found some relevant points that may contribute to future research. This instrument being developed from the Theory of Multiple Intelligences, we observe that this does not include all possible skills that can be observed by the teacher, for example, the areas of visual arts. In early childhood education , this area is seen by teachers as an essential field of child development as it stimulates self-expression , such as drawing, storytelling make -believe and dramatize , thereby motivating creativity , one of the main characteristics the gifted child.

This study triggered discussions that recognition of early childhood education student in not guarantee that this will be a talented and gifted children in the future because this phase of high capacities can be only one step in early . However, the purpose of this research is not to identify gifted student, but rather to offer information about the professor of early childhood education can recognize the uniqueness of your student, in the context of the capabilities and potential.



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## **Software Accessibility dosvox and Virtual vision: a teaching program for students with blindness**

Paulo César Turci  
Universidade Federal de São Carlos

Maria da Piedade Resende da Costa  
Universidade Federal de São Carlos  
[piedade@ufscar.br](mailto:piedade@ufscar.br)

### **Abstract**

Dosvox and Virtual Vision accessibility software are screen reader programs that allow reading of the information presented on computer screens through speech output using voice synthesis technology, making their use possible by people with blindness. The objective of this study was to implement and evaluate the effectiveness of a teaching program for the use of accessibility software Dosvox and Virtual Vision by students with blindness of elementary and middle school. To this end, we developed a quasi-experimental study with an AB design, attended by two students with blindness, 18 and 19 years old, who were attending the sixth grade of elementary school and the third year of middle school, respectively. Both attended the same Resource Room facility featured by a public school located within the countryside of the State of São Paulo. The Education Program was 30 hours long, with one hour weekly classes. The following tools have been used to collect data: a) A semi-structured interview, applied pre-intervention to check the suitability of participants to the inclusion criteria of the study and characterize them. b) The tasks protocol has been used to measure participants' knowledge at two different times: 1) before the education program had been applied (pre-intervention) and 2) after the education program was implemented (post-intervention). c) Questionnaire to measure participants' satisfaction. d) Field diary to record the development of the education program. The analysis and interpretation of data was quantitative and qualitative: a) Quantitative evaluation of data from protocol tasks. b) Qualitative evaluation of data from semi-structured interview, from questionnaire and from the field diary. The results obtained in quantitative evaluation showed that performance of the first participant was better than that of the second participant. The qualitative evaluation has shown that the education program was effective for developing flexible teaching strategies that allowed participant 1, who had no computer and had no prior knowledge about the software, a great level of knowledge acquisition. Participant 2, who had a computer and prior knowledge about the software, was enabled to improve his technique so that now he performs numerous tasks with excellence. By making both of them able to use Microsoft Word and access the virtual environments with a computer equipped with Dosvox or Virtual Vision, the new pedagogical strategies arising from the use of computers in the classroom promoted the transition of the educational process of participant 2, previously marked by the demerit of his intellectual capacity, failure and assistance, to a new reality guided by equality and sharing with his peers. No considerations were made about the educational process of participant 1 due to the absence of a computer in the classroom where he had been studying.

**Keywords:** Special Education. Blindness. Dosvox. Virtual Vision. Teaching program.

### **Introduction**

The main instrument that enabled the education and communication of students with visual disabilities by providing them with access to knowledge was the Braille system. Since its inception in 1829 until today, was established as an alternative way of reading and writing to the student with the total or partial lack of vision might have access to knowledge produced by humanity through reading (Ferreira, 2009).

Dallabrida and Lunardi (2008 ) state that in consequence of the intrinsic Braille system specifics , such as volume, weight , reading technique , among others , is a deep, space limitation and possible times for the reading exercise , restricting the power of appropriation of knowledge for their users . The Braille system has become almost obsolete, and the collections of printed works in Braille be limited and not easily available in a few libraries .

Valente (1999 ) points out that before the technological development , globalization of the economy , the popularity of the World Wide Web , the domain of information and speed of access to them have become of paramount importance in today's society .

Galvão and Damasceno (2006) reported that the sensory limitations of students with visual , blind or low vision disabilities , because they constitute an obstacle to the traditional learning process seriously undermine ownership by them of systematized knowledge . This is due to the fact that this process developed almost entirely through information that usually only is acquired visually.

Galvão and Damasceno (2002 , p.1) , underscore the importance of using accessibility software as a way to minimize educational barriers , stating that : "Developing accessibility features would be a concrete way to neutralize the barriers caused by disability and insert that individual in rich environments for learning". According Sonza (2008 ) technological development and mass use of the world wide web access and participation in socio- cognitive digital environments . The virtual media produced profound changes in the education and traditional learning process, to enable the development of new strategies for the acquisition of knowledge. This transformation facilitates access to libraries, newspapers, journals, dissertations, theses among others , inaugurating a new school culture .

Lima (2011 ) states that although the screen readers can bring to all people the benefits already described , they have not yet been incorporated in practice , the daily life of schools. This is due to the difficulties of its use by the lack of adequate training for their use, but also because education professionals, in addition to not knowing the efficiency of technological resources , not yet believe in the efficiency of its use by students with disabilities visual .

As the above the present study has the following research problem :Does suited to students with visual disabilities in a public school for the use of accessibility software Dosvox and Virtual Vision training , can provide you with the development of specific skills and expertise to overcoming the barriers traditionally present in their educational process?

To answer this question this research has the general objective: Implement and evaluate the effectiveness of a training program for use by accessibility software Dosvox and Virtual Vision for students with visual impairments as a way to develop skills and expertise to overcome the barriers traditionally present in their educational process.

Virtual Vision, its development began to be designed in 1995, motivated by the claim of a customer of Banco Bradesco visually impaired. They wanted access and move your bank account online, the same way that other bank customers.

The Board said imbued in materializing the idea proposed by its financial institution customers, contacted the Micropower, company specializing in software that developed the Virtual Vision and become more effective readers of existing screens in Brazil. In 1988, Bradesco launched internet banking for the Visually Impaired, a new service in the country.

## **Method**

The quasi-experimental studies according Sampieri (2006, p . 214 ) are characterized by deliberate manipulation of one or more independent variables to observe its effect and relation to one or several dependent variables . This approach does not use a random sample, as Sampieri (2006, p. 216) explains the quasi- experimental design "individuals are not randomly assigned to the groups or are paired, because these groups already existed ( intact groups )." This approach can have a control group, the group itself can be studied as control group or the study can be developed without a control group.

The present study is the independent variable training program, and how dependent the tactile perception, fine motor skills, specific learning process for persons with visual disabilities . This research is characterized as quasi-experimental design with type AB. Will also be developed with the intact group, and the group itself will control, and may be reproduced with minor variations that refer to personal characteristics of each student with a visual impairment.

Participated in two subjects with blindness over the age of 10 years, users of the resources of a public school room, located in a city in the state of São Paulo. The criteria for participating in the research were: i ) be the user resource room in a public school , ii ) have visual impairment (blindness or low vision ) , and iii ) To ignore all or part of programs (Dosvox and Virtual Vision) .

Was performed on the resources of a public school in the state of São Paulo room. I ) Writing of semi - structured pre intervention - aimed at: the following instruments were used to understand the uniqueness of each student , to develop customized educational strategies and specialized teaching materials that enhance their personal learning conditions , ii ) questionnaire with questions closed and aims : to measure student satisfaction in relation to the training program , and iii ) Task Protocol .

Data collection initially Script Semi-structured interview, ie the pre-test instrument was administered.

Before applying the program the student was assessed in the first class and the student's initial performance was recorded in Task Protocol.

The implementation of the Programme itself as described below was performed. The training program was designed to be developed in thirty hours long, divided into four phases.

The protocol was designed to evaluate 20 tasks, divided into five blocks to assess students' skills when applying the training of students: 1 ) handling the keyboard , 2) accessibility software Dosvox , 3) accessibility software Virtual Vision ; 4 ) Microsoft Word and 5) virtual environments. The tasks performed by the participants were classified into five levels : 5 (excellent ) 4 (good ) , 3 (fair) , 2 ( poor) , 1 ( do not know to accomplish the task ).

After the training program was applied again to the Protocol Task in the last class for purposes of comparison with the data shown in Task Protocol applied to the first lesson and assess whether there were purchases by the student. Finally, the questionnaire was applied to investigate student satisfaction across the program.

Data analysis was performed under two approaches: a) quantitative b) qualitative. Quantitative approach in an analysis and comparison of students' responses regarding the Roadmap semi-structured interview as the pre and post test was performed.

Were also analyzed and compared notes in Task Protocol of the first (initial) and last class (final).

## **Results and Discussion**

The first semi - structured interview at the beginning of the first lesson Training Program showed that two participants met the requirements for inclusion in the proposed research, both are users of a resource room installed in a public school, and are also students with blindness.

Participant 1 knew of the existence of Dosvox software, before the intervention, this knowledge was based on information from one of his colleagues, also blindness. But were not enough so he could operate a computer, as was recorded in the protocol (Pre ) task applied in the first class of the Training

#### Program.

Participant 2 had basic knowledge on how to use a computer through software accessibility Dosvox and Virtual Vision. Such knowledge was acquired before intervention, as was recorded in the protocol (Pre) task applied on the first day of school Training Program .

The first did not have a computer at home , as it was also not offered you this opportunity in the regular classroom , only in the resource room had a computer but could not use it because it had not yet built the necessary knowledge to perform this task. Thus could not rely on this technological resource to perform schoolwork.

In the opposite situation, participant 2 had a computer at home and had just won a notebook would start using the regular classroom , in addition, also attended the same class of resources that participant 1 , in which there was a computer equipped with software accessibility Dosvox and Virtual Vision .

The knowledge prior to the training program purchased by the participant 1 on accessibility software, even if limited, decisively influenced the development of different ways of accomplishing school tasks between the two .

Participant 2 in addition to having a computer at home , had acquired basic knowledge about accessibility software that use the computer to perform internet searches, even being necessary sometimes to have the assistance of a person .

The choice of the two participants was equal both in relation to the Braille system which has been chosen by them to be the format of didactic material to be used during the training program , as well as two participants made the choice , in agreement , manifesting the preference for the term blindness or blind to denote the absence of vision.

The data obtained in the first semi - structured interview contemplated the objectives outlined in the research, were considered very important because they have been established as a subsidy to understand the uniqueness of each of the participants of the training program.

#### First phase: Tactile Perception and memory

The protocol (pre) was applied in the first class of the training program in order to assess the knowledge acquired by the participant before the intervention.

The second protocol (post) applied during the last class of the training program showed the progress of the participant in three items that make up the first phase. The tactile perception evolved level of "do not know " to " good" , this means that the perception has been developed to the point of knowing all the positions occupied by the components of the computer keyboard and what are the details that separate the keys into blocks with different shapes and number of keys. But still makes small mistakes while moving from one block to another as a consequence of this mechanism is not fully automated.

The memorization of the functions of the keys also evolved from the level "do not know" to "good." This means that the memory has been developed to the point of knowing all the functions of each component of the computer keyboard , but this process is not fully automated , so you need to think to perform an operation , it is still possible to confuse the function of a key with another .

The item evolved level typing "do not know" to the "regular", this means that the motor coordination has been developed but has not reached the ideal place to accomplish this task with speed and accuracy level, implying the occurrence of errors during the typing of a text.

#### Second phase : Dosvox and Virtual Vision

The protocol ( pre ) applied to the first class of the training program indicated that the performance of participants in the second phase , which was addressed to enable and disable Dosvox , command keys , commands for reading texts and Cartavox , was rated at level 1 which corresponds to the concept "do not know " , showing the total ignorance of the procedures required to perform a task via computer

## accessibility

### Dosvox software

The second protocol (post) applied during the last class of the training program showed the progress of the participant in three items that make up the second phase.

The items enable and disable Dosvox and command keys Dosvox evolved level "do not know " to " good" , this means that the participant dominates all options to accomplish these tasks , but the two processes are not automated , this fact implies to think before using a command , they can still be confused .

### Virtual Vision

The protocol ( pre ) applied to the first class of the training program indicated that the performance of participants in the second phase , where the items were addressed to enable and disable the Virtual Vision , commands for reading texts ; Virtual Vision command keys; operation the control panel were classified at level 1 . This position corresponds to the concept "do not know", in total ignorance of the procedures required to perform a task on the computer through software accessibility Dosvox or Virtual Vision.

The second protocol (post ) applied during the last class of the training program showed the progress of the participant in the four items that make up the second phase , ie , the four items were as level "do not know " to " regular" . This means that although it has been acquired knowledge about the topics addressed at this stage there are still the following questions to perform the tasks: reverses the command to disable the Virtual Vision , the commands for reading texts are not used in a way that optimizes the task ; doubt to set up the control buttons on the right or left side of the keyboard are the most appropriate for the implementation of the action ; questions regarding the options to operate the control panel . These facts make the task slower than they should be.

### Third phase : Microsoft Office Word

The protocol (pre) applied to the first class of the training program indicated that the performance of participating in the third stage was classified at level 1 . This position corresponds to the concept "do not know " , showing a total ignorance of the procedures required to perform a task on the computer through software accessibility Dosvox or Virtual Vision .

The second protocol (post) applied during the last class of the program evolution recorded in the six items addressed at this stage , save a text in my documents reached the optimum level , ie, the task was performed with excellence . Shortcut Keys Microsoft Word, basic tasks : formatting text and make a good folder were classified in level , this means that the participant dominates the procedures necessary to accomplish the tasks , but are not fully automated generating the emergence of small questions during the action. Use the toolbar and the task was rated on the regular level, this should be the questions found to opt for the best way to navigate the tasks and toolbar.

### Fourth phase : Internet

The protocol ( pre ) applied to the first class of the training program indicated that the performance of participants in the second phase was classified within level 1 that corresponds to the concept "do not know " , showing a total ignorance of the procedures required to perform a task on the computer through the accessibility Dosvox software.

The second protocol (post) applied during the last class of the training program showed the progress of the participant in three items that make up the fourth phase. Using MSN evolved level of "do not know "to " good" , this means that the participant mastered the knowledge required to perform the task , but

sometimes it needs to reflect for choosing the best alternative . Use your email and perform a search on the internet has evolved from level 1 " Do not know" to the " regular" , it means that the participant does not know all the features offered mainly by Virtual Vision that provides surf the internet and enjoy autonomy.

The two participants to answer the questionnaire , attributed to grade five the teaching materials used in the training program , which was prepared according to the answers of the first semi - structured interview , in which participants chose the format that would be more interesting to their learning . Lima (2011) points out that although they may be cited various experiments related to assistive technology such as the partnership developed between the Dosvox Project (UFRJ ) and the Ministry of Education and Culture, who like many others, had as a result advances and discoveries very important are not yet used in rooms of mainstream education for students with visual impairments . The author referred to reports that the lack of knowledge about assistive technology and its potential still prevails. If that were not enough students and their abilities and needs are also unknown. According to Lima (2009) these facts are consequences of a historical period in which people with disabilities were deprived of social interaction.

The main difference between the two participants in this study consists of the teaching resources they use. While participant 2 has a notebook at your disposal that enabled the development of new perspectives for their educational process , participant 1 , if either, has its disposal a Braille typewriter and makes use of a 'reglete' to appropriate the knowledge dissemination in classroom, in a school that does not have the resource room

The situation experienced by participant 1 has already been reported by Bianchetti, and Deitos Ros (2000). They demonstrate that this situation it is not an exception but a common situation in the educational process of students with blindness and argues that the implementation of accessibility software plays a fundamental role in overcoming the barriers that are still present in the educational process of students with DV. These supports computer can be used to develop interfaces between the student and knowledge, creating favorable conditions Accessibility their autonomy and participation in the classroom.

Duarte (2010), explains properly the changes in the educational process of participant 2 , stating that : access to the computer through the accessibility Dosvox software , empowers people with appropriate knowledge and DV to produce them in virtual environments , leading new ways for intellectual and professional development , which was previously restricted to the context of the limitations and impossibilities , inaugurating a new lifestyle , social interaction and behavior.

Leonardo (2009) points out that homogenizing educational practices , teachers without adequate training and no experience in living with diversity, lack of teaching materials in Braille , added to the absence of specialized pedagogical procedures that enhance the uniqueness of each student , prevent the adequacy the public education system for the inclusion of students with DV .

## **Conclusions**

The results submitted by participants and allow you to perform considerations indicate that the training program for the use of accessibility software Dosvox and Virtual Vision for students with DV has succeeded to provide the development of skills and abilities that made the participant able to overcome the barriers traditionally present in their educational process.

The training program was developed on the assumption that visual impairment is not a limiting factor for cognitive development, but a condition to be overcome through customized educational practice, structured procedures in specialized pedagogical and technological accessibility features . These practices should enhance the intellectual potential of students with DV and personal learning characteristics.

One of the best alternatives for achieving these practices is the use of software accessibility Dosvox and Virtual Vision DV by students as a way to develop skills and expertise to overcome the traditionally inherent in the educational process of students with DV barriers.

Throughout history the Braille system was set up as a vehicle for the integration of persons with blindness in the world. But for it to have been created especially to facilitate communication of people with blindness, has limitations that are intrinsic to their specificity. As a result of these characteristics that system is no longer compatible with the contemporary standard of knowledge appropriation. Became almost obsolete to the demands of society and inclusive education.

Characterizing the Braille System as not compatible with the contemporary pattern of acquisition of knowledge, not search preach extinction , unlike , you want to associate it with new accessibility technologies . The educational process of students with DV is so poor that it cannot, even forego features are same as archaic as it seems to be the single most educational professionals know . However before tax disregard this population, even its existence is evident , do not bother to use it to improve quality in the classroom .

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## **Family: School and social development of visually impaired adolescents**

Ana Cláudia Fernandes,  
University of Campinas – UNICAMP – Campinas  
[ana.claudia2221@gmail.com](mailto:ana.claudia2221@gmail.com)

Zélia Zilda Lourenço de Camargo Bittencourt,  
University of Campinas – UNICAMP – Campinas  
[zeliaz@fcm.unicamp.br](mailto:zeliaz@fcm.unicamp.br)

Maria Elisabete  
University of Campinas – UNICAMP – Campinas  
[gjcrepaldi@yahoo.com.br](mailto:gjcrepaldi@yahoo.com.br)

Rodrigues Freire Gasparetto  
University of Campinas – UNICAMP – Campinas

Giuliana Jorge Crepaldi  
University of Campinas – UNICAMP – Campinas

Rita de Cássia Ietto Montilha  
University of Campinas – UNICAMP – Campinas  
[rcietto@fcm.unicamp.br](mailto:rcietto@fcm.unicamp.br)

### **Abstract**

This research is justified by the need to increase knowledge about family participation in the development of visually impaired adolescents. Studies show that visually impaired students ask for family help with their school tasks, looking for fast access to educational material. The objective of this qualitative study was to verify the perception and behavior of parents and/or caregivers in the schooling of visually impaired adolescents. Data collection was conducted through interviews about how family participation happens in the schooling of these teenagers. 8 family members related to 6 adolescents were part of the study; they participated in experiences with low vision and blindness simulation and assistive technology resources, besides discussions about the family role as a facilitator for social and school inclusion. We observed that parents and/or caregivers of visually impaired adolescents live through an educational process that is permeated by anguish and grief for the loss of the idealized child. Thus, group work favored the sharing of their troubles and their knowledge; this created an environment for families to discuss ways of promoting the development of visually impaired adolescents, through resources for reading and writing, games and daily life activities. These actions enabled the inclusion of the adolescents at school, in the family and in the society; it also enabled the consideration of new public policies.

**Keywords:** schooling, family, visually impaired people, specific groups' health.

## **Introduction**

Interventions with the family must include rehabilitation teams and education professionals. The oriented family can contribute to improve the visual quality and performance of the impaired adolescent. This research tries to bring light to the understanding of how family participates in school activities and how adolescents appeal to their relatives for assistance.

Rodrigues (2010) defines inclusion as an evolving process, which must come true, whilst there must be acceptance of individual differences and valorization of each one's potential. Therefore, the inclusion takes education as a right for all and as the basis for a supportive, fair society. Inclusion is not as simple as putting people side by side, but it is more than this; parents and caregivers are the central theme of this study, as they have the legitimacy to claim access and quality to meet the needs and individualities of visually impaired adolescents.

This research is justified by the need to deepen the knowledge about participation of parents and/or caregivers in the school development of adolescents with visual impairment. The objective was to determine the perception and behavior of parents/caregivers regarding the schooling process of these adolescents.

## **Methods**

This is a longitudinal qualitative study of the relatives of visually impaired adolescents who participated in a university rehabilitation service. The criteria for the inclusion of subjects in the research were: being visually impaired adolescents and participate in the program; being parents/caregivers of these adolescents. All participants signed the Family Informed Consent.

Data collection happened from August to November 2013, in interviews and family groups. 8 1-hour meetings were organized with the family members.

This study is part of the research named "Visually impaired students: perceptions of their educational processes" and was submitted and approved by the University's Research Ethics Committee.

## **Results and Discussion**

We performed experiences with low vision and blindness simulations, with the use of assistive technology resources. In the experiences, participants discussed the student's family role as a facilitator of the school and social inclusion processes. The themes in these meetings allowed families to know and discuss ways of fostering the teenagers' development, favoring their inclusion in the family, at school and in society. Three analysis categories were listed, from the data collection in interviews and group activities:

### **1. Feelings and expectations of parents/caregivers regarding the visually impaired adolescent**

During data collection, we observed that parents have high expectation towards their children's education. Even though some families say the future is their child's choice, all relatives expressed their positive expectations regarding the impaired teenagers – this has direct relation with the encouragement and participation of parents/caregivers in school activities. The following excerpt from one of the interviews illustrates the idea:

"[...] we hope... we can count on him... that he gets a degree [...] in something, you know? [...] we hope we can depend on him [...] we tell him, 'We are supporting you... I hope [...] this works for your future'. We tell him to be interested [...] to study more and more. [...] He says he wants to get a degree... he just doesn't know what, yet [...] he used to say he wanted to be a civil engineer. But the he lost his sight... now... we'll see what to do..." (Wilson)

The encouragement to the studies from parents/caregivers is remarkable – even for the adolescent who currently does not attend school and is learning the braille system in the rehabilitation program:

"... I hope she learns it... I hope she at least learns how to read and write in braille, because [...] she's is going to be independent, at least, wherever she gets braille..." (Marília)

It is important that health and education professionals are attentive to the family's and adolescent's needs. As Defendi (2008) suggests, relatives in the family of an impaired person may feel inferior, compared to the rest of the community; however, we know that when families think about it, they are able to look for ways to change the condition. In this sense, the team needs to accommodate the family and contribute to this transformation.

## 2. The use of resources and strategies in the impaired adolescent's day-to-day life

The school transportation theme was brought in most reports. Inefficient transportation hinders school access for the participation of adolescents and their parents/caregivers in meetings; "transport" is here understood as a resource:

"[...] but I can't enroll P1 at day school because there are no vacancies... there are vacancies at night, only... so she has to go at night... it's complicated. [...] if there were no vacancies, we would have to find it in another city, right? [...] it would be even more complicated, right?" (Manuel)

"[...] then the whole class went to the first grade; and they called me at school because she couldn't go... then I said, 'but why?', 'Because they are proceeding to the first grade, and she's always going to be delayed, and there are no teachers for her'. Then, they said she couldn't stay in that school... She had to go to APAE... So I took her to APAE. I talked to them, I sent her there for some time... but she stopped attending three or four years ago. She doesn't want to go, no way. But they had already told me that's not a place for her, too... because she's not sick... she just has a vision problem..." (Marília)

On the other hand, there are some adolescents who managed to raise educational materials with the help of schools and families who know and seek the rights of these impaired students.

"(...) there is some complete material he was given... so he has it at home and at school... when he's at home, he can study with what he has here... and when he goes to school, he studies with what he has there..." (Wilson)

Siaulyš (2007) points out that the family involvement is essential for the education of visually impaired adolescents; therefore, it requires not only greater involvement of parents in home activities, but also in capacitation programs which support the parents' learning on what is necessary to meet their children's demands.

Bazon (2011) reports the importance of family in the process of school and social inclusion (and our study reports the same), since the family influences the impaired student's school life performance (BAZON et al., 2011). We notice that the families of adolescents who are not properly enrolled in regular schools have an extremely relevant role in their development. In the following statement, a mother talks about using home resources to encourage her daughter to learn braille:

"[...] she can read everything she runs her hand on... sometimes... I tested her on reading medicine boxes that have these... these little dots, right? Then she put her hand on the box... and read the letters, while I was looking at the medicine box. [...] and she kept running her hand on the box... speaking... and the first box she read was Maxindex... and I said 'it even has an X in the end'... Maxindex... it's her eyewash... and she read it." (Marília)

## 3. The relevance of proposing experiences in groups of parents/caregivers

Parents most of the times are thankful for consultations and talk about the importance of the parents groups: an opportunity for them to share their troubles, since all participants have already identified with each other.

"Here? I found it great... I like it. We don't feel so comfortable in front of them... I loved it... here... I don't know... we let it off, you know? We feel what the other feels... I loved it." (Carolina)

These stories come as a complement to what Temporini et. al. (2008) asserts: Group Meetings offer

opportunities for the parents to receive information about the disability, types of adequate interventions, besides offering experience sharing among the members.

Montilha et al. (2006) state that school and rehabilitation must be together, supplying real difficulties of the impaired person; besides that, as this research tries to show, it is fundamental that the family is present in the schooling, rehabilitation and inclusion processes. Family has, as Bazon et al. (2011) assert, the leading role, in present society, on the development of individuals, their personality shaping, and their social evolution and cultural development.

### **Conclusion**

The behavior of parents/caregivers towards the schooling process of visually impaired adolescents is permeated by doubts, uncertainties, access difficulties and lack of information.

After group interventions, parents/caregivers are prepared for behavioral changes; they became able to access information and had their doubts clarified, they could experience and know more about assistive technologies for the impaired person, and make small changes at home, to help ensuring greater autonomy and better performance for the adolescents.

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## **The Use of Assistive Technology Resources by Visually Impaired Teens**

Maria Elisabete Rodrigues Freire Gasparetto  
University of Campinas – UNICAMP  
[gasparetto@fcm.unicamp.br](mailto:gasparetto@fcm.unicamp.br)

Zelia Zilda Lourenço de Camargo Bittencourt  
University of Campinas – UNICAMP  
[zeliaz@fcm.unicamp.br](mailto:zeliaz@fcm.unicamp.br)

Fatima Mendes  
University of Campinas – UNICAMP

Fernanda O. Narita  
University of Campinas – UNICAMP

Ariane P. Bois  
University of Campinas – UNICAMP

Rita de Cassia Ietto Montilha  
University of Campinas – UNICAMP  
[rcietto@fcm.unicamp.br](mailto:rcietto@fcm.unicamp.br)

### **Abstract**

Brazilian law establishes that children and teens with disabilities must preferably be included in regular school. They must also receive specialized support for their visual disability needs and for using assistive technology resources. This study aimed at the development of a project to promote the use of assistive technology resources by visually impaired teens. We conducted this research in 2013, at the Brazilian University Center for Studies and Research in Rehabilitation. The sample population comprises visually impaired teens, which were part of the Cultural Diversity of Countries Project – they studied culture, cuisine and dance from six different countries; they developed activities such as reading, writing, and tasting typical foods. The students made use of assistive technology (glasses, magnifiers, computers and braille machine) to conduct these tasks, and they mostly chose Information Technology resources. This practice enhanced their interest in doing the same at school. The project and assistive technology resources also enhanced the development of a sense of independence and responsibility.

**Keywords:** assistive technology, adolescence and rehabilitation, low vision, special education, visually impaired people.

### **Introduction**

In Brazil, the founding principle of inclusive education is that all children should learn together, no matter the difficulties or differences they may have. The law developed important guidelines for National School Systems, in order to guarantee educational access and continuity to visually impaired

children at regular school. These guidelines include strategies and educational orientation for the education of these children (Brasil, 2007).

Brazil is a large country with great diversity and contrasts, thus not all policies cover the educational needs of all visually impaired teens; these needs should be met by specialized services.

Vision is the sense that supplies the brain with information about the environment, and it is capable of organizing other sensorial information. Visual deficiency can dramatically affect life experiences, limit routine duties in the everyday life and thus compromise life quality.

IBGE (Brazilian Institute of Geography and Statistics) data, according to 2010 Demographic Census, show that 45.6 million people in Brazil have some kind of disability. This figure corresponds to 23.91% of the Brazilian population. From this group, 12.7 million (6.7% of the total population) have at least one serious disability – with prevalence of visual disability in 3.5% of the population (IBGE, 2010).

Blindness is the inability to see. Low vision is visual acuity lower than 6/18 and equal to (or better than) 3/60 in the best eye, with the best correction. Visual acuity ranging from 20/70 to 20/200 is considered moderate visual impairment, or moderate low vision. Acuity ranging from 20/200 to 20/400 is considered severe visual impairment, or severe low vision; and visual acuity from 20/500 to 20/1000 is considered profound visual impairment, or profound low vision (WHO, 2003).

Visually impaired teens need to know strategies, resources and equipment to make their academic and daily activities easier (Ferroni & Gasparetto, 2012). The role of interdisciplinary rehabilitation teams is to foster this knowledge. The rehabilitation program does not seek to help on the eyes' physical or functional recovery; instead, it functions as a group of interventions performed by an interdisciplinary team that tries to build new abilities and a new identity (Montilha & Arruda, 2007).

Visual rehabilitation professionals, besides having broad knowledge about the adolescents' visual condition, also need to understand the related psychological and social aspects, in order to prepare the environment in which assistive technology resources can be used towards educational and social inclusion.

Assistive technology is an interdisciplinary field of knowledge that comprises products, resources, methodologies, strategy practices and services that aim to promote autonomy and independence for blind and low vision people. The Assistive Technology makes use of optical aids, non-optical aids, computerized aids and other resources (Gasparetto et al., 2012).

Computers are an important tool which can be extensively applied to students with disabilities, in order to allow their access to digital environments and promote their educational and social inclusion (Cook & Hussey, 2002).

From the above this study aimed at developing a project to promote the use of assistive technology resources by visually impaired teens.

## **Methods**

This study was held at the Brazilian University Centre for Studies and Research in Rehabilitation. Eight visually impaired teens were the study's sample population. Group sessions were conducted along the Cultural Diversity of Countries Project, in which teens selected one of the following subjects to participate in the Project: Portugal, Egypt, Italy, Mexico, Israel or Africa. Visually impaired teens were told to develop reading, writing and typical food tasting tasks. Assistive technology was available for them to conduct the tasks: optical aids (glasses, magnifiers); non-optical aids (magnification, high contrast, lights); information technology (screen magnification and speech synthesis software, Dosvox, Microsoft Windows tools and braille machines). Data were collected from August to December 2013. The research was approved by the Research Ethics Committee of the University Centre (process number: 570/2010). The responsible team agreed that adolescents could participate in the study and signed the Terms of Informed Consent.

## **Results and Discussion**

The sample population comprised 8 visually impaired teens: two blind and six low vision, aged between 12 and 18 (average 16.2 years old); 62.5% were females and 37.5% were males.

At the time, the majority of the teenagers (62.5%) attended high school; 25.0% attended basic school and one student (12.5%) was not enrolled in school. The main causes for their visual impairment were: congenital cataract; congenital glaucoma; Leber's congenital amaurosis; diabetic retinopathy; corneal opacity; and visual loss due to parameningeal rhabdomyosarcoma.

The visual acuity of farsighted teenagers ranged from 20/100 to 20/1000, and nearsighted acuity ranged from 1.0M to 6.0M. Most of the teenagers (75.0%) showed congenital visual impairment, and only 25.0% had acquired disability.

Figure 1 indicates that the biggest group of low vision teenagers (50.0%) presented severe low vision; 33.4% of the teenagers presented moderate low vision; and 16.6% had profound low vision. Visual acuity levels for farsightedness ranged from 20/100 to 20/1000; nearsightedness acuity ranged from 1.0M to 6.0M.

The adolescents explored geographical, political, cultural and gastronomical aspects of the six countries of the Project; they performed activities such as reading, writing, preparation and tasting of typical foods, and also researched on dance and music.

For these tasks, they made use of optical aids, non-optical aids, computerized technology, Braille machines, as well as auditory, tactile cues and environmental exploration, which prioritized the use of their residual vision.

Figure 1 - Characterization of visually impaired teenagers considering the impairment type, visual acuity, visual disability type, low vision degree and use of assistive technologies resources



Subject	Impairment type	Visual acuity		Low vision degree	Assistive technology resources			
		Far-sightedness	Near-sightedness		Optical aids	Non-optical aids	Information technology	Braille machine
A.	Low vision	20/100	1.2M	Moderate	Glasses	Large print	Tools available in Windows	-----
L.	Low vision	20/200	2.0M	Severe	-----	-----	Tools available in Windows	-----
B.	Low vision	20/100	1.0M	Moderate	Glasses	High Contrast	Dosvox Magnification Software	-----
D.	Low vision	20/1000	8.0M	Profound	-----	-----	Dosvox speech synthesis systems	Use
N.	Low vision	20/200	2.0M	Severe	Glasses	Large print	Dosvox Magnification Software	-----
E.	Low vision	20/200	2.0M	Severe	Magnifiers	Large print	Dosvox Magnification Software	-----
J.	Blind	-----	-----	-----	-----	-----	Dosvox speech synthesis systems	Use
F.	Blind	-----	-----	-----	-----	-----	Dosvox speech synthesis systems	Use

In order to accomplish the activities of the Cultural Diversity of Countries Project, 66.6% of the adolescents wore glasses and used hand magnifiers. It is possible to assume that 33.4% of the low vision teenagers who did not use optical aids resources were avoiding it, due to typical teenager psychological factors. It is known that group acceptance is a determinant factor in behavior, especially during adolescence; therefore, the use of goggles or aesthetically peculiar resources might cause discomfort on their self-esteem and self-acceptance related to their disability conditions (Ormelezi, 2010). About non-optical resources, 66.6% of the adolescents made use of large print and high contrast. Three teenagers typed texts and messages in a braille machine. The majority of them (87.5%) used specific software for the visually impaired, such as Dosvox and Microsoft Windows tools. This preference may happen due to the fact that Information Technology resources are present in most people's lives (in computers, automated teller machines, games etc.) and represent a method of fast and confidential access.

### Conclusions

Most of the visually impaired teens declared to have been introduced to and trained on the use of Information Technology resources only at the Brazilian University Centre for Studies and Research in Rehabilitation.

It is worrying to notice low vision students using Information Technology resources only at specialized institutions, as these resources are also available in regular schools. Information Technology is a valuable resource for the teaching-learning process.

The visually impaired teens used assistive technology resources to conduct the Cultural Diversity of Countries Project, and this practice enhanced their interest in doing the same at school. The project and the assistive technology resources also enhanced the development of a sense of independence and responsibility.

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## **Collaborative Research in Continuing Education for Teachers in Alternative Communication Technologies**

Munique Massaro  
São Paulo State University – Brazil  
[munique\\_massaro@yahoo.com.br](mailto:munique_massaro@yahoo.com.br)

Débora Deliberato  
São Paulo State University – Brazil  
[delibera@marilia.unesp.br](mailto:delibera@marilia.unesp.br)

### **Abstract**

According to Brazilian literature, collaborative research has been an effective methodology in continuing education programs for teachers. Thus, we aimed at analyzing an intervention program of augmentative and alternative communication through collaborative work with teachers of students with and without disabilities from early childhood education in order to provide continuing education for teachers in alternative communication technologies. Participants in the survey were the researcher, an early childhood education teacher of a special classroom with no experience in the field of Alternative Communication, two classroom assistants, seven 3-6 year old students with complex communication needs, three teachers of regular early childhood education classrooms and 15 students from each class, totaling 45 students without disabilities. We employed a 3-tier Alternative Communication Program. After selecting three children's songs according to the teacher's pedagogical planning, we created and adapted resources through augmentative and alternative communication systems, and collected data through audio and video recordings, a logbook and protocols. After data collection, we laid out all information in one single text. Based on such document, content analysis was carried out. Results showed that teachers made use of systems of augmentative and alternative communication in combination with children's songs during the intervention program. However, students without disabilities were confused when confronted with diversity and augmentative and alternative communication. This research emphasizes the importance of continuing education for teachers in order to continually enable new communication partners without disabilities.

**Keywords:** augmentative and alternative communication, collaborative work, early childhood education.

### **Introduction**

According to Brazilian literature, collaborative research has been an effective methodology in continuing education programs for teachers. However, studies are mostly aimed at the education of elementary school teachers.

Furthermore, the inclusion process has demanded a collaborative network of a more diverse body of professionals in order to build up new possibilities aimed at including children with disabilities in the school context (Soto, Müller, Hunt, & Goetz, 2001).

This partnership can be held between regular teachers and teachers of special education in collaborative learning, but can also be composed of a multidisciplinary team of professionals in the areas of

education and health, such as occupational therapists, psychologists, physiotherapists and speech therapists, among others, in cooperative consultation (Mendes, 2006; Melo & Ferreira, 2009; Briant & Oliver, 2012).

Given this context, our purpose was to analyze an intervention program of augmentative and alternative communication through collaborative work with teachers of students with and without disabilities from early childhood education.

## **Method**

Participants in the survey were the researcher, an early childhood education teacher of special classroom with no experience in the field of Alternative Communication, two classroom assistants, seven 3-6 year old students with complex communication needs, three teachers of regular early childhood education classrooms and 15 students from each class, totaling 45 students without disabilities.

Data collection took place from May to December 2010. We put into practice a 3-tier Alternative Communication Program in a collaborative work setting between researcher and teachers. In the first phase, the teacher was provided with systematic guidance concerning language and communication, Augmentative and Alternative Communication Systems as well as the link between such systems, communication issues and the acquisition of literacy. In the meantime, we identified the school curriculum and the class pedagogical plan. In the second phase, by means of interviews with the teacher, we identified the school routine and the students' abilities. The third step consisted of creation and adaptation of resources through Augmentative and Alternative Communication Systems and development of educational activities encompassing three children's songs. We approached each selected song throughout five meetings, three of them with students with disabilities alone and two with a regular education class.

During the course of activities, assisted evaluations also took place and the teacher made a registry of activities related to each song's theme. We collected data through audio recordings, video footage, a registry book and through the filling out of forms. Then, we incorporated the information gathered from assisted evaluations and from other activities carried out by the teacher and recorded it into one single written text joined to transcriptions of the recorded material. Based on this document, we performed qualitative content analysis.

## **Results and Discussion**

The results indicated that the four teachers used the systems during the intervention program along the researcher, based on the model established, and the teacher of special classroom used the systems in other educational activities she developed with students with disabilities.

In this research, augmentative and alternative communication systems were constituents of the children's language, providing and enhancing opportunities for human development. They also allowed student participation in educational activities, in other words, augmentative and alternative communication systems enabled the teaching of content through children's songs.

However, students without disabilities were confused when confronted with the diversity of children with disabilities and with augmentative and alternative communication during the intervention program.

According to the literature, teaching of alternative languages in schools could allow for improvements in the capabilities of different partners in the process of interaction with the diversity of children and young people with disabilities and complex communication needs (Von Tetzchner, 2009). In that respect, given inclusion policies, a significant amount of courses, studies and research have focused on the education of teachers. They especially relate to training in connection with the area of augmentative

and alternative communication (Araújo, Deliberato, & Braccialli, 2009).

The undertaking of activities through augmentative and alternative communication systems in schools must be carefully devised and there is a need for competence in the use of these systems (Von Tetzchner, 2009; Von Tetzchner, Brekke, Sjothun, & Grindheim, 2005).

### **Conclusions**

This research made it possible to implement a program of activities with songs adapted with augmentative and alternative communication systems that involved students with and without disabilities.

Augmentative and alternative communication systems can not only contribute to the development of communication and language in children with disabilities and complex communication needs, but also be a resource to teach pedagogical content itself.

This research emphasizes the importance of expanding Brazilian research on the subject to deepen the knowledge in the area, especially those that contribute to the education of early childhood education teachers in augmentative and alternative communication. Furthermore, it emphasizes the importance of continuing teacher education in order to continually enable new communication partners without disabilities.

### **Acknowledged**

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## **Semente Project: Early Stimulation and Guidance for Parents in Occupational Therapy**

Patricia C. S. Della Barba  
Federal University of São Carlos  
[patriciadellabarba@yahoo.com.br](mailto:patriciadellabarba@yahoo.com.br)

Raquel C. Pinheiro  
Federal University of São Carlos

### **Abstract**

Developmental surveillance and early stimulation are actions that are expanding in the field of pediatric occupational therapy. Facilities' health and education have improved the strategies for identifying developmental delays and established deficits. Thus, it is necessary to form a network of support involving the host families and children who present risks in effective development and behavior by stimulating aspects of the child's overall development—not only motor, but cognitive, language, self-care, and socialization. This activity aims to use developmental surveillance procedures for identification and early intervention in cases of developmental delays in children from birth to four years old. Standardized instruments are used for screening, evaluation, and monitoring of child development and to allow us to understand the performance of children in their daily activities. Based on the results of assessment, occupational therapy intervention procedures were performed directly with children and their parents to improve quality of life. Participants were infants and children with movement disorders, developmental delays, and previously diagnosed disorders who were referred for early simulation programs. Activities were developed involving graduate and post-graduate students in occupational therapy courses, and consisted of an opportunity to improve techniques and develop multidisciplinary teamwork with possible academic gains.

**Keywords:** early intervention, occupational therapy, community-institutional relations

### **Introduction**

Currently, evaluation in early intervention is defined as a flexible process of collaboration between professionals and families focused on understanding a child's potential and resources in the contexts of his or her health and education, involving the sharing of information and observations as well as organization centered on the family (Serrano & Pereira, 2011).

In some countries, such as Portugal, early childhood intervention (ECI) has legal force (Portugal, 2009) and is understood as a set of support measures aimed at the child and family, including preventive and rehabilitative actions in education, health, and social action (Portugal, 2009).

In Brazil, however, there are no clear policies in relation to the early diagnosis of problems in child development, even with regard to the establishment of guidelines for intervention with high-risk children. In 2011, the Federal Government launched a national plan on the rights of persons with disabilities—Living Without Limits (Brazil, 2013) when the "Orientation to Early Detection and Intervention" action was announced for 2014.

Actions regarding early intervention in the field of pediatric occupational therapy are expanding in

Brazil. Research and intervention initiatives in this field have also occurred within the university environment, but some projects have gained strength and have focused on the identification of developmental delays and deficits established using health and education equipment.

One university activity focused on training educators and daycare graduate students in occupational therapy on the topic of child development has shown that the theoretical and practical strategies used provided expansion of knowledge about typical child development as well as the instrumentalization of the participants to identify possible risk factors for the development of children who are monitored daily in childcare (Della Barba et al., 2013).

Another project aimed at identifying ways of caring for as well as expertise in monitoring children in primary health care was conducted with undergraduate students in occupational therapy, community health workers, and users of family health units by using dynamic strategies to work on the content concerning child care in this context. The results showed great potential regarding dialogue between the knowledge of the university and that of healthcare workers, participants' appropriation of concepts about child development, and contributions to the range of possibilities for the classification of the public health system with regard to comprehensive child care (Barros & Della Barba, 2013).

The initiatives described show results related to the questioning of aspects concerning child development in the context of early childhood education and primary health care through the training of its participants. However, it is still considered necessary to have a support network for families and children who present developmental risks that acts effectively in stimulating aspects of children's overall development, not only physically, but also in relation to cognitive, linguistic, self-care, and socialization aspects.

In these terms, this study aims to present the experience of an extension activity using development surveillance procedures for early identification and intervention in cases of developmental delays in children from birth to four years old.

## **Method**

The Semente Project is an extension activity offered by undergraduate Occupational Therapy faculty members in the School Health Unit at the Federal University of São Carlos. It consists of an intervention in the area of early stimulation in occupational therapy.

The project aims to assist children from birth to four years old who are referred by different city facilities, such as schools and day care centers, basic health units, family health units, children's hostels, and municipal school hospitals. From the individuals' arrival at the service, tools related to screening, assessment, and monitoring of child development are used.

The most-used instrument in this project was the Denver Development Screening Test- II (Frankenburg et al., 1992). First created by Frankenburg et al. in 1967, this test aims to monitor the neurological development of children from birth to six years old. It is a screening tool and can detect conditions of child development at an early stage. It evaluates four areas/categories: gross motor, fine motor-adaptive, language, and personal-social factors (Moraes et al., 2010).

Assessments were also conducted that allowed us to understand children's performance in their daily activities and detect risk factors that might interfere. For this purpose, anamnesis was used by the staff of the School Health Unit (Della Barba & Agnelli, 2012). It addressed issues related to pregnancy, birth, and development in the first months of life; a description of everyday activities, leisure, and child play; the use of equipment related to assistive technology; and diagnostic hypotheses and complaints put forward by family members.

In addition, to evaluate children's daily life and everyday activities, school and home visits were scheduled that assessed the children in the different contexts in which they took part. Note was taken of their participation and performance in the proposed activities conducted in these environments. Thus, it

was possible to evaluate, in addition to the child's performance, the need for environmental modifications to improve his or her participation.

Based on the evaluation results, occupational therapy intervention procedures were performed directly with children, their parents/caregivers, and educators to improve quality of life, favoring their inclusion in different areas of everyday life.

### **Results and Discussion**

During 2013, care was given to 10 babies within the School Health Unit. These babies, with ages ranging from 10 months to 3 years old, had different pathologies. Table 1 shows the characterization of each child that was cared for.

Sessions were held weekly, lasting 50 minutes. They were conducted by undergraduates, graduate students in occupational therapy, and occupational therapist volunteers, as described in Table 2.

Initially, each baby's development was evaluated; then, treatment plans and progress reports were traced, allowing students and volunteers to form a theoretical approach toward their experiences with the patients. The cases were discussed with the team, allowing for better targeting of approaches to be used during the sessions and a deeper theoretical study of the issues of child development as well as the pathologies present. This allowed for an opportunity to improve techniques relating to the development of multidisciplinary teamwork.

The theoretical study of the conditions contributed to expanded knowledge in the undergraduate and graduate students.

As posited by Serrano and Pereira (2011), assessment and intervention allowed for collaboration between professionals and family and have involved the sharing of information based on the health and educational contexts in which children participate.

It is expected that, through this project, there will be an approximation of the assumptions of Decree-Law no. 281/2009 of Portugal (2009), bringing about the activation of a set of support measures focusing on the child and family, including preventive and rehabilitative actions in education, health, and social action.

### **Conclusion**

The actions of the Semente Project aim to further improve care for children at risk for developmental delay or established disorders and are directed at children and their families as well as at health professionals and childcare educators, focusing on systemic work and, thereby, forming a project of great social relevance.

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**Table 1: Characterization of the participants**

<u>Name</u>	<u>Gender</u>	<u>Date of birth</u>	<u>Diagnosis</u>
R.R.W.	M	February 8, 2011	Arthrogryposis Multiplex Congenita
L.H.C.	M	October 22, 2009	Developmental delay
P.H.R.	M	May 28, 2012	Developmental delay
I.I.S.	M	April 3, 2010	Cerebral palsy
B.F.V.	F	November 10, 2011	Cerebral palsy
P.G.N.	M	March 18, 2011	Cerebral palsy
I.V.S.	F	January 10, 2011	Cerebral palsy
N.C.B.	F	December 22, 2011	Retinopathy of prematurity
P.F.S.	M	February 19, 2011	Down syndrome
P.S.A.	M	August 2, 2012	Down syndrome

**Table 2: Therapist characterization**

NameCharacterization

A.C.M.	Student in Occupational Therapy
L.P.P	Student in Occupational Therapy
A.F.R.	Graduate student in the Occupational Therapy Graduate Program
A.F.J.	Graduate student in the Occupational Therapy Graduate Program
B.M.	Occupational Therapist
R.C.P.	Temporary Lecturer in the Department of Occupational Therapy

P.D.B Head Lecturer in the Department of Occupational Therapy

## **Promoting Inclusion through Positive Behavior Supports in Preschool**

Sandra Hess Robbins  
University of West Georgia  
[srobbins@westga.edu](mailto:srobbins@westga.edu)

Jessica Lynne Bucholz  
University of West Georgia  
[jbucholz@westga.edu](mailto:jbucholz@westga.edu)

### **Abstract**

A collaborative project between special education and early childhood faculty was initiated to facilitate a university preschools transition to becoming an inclusive program. The project was designed to support the development and implementation of a system of School Wide Positive Behavior Support (SWPBS). The primary investigators developed and provided 15 hours of training around SWPBS for the teachers and staff during the fall semester. Then, during the spring semester, the investigators administered fidelity of implementation measures and provided the staff with feedback and follow up support. In addition, data were collected to include child level data examining the effect of SWPBS on the children's social skills and two different measures of social validity.

**Keywords:** SWPBS, Preschool, Inclusion, Social Skills

### **Introduction**

In a preschool setting, challenging behaviors are an increasing problem; pre-school teachers report that challenging behaviors are their single greatest concern (Hemmeter, Fox, Jack, & Broyles, 2007; Alkon, Ramler, & MacLennan, 2003). Challenging behaviors have been defined as behaviors that are inappropriate for a child's developmental level and/or cultural background, including but not limited to behaviors that cause injury to self or others, cause damage to the physical environment, interfere with learning new skills, or socially isolate a child (Conroy, Dunlap, Clarke, & Alter, 2005; McCabe & Frede, 2007). Children who display any of these challenging behaviors are at a higher risk for problematic developmental trajectories, school failure, and social maladjustment (Powell, Dunlap, & Fox, 2006).

School Wide Positive Behavior Interventions and Support (SWPBS) is the systematic, data driven use of tiered intervention strategies to decrease challenging behaviors (Fox, Carta, Strain, Dunlop, & Hemmeter, 2010; Sugai & Horner, 2002). SWPBS has shown great promise for teaching children appropriate behaviors, and decreasing inappropriate and challenging behaviors (George, George, Kern, & Fogt, 2013; Chitiyo, Michael, & Chitiyo, 2012).

Evidence supports the implementation of SWPBS through a step-wise process focusing on three to five positively stated program goals. For example: Be Respectful, Be Safe, and Be a Team Player (Carter et al. 2011; Fox & Hemmeter, 2009). Fox and colleagues (2010) developed a three-tiered pyramid model of SWPBS. In the pyramid model the first tier involves two levels of provisions: the first of which focuses on developing and modeling nurturing and responsive relationships. The next provision is the development of supportive environments. Tier two of the pyramid involves the direct instruction of

social and emotional skills (Fox et al., 2010). The third tier focuses on individualized behavior interventions. Using the first two tiers of the pyramid model, this study aimed to support inclusion among preschool age children and add to the body of evidence for SWPBS by focusing on (a) fidelity of implementation, (b) child level social skills, and (c) measures of social validity.

## Method

### Participants and Setting

The study was conducted in an inclusive classroom at a university housed preschool program. The preschool program included four classrooms with approximately 20 children in each. Each classroom housed a lead teacher and an assistant. Table 1 includes the teacher demographic information for the 10 adult participants. Child level data were collected in one of the four classrooms. The designated inclusive classroom examined for this study included 18 children with and without disabilities and 4 adults: a general education teacher, an assistant, a special education teacher, and a special education assistant. Table 2 includes the baseline scores on the Social Skills Improvement System (Gresham & Elliot, 2008) for each child participant.

**Table 1: Adult Demographic Table**

Name	Job Title	Gender	Age Range	Education/ Degrees Held	Ethnicity	Family Income
Carol	Lead Teacher	Female	40-49	Bachelor's Degree	Caucasian	20-40,000 per year
Ashley	Lead Teacher	Female	50-59	Bachelor's Degree	Caucasian	60-80,000 per year
Lisa	Assistant	Female	40-49	High School Diploma	Caucasian	20-40,000 per year
Leigh	Assistant	Female	30-39	High School Diploma	Caucasian	40-60,000 per year
Jessica	Teacher	Female	40-49	Bachelor's Degree	Native American	60-80,000 per year
Jackie	Staff	Female	30-39	Bachelor's Degree	African	20-40,000 per year
Alyssa	Carroll Co. Schools - PALS	Female	30-39	High School Diploma	Caucasian	20-40,000 per year
Robyn	SPED Teacher	Female	40-49	Master's Degree	Caucasian	Left Blank
Melissa	Assistant	Female	20-29	Associate's Degree	Caucasian	Left Blank

The adult participants were trained on the first two tiers of the pyramid model during the fall semester. During the training, school wide expectations, positively stated rules, and a system of positive reinforcement were developed and agreed upon. Over the winter break, the investigators created the SWPBS materials (e.g. rule posters, prompt cards, caught being good poster, token systems, and prize

boxes). Immediately after the winter break the teachers began implementation of PBS through: (a) modeling positive relationships with children, families, and colleagues, (b) using preventative practices such as classroom and safety rules, and © supporting children’s social-emotional well-being. The Skillstreaming curriculum (McGinnis, 2012) was introduced for all classrooms as a social-emotional teaching strategy. Specifically in the inclusive classroom, skills from the curriculum were chosen based on the results of the initial social skills assessment.

**Table 2: Social Skills Improvement System Baseline Scores for Child Participants**

Name	SS Raw Score	SS Standard Score	SS Confidence Interval	SS Percentile Rank	PB Raw Score	PB Standard Score	PB Confidence Interval	PB Percentile Rank	AS Raw Score
Chris789289-953230117113-1218313									
Allie697673-79833129125-1339316									
John296259-65139127123-1319330									
Mary919390-96331310096-1045510									
Rick799390-963322108104-1127020									
Matt9110198-10452109490-98387									
Brandon95103100-10658109490-983810									
Luke668580-881827113109-1177814									
Jack809491-9735149995-1035312									
Brad95103100-1065879086-94269									
Caroline889087-932899692-100436									
Jake103108105-1116989288-96306									
Allen819491-973619104100-108659									
Marie858885-91241410399-107629									
Ron95103100-1065868985-93215									
Seth738986-922626112108-1167612									
Laura879087-9327109894-1024711									
Zach879895-10145149995-1035311									

**Measures**

The Social Skills Improvement System (Gresham & Elliot, 2008) was used to collect data on social skills and problem behaviors in the inclusive classroom. The assessment was given in the fall before the teachers were trained and then again in the spring after the teachers began implementation of PBS. The Inventory of Practices for Promoting Social Emotional Competence (The Center on the Social and Emotional Foundations for Early Learning, n.d.) and the School- Wide Benchmarks of Quality

(Revised) Scoring Form (Kincaid, Childs, & George, 2010a) were used to evaluate fidelity of implementation. The investigators completed the fidelity measures at the start of PBS implementation right after the winter break. After the initial results, teachers were provided with feedback and the measure was completed a second time six weeks later. In addition, the School-Wide Benchmarks of Quality (Revised) Team Member Rating Form (Kincaid, Childs, & George, 2010b) was used for teachers to self-reflect on their implementation of PBS. The team member rating form includes the same areas as the traditional scoring form. The lead teachers in each classroom completed the self-evaluation form two times (i.e. at the same time the fidelity measures were given). Finally, the Intervention Rating Profile – 15 (Martens, & Witt, 1982) and the Teacher Questionnaire on Social Validity of Implementing Early Childhood Positive Behavior Support (Montana Department of Public Instruction, n.d.) will be given to the teachers at the end of the study to gain social validity data.

### **Results and discussion**

The final round of data collection will be completed in mid-April. The expected results include an increase in fidelity of implementation as a result of follow up support and feedback, moderate improvement in children's social skills, and evidence of teacher buy-in and acceptability of SWPBS at the end of the project. Moreover, increased levels of support and inclusion of children with disabilities in the university preschool program is expected.

### **Conclusions**

Next year, the university preschool director, teachers, and staff plan to establish a Positive Behavioral Support (PBS) team and to conduct regular, monthly team meetings. The first agenda item for the PBS team will be to develop a clear mission and purpose. Monthly meetings will be designed to support the mission/purpose, to review data, and to engage in a systematic solving process.

An effective procedure for dealing with discipline is one area identified as a need of future examination because there is no systematic discipline system in place at this point in time. The team needs to develop a discipline plan that is described in a narrative and graphic formats. The plan will also need to include documentation procedures. The team needs to discuss the possibility of developing discipline referral forms that include information useful for further decision making. As of right now, there is no data collection system in place. The team will need to collect data on behavior as well as additional data such as student attendance, teacher attendance, and information from surveys. The data collected should be analyzed by the team at least once a month. Something that would help greatly with this process would be to clearly define problem behaviors and differentiate between the major and minor behaviors. When problem behaviors come up there needs to be a range of consequences/interventions that are established, documented, and consistently delivered.

Rewards have been established for the children when they are acting appropriately but the team needs to vary the rewards to maintain the student's interests. The rewards also need to be consistently linked to the expectations and rules of their teachers and classrooms. In addition, the team needs to examine the ratio of praise to correction, create a process for allowing the children to be involved in identifying and developing rewards, and consider incentives for faculty and staff.

The PBS team will need to develop a behavioral curriculum that includes teaching expectations and rules and the lessons need to be embedded into subject area curriculum. The preschool director and investigators considered the possibility of developing a set of lesson plans that teachers can pull from. These lessons can be borrowed from other sources including the Center for Social Emotional Foundations for Early Learning. To maintain PBS over time, it is recommended that teams develop and use a curriculum to teach the components of the discipline system to all staff as well as develop a plan for orienting incoming staff and students on the same system. This is basically a plan for establishing

consistent procedures over time.

Finally, teachers need reminders and support to continue implementing PBS. Ensuring the use of immediate and specific praise when acknowledging good behavior should be a priority. This can be accomplished through fidelity monitoring, peer observations, and staff incentives.

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## Use of a Universal Design for Learning Artifact to Prepare

Dr. Sherry Mee Bell,  
The University of Tennessee  
[sbell1@utk.edu](mailto:sbell1@utk.edu)

Melissa Martin,  
The University of Tennessee

Dr. Steve McCallum  
The University of Tennessee

### Abstract

Due to accountability pressures and budget constraints, increasingly general and special educators must address a wide range of student special education needs in inclusive settings. Further, growing evidence supports the effectiveness of inclusive practices on student achievement and behavior (Friend & Bursuck, 2012). Teacher education candidates at the University of Tennessee participate in three professional preparation courses, Special Education and Diverse Learners, Applied Educational Psychology, and Educational Technology. The centerpieces of these companion courses involve student-created artifacts designed to develop expertise in meeting the needs of diverse student populations, including those with disabilities. The artifact in the Special Education and Diverse Learners course requires the development of a lesson plan based on principles of universal design for learning. The artifact in the Educational Psychology course is Creating and Sustaining Environments for Learning (CSEL). The artifact in Educational Technology is creation of a classroom website. These artifacts are in their eighth year of implementation and are completed by approximately 200 teacher education candidates per year. The purpose of this paper is to describe in some detail the universally designed lesson plan (UDLP) artifact and its salient characteristics, as well as data supporting its utility.

**Keywords:** universal design for learning, diversifying instruction, teacher preparation

### Introduction

General and special educators increasingly must address a wide range of student needs related to both disability and diversity (Turnbull, Turnbull, Wehmeyer, & Shogren, 2012). All teacher education candidates at the University of Tennessee (UT) participate in three professional preparation courses, one of which is Special Education and Diverse Learners. Candidates enroll in these courses during the senior year, prior to a yearlong teaching internship experience. Approximately 14 sections of each course per year are offered and enrollment is mixed; that is, candidates from across a range of teacher preparation areas (e.g., elementary education, middle and secondary content areas, music and art education) may be enrolled in a given course of 20 to 30 students. This heterogeneity allows for a rich exchange of ideas and experiences. The centerpieces of these courses involve student-created artifacts designed to develop expertise in meeting the needs of a diverse range of learners. The artifact in Special Education and Diverse Learners, a lesson plan based on principles of universal design for learning (UDL), is the focus of this paper.



Initially conceptualized in architecture (e.g., ramps rather than stairs to allow physical access for more individuals), UDL has been applied in a variety of settings, including education (Hitchcock, Meyer, Rose & Jackson, 2002) for over a decade. With UDL, the focus is not on an individual student's needs. Rather, it is on identifying and eliminating barriers to learning for all diverse learners. The premise of the UDL framework is providing all learners with multiple means or representation, action and expression, and engagement (Center for Applied Special Technology, CAST, 2011).

The first component of the UDL framework, multiple means of representation, refers to providing ways for students to become knowledgeable learners (CAST, 2011). This component provides learners with a variety of methods, instructional strategies, and materials to represent content and curricular standards to increase comprehension and improve skills. Representation may include textbooks, electronic text, text-to-speech software, and manipulative materials, all of which are effective tools for diverse classrooms. Science teachers teaching students to identify and compare the major components of the solar system, for example, can have students read a text about the solar system, analyze photographs and visual simulations of the solar system, and listen to audio recorded interviews with astronauts. Providing students with three different representations of one content standard will increase comprehension and mastery.

Engagement is the second component of the UDL framework. This element promotes motivation among learners by allowing student choice, fostering collaboration, and varying demands to accommodate each diverse learner (CAST, 2011). Teachers can differentiate instruction by providing learning activities that are based on student need. For example, some students can be engaged in an acting out or walking through of the rotation of the Earth, moon and sun. But students with physical disabilities may orally describe the process because they are physically unable to participate in acting out. This choice allows students to facilitate their own learning based on specific learning styles and needs. Additionally, the variety promotes engagement among learners because it allows each to tailor instruction to best meet individual needs, making both instruction and assessment meaningful for each learner.

Action and expression, which comprises the second component of the UDL framework, encourages students to be able to respond and express their mastery and comprehension in a variety of ways (CAST, 2011). These assessments should not only address the required content standards, but they should also be purposeful and meaningful for each learner. For example, students can use a variety of multimedia tools (e.g. Microsoft Office, Inspiration) instead of writing a lengthy essay to demonstrate, or assess, mastery of the content standard described above. For example, students can use software to create a graphic organizer that compares two or more planets in the solar system. This variety allows diverse learners to express their mastery of the content standard in an alternative way.

The purpose of UDL is not to individualize instruction for every learner in a general or inclusive setting. Instead, it is designed to provide multiple ways and methods for all students to learn and demonstrate mastery of skills and standards. To ensure teacher education candidates at UT can incorporate UDL principles in lesson planning, they develop a lesson plan from their grade level/content area for a specific class constellation that includes students with a range of disabilities (e.g., vision impairment, hearing loss, spina bifida, reading disabilities, autism, emotional disturbance, etc.) and students who are English language learners.

## **Method**

Teacher education candidates use an online UDLP template, created by special education faculty with input from general education faculty, to develop their own unique UDL plan, appropriate for their grade level and content area. Candidates must develop curriculum objectives (extracted from Tennessee state curriculum standards), instructional activities, and assessment tools that address the needs of all the

students in their specified class constellation. Students develop a UDLP for a general education class at a selected grade level, consistent with the licensure they are seeking. They select at least one English language learner and two students with disabilities from a menu of short case studies. In addition to students with disabilities and English language learners, teacher candidates must address the typically achieving, high achieving, and low achieving students who are commonly found in any general education classroom. Teacher candidates are also asked to construct a layout of the classroom, taking into account seating arrangement, grouping of students to achieve lesson objectives, materials and/or equipment, and specific needs of certain students (e.g., making room for a wheelchair).

The UDLP and other artifacts, currently in their eighth year of implementation at UT, were developed in accordance with accountability guidelines of the Council for Accreditation of Educator Preparation (CAEP, 2013). The UDLP artifact is linked to the following teacher education standards developed by the Council of Chief State School Officers' Interstate New Teacher Assessment and Support Consortium (CCSSO, InTASC, 2011): (a) The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make the discipline accessible and meaningful for learners to assure mastery of content; (b) The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards; (c) The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways; (d) The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context; and (e) The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

Teacher education candidates post working drafts of the artifacts on an electronic portfolio site; instructors provide feedback via rubrics. The UDLP is evaluated in the broad areas of Curricular Objectives, Instructional Strategies, Materials and Resources, Diversifying Instruction, Assessment, and overall Organization and Clarity. Teacher candidates must demonstrate that the objectives are appropriate for the students in the class constellation, that the instructional activities provide multiple modes of engagement by the students (e.g., reading material using a computer, cooperative groups, peer tutoring, creating student products such as graphic organizers, and role playing), and that the assessment is both tied directly to the stated objectives and is fair and nondiscriminatory. The assessment must be accessible to all students. For example, students whose reading skills are below expectations may have the assessment read to them via computer, by a teacher, or by a peer. The template and rubrics for the UDLP were developed initially and have been enhanced over the past eight years by a group of special education professors and graduate students. Following each year of implementation, a completed plan is chosen at random and evaluated by five to seven professors to establish reliability of scoring of the rubrics in the categories indicated above. If inter-rater reliability falls below .80, additional discussion and scoring are performed to both improve the clarity of instructions for future students and to improve reliability of scoring.

### **Results and Discussion**

Five years of data from teaching internship program completers are presented in Table 1. Teaching interns are requested to respond to a follow up survey the summer following completion of internship. The response rate averages from 75% to 80% completion. Results from years 2008-2009 through 2012-2013 indicate that interns in general believe they had sufficient experiences in teaching students with diverse learning needs (92% to 98% of respondents across these five years answered yes). The interns also reported they feel adequately prepared to work with culturally diverse students (87% to 93%) and

to work with at-risk students (85% to 91%).

**Table 1: Responses of Teaching Interns to Post Internship Survey on Effectiveness of Teacher**

2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
N = 177	N = 155	N = 155	N = 119	N = 137

During the internship did you have sufficient experiences in teaching students with diverse learning needs?

173	145	149	110	128
(97.7%)	(93.5%)	(96.1%)	(92.4%)	(93.4%)

Do you feel adequately prepared to work with culturally diverse populations?

158	138	135	104	126
(89.3%)	(89.0%)	(87.1%)	(88.9%)	(93.3%)

Do you feel adequately prepared to work with at-risk students?

151	131	134	99	123
(85.4%)	(84.5%)	(87.0%)	(84.6%)	(91.1%)

### Conclusion

In conclusion, the UDLP artifact prepares future teachers in all areas to better meet the needs of student with disabilities and diverse learners. The UDL lesson plan artifact affords teacher education candidates an applied opportunity to integrate their developing pedagogical knowledge and skills to address the needs of the entire range of learners.

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## **Journey to the syllables' world: Intervention in phonological awareness**

Sónia Costa  
Universidade do Minho, CIEd  
[ssilvacosta@gmail.com](mailto:ssilvacosta@gmail.com)

Susana Gomes  
Universidade do Minho, CIEd

Cátia Sacadura  
Universidade do Minho, CIEd

Cidália Araújo  
Universidade do Minho, CIEd

Ricardo Cardoso  
Universidade do Minho, CIEd

Anabela Cruz-Santos  
Universidade do Minho, CIEd  
[acs@ie.uminho.pt](mailto:acs@ie.uminho.pt)

Maria João Gomes  
Universidade do Minho, CIEd

### **Abstract**

This poster aims to present the interactive game "Journey to the syllables' world." This game has two tasks with the following goals: a) to promote the acquisition of phonological skills, and b) increasing the quality and quantity of vocabulary. It can be applied by a mediator (teachers, parents, other educational professionals) or even by the child on his or her own in a variety of contexts since it has a script that guides the child through the tasks. The development of phonological awareness at the syllable level arises as the purpose for which this game was created and where lies the whole game but, associated with this, it also provides: vocabulary development; guidance through clear instructions, accurate and adequate volume, absence of distracters' stimuli without, however, ceasing to be appealing for the children. Four main characters were created to make it more playful and foster the interaction between the child and the software in an attractive, dynamic and familiar way. The game can be applied to children from the age of 4 or more. The task "Visit to animals" was developed in order to identify names of animals and suppress the initial syllable while the task "Going to the supermarket" consists in detecting the initial syllables of supermarket products. The exploration of the game can contribute to understand child's language development and analyze potential difficulties in phonological skills in children that are at risk to develop language problems.

**Keywords:** phonological awareness, interactive game, language, intervention.

### **Introduction**

The component of language which the game focuses is phonology, focusing specifically on phonological awareness, i.e., on the "ability to consciously manipulate (move, combine or abolish) the sound elements of oral words" (Tumer & Rohl, 1991, as cited in Silva, 2003). These sound elements can be divided into the following phonological units: syllables and phonemes (Silva, 2003). A systematic work with explicit and targeted instruction in preschool allows you to create an awareness of the phonetic structure of words and manipulation of phonemic segments that will facilitate the learning of reading, writing and the level of metacognitive development (Silva, 2008). The Battery of Phonological Tests developed by Silva (2008) has 6 subtests: a) classification based on the initial syllable, b) classification based on the initial phoneme, c) suppression of the initial syllable, d) suppression of initial phoneme, e) syllabic analysis, and f) phonemic analysis. Based on this test we developed an interactive game, called "Journey to the syllables' world". Its objective consists on the development of phonological awareness, i.e., effectively increase of the skills of phonological awareness, since processing and specific phonological skills are predictors of future capabilities in reading and spelling (National Institute for Literacy, 2008). Furthermore, it is intended to also promote the child's vocabulary.

This game, being multimedia, may be applied in a variety of contexts, requiring only, as material, a computer or a tablet. Four main characters were created to make it more playful and foster the interaction between the child and the software in an attractive, dynamic and familiar way. Therefore, and depending on the goals which is used, it can be used individually, in small groups, in after-school recreation centers, in classroom or other contexts. It can be applied as an activity to develop phonological awareness at the syllabic level, especially in the early ages, but also as an intervention activity, when children show difficulties in these language competencies.

### **Method**

This game consists of two activities: "Visit to animals" and "Going to the supermarket" and aims to promote the phonological skills acquisition and the increase of the quality and quantity of vocabulary. The choice of subjects took into account that children in pre-school ages need to acquire concrete concepts that are part of their experiences. The activity "Visit to animals" is intended to identify the name of animals and suppress the initial syllable, while "Going to the supermarket" consists in detecting initial syllables of supermarket products.

The game can be applied to children from the age of 4 or more. We considered this age group because, according to Rigolet (2008), at this age it is already possible to implement activities from images without being necessary the concrete representation of the object /concept. The choice of these themes took into account that this age group still needs to acquire many concrete/real notions, i.e., that are part of their experiences. A maximum age was not defined, since phonological awareness may not be fully developed at advanced ages. For example, the target public may include children from 4 years old with a normal language development, 6 years old children with delayed speech-language development and older children with dyslexia.

The following procedures were taken into account according to Silva (2003):

a. "The sound units should be modeled by the mediator and reproduced by the child." In the game, care was taken to ensure that all words and syllables were accompanied by their respective sounds. So whenever the mouse is placed over the images, it is heard

the respective sound.

b. “Should be given explicit instructions and feedback in relation to the proposed activities.” The game starts with the explanation of the instructions given by a character who provides all the information needed to play. Feedback is provided immediately at the end of each task, the same is given through a verbal positive reinforcement by the computer program when the answer is correct.

c. “Diversified activities are required, that include the dimensions of segmentation, synthesis, suppression and detection of certain units of sound.” Based on the abovementioned themes the game works on the classification based on the initial syllable and the suppression of the initial syllable.

d. “It is important, when sequencing the training activities, to take into account the complexity of linguistic units to manipulate.” The words have been carefully selected so that the degree of complexity of the phonemes were growing and the size of the syllables were increasing. Thus, the order of presentation of the images is not random. e.

“The efficiency of these training programs increases when they are accompanied by activities that involve learning graph-phonetic correspondences.” Effectively, all images and audio support are always accompanied by the appropriate grapheme. According to Rigolet (2008), at this age, the use of the written record associated with the image is important to guarantee the notion that there is a written representation of the concept. These type of activities also promote on one hand, the identification of children with difficulties in the phonological component of language, i.e., it enables the identification of children at risk. Moreover, this material also allows the intervention with children with specific learning difficulties in reading and writing, difficulties in language, etc..

The four characters that follow the course of the game have distinct functions. Thus, the character who has the role of teacher, Professor Bento, is illustrated by a picture of a personified green book distinguished from others by having glasses, pen, hair and a higher stature. Its function is to provide the necessary instructions to perform the tasks, whenever requested. Its orientation is given automatically at the beginning of each activity, i.e., the teacher's voice is heard without the need to load on any object in the screen. As the child progresses in the application, it is assumed that understands the steps of the task and, as such, Professor Bento intervenes only if the child wants, clicking in the image of the teacher.

The other characters are also illustrated through books of various colors, Ana (yellow book), Luís (orange book) and André (blue book). In the first activity, they represent the answer possibilities and, in the second and final activity, they go with the teacher to the supermarket.

The first activity of the game consists of a visit to the animals, where the child is asked to manipulate syllables of the names of animals. This activity was built according to the procedures of a subtest of the Battery of Phonological Tests of Ana Cristina Silva (2008)- Suppression of the Initial Syllable. And involves, in a first stage, an analysis of the word represented by the image, to extract the initial syllable, and in a second stage, the work of synthesis, to reconstitute the remaining syllables. This activity is considered the most reliable to determine the syllabic manipulation skills (Gombert , 1990, as cited in Silva, 2008). The activity is divided into 3 levels of increasing difficulty. In this task, the vocabulary chosen and respective images are divided into categories of animals according to their habitat (aquatic, wildlife, and farm). The animals were selected according to the knowledge demonstrated by a group of ten children aged between 4 and 8 years old, including children with special educational needs, namely dyslexia and intellectual difficulties.

The second activity is a visit to the supermarket where the child is asked to handle the



syllables of the words of the materials that you can buy in a supermarket. This activity was built according to the procedures of a subtest of the Battery of Phonological Tests of Silva (2008) - Classification based on the initial syllable. The purpose of this activity is to evaluate the children ability to detect identical initial syllables in different words.

In this task, four words are presented to the child figuratively, i.e., each word has an image that represents it and the child has to select the two pictures that begin with the same syllable, and the chosen objects are introduced into a shopping bag.

### **Conclusions**

The development of a playful multimedia game based on an assessment instrument proved to be a very constructive work and met our goals, namely to promote phonological and vocabulary development. Thus, the implementation of the activities of this game is not only possible to be used in the early identification of children at risk, but also in intervention in phonological awareness. Also, this game can be used with children with and without special educational needs in order to recognize the importance of early language development in an efficient way.

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## **Strategies for the Preparation Video Modeling to use the Picture Exchange Communication System**

Viviane Rodrigues  
Federal University of São Carlos  
[viviane\\_reb@hotmail.com](mailto:viviane_reb@hotmail.com)

Juliane A. P. P. C  
Federal University of São Carlos  
[jappcampos@gmail.com](mailto:jappcampos@gmail.com)

Maria A. Almeida  
Federal University of São Carlos  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

Video modeling (VM) is a technique that involves teaching social communication skills, daily life and academic performance for individuals of various disabilities. In this sense, this study sought to develop strategies necessary and fundamental to the development of video modeling for the development of communication skills through training Picture Exchange Communication System (PECS). It was first necessary to establish some inclusion criteria for the selection of participant and the model. Participant should: a) not have functional speech, b) have school age c) do not show deficits in attention which makes it impossible to understand learning through VM. The model should: a) be part of the interaction of the participant, b) do not have any communication problem, c) have approximate age of the participant. From this selection, the video was made. As the PECS consists of six stages, three videos were produced for each phase, each lasting 20-30 s made with the model in interacting environments, people and diverse activities. The videos were watched by the participant before each session of each phase of PECS. As a result it was possible to note the by fact of the model is being part of the interaction of the participant and having the approximate age, facilitated student interest e attention to the video. The video length can be considered a timely fashion to keep the participant's attention and encourage learning from him. The fact that the videos were made with the model interacting with people, environments and different activities, favored generalization.

**Keywords:** Video modeling. Picture Exchange Communication System. Intellectual Disability. Special Education.

### **Introduction**

Communication can be expressed by means of engine parts, facial expressions, vocalizations, and may even occur without language. The Augmentative and Alternative Communication (AAC) area is responsible for ensuring access to non-verbal communication people or with significant communication skills and language deficits. However, there are several forms of training, strategies and programs on AAC to teach communication skills, one of them is The Picture Exchange Communication System

(PECS) developed by Bondy, Frost (1994) as a training manual in alternative communication to increase communication skills within the social context. It is applied with the presentation of six phases, which can be used individually or in groups, in many places such as at home, in the classroom or in the community. Its main advantage is the low cost in its preparation and execution.

But there are also some disadvantages shown in some of the researches related to PECS training, such as: slow learning, dependence of many students to coach/teacher stimuli; very long time to reach all stages. Some scholars question whether there is any strategy to enhance the PECS teaching minimizing these potential limitations (SMITH; HAND; DOWRICK, 2013).

Considering this, a strategy that could overcome the disadvantages in the PECS teaching would be its association to the video modeling (VM). The VM is a technique that has been widely used and researched. Research indicates that it has demonstrated efficacy in the acquisition and development of social communication, daily living, work and academic performance skills for people with various disabilities (HUANG, WHEELER, 2006).

Its construction is easy and inexpensive, making it necessary to use a camera for building video, TV and DVD player or laptop to watch the video (CIHAK; SMITH CORNETT; COLEMAN, 2012). Consists of an individual watching a video of a model/actor performing a desired behavior before, personally, exercising the ability to facilitate learning. This method is advantageous because it can be accessed at any time and be used in different environments such as home, work, school and community in general (BRANHAM; COLLINS; SCHUSTER; KLEINERT, 1999). In this sense, this study aimed to develop necessary strategies for the video modeling preparation with regard to the Picture Exchange Communication System teaching.

## **Method**

### **Participants and Place**

This study took place in a special school located in the state of São Paulo. The study included a 10 years old student with a diagnosis of intellectual disability and significant delays in communication and a classmate (model) of 12 years old without communication difficulties (no data was collected in relation to her behavior and performance). It was first necessary to establish some inclusion criteria for the student and model selection. The student should not present: a) functional speech; b) attention deficits that precluded understanding learning through VM. The model should: a) be part of the student fellowship; b) have no communication problem; c) have approximated the student's age.

### **Materials and equipment**

Toys, food and diverse objects that had been previously identified, camera and notebook were used. A folder of communication that containing Velcro so that the figures could be displayed was also used. The figures were prepared using the Boardmaker Software (version 6) and after printing were laminated for strength and durability.

### **Experimental Design**

The design of single subject AB (GAST, 2010), this where "A" refers to the baseline phase and "B" refers to the intervention phase, was used.

### **Interobserver Agreement**

Interobserver agreement (IOA) was scored by a special educator for 25% of sessions in

each stage. The videotaped sessions were randomly chosen. The observer was taught about expected goals at each stage through video modeling. Data with at least 75% of agreement, were considered reliable. The reliability index average percentage related to the student Júlio was .

#### Procedures

**Baseline.** The baseline occurred in three sessions before the PECS training associated to the VM. At this time it was observed how the participant performance in relation to the exchange of figures by the desired item without any stimulus would be.

**The training model.** To teach the model, the researcher acted as if she was the student, demonstrating the behavior she should play, this mimicked the behavior while being filmed.

**Intervention: PECS associated to VM.** Before beginning each application session of the PECS phases, the participant watched the video of his 12-year-old colleague. For each phase three different videos were made representing activities, environments and diversified communication partners. The videos were lasting 20-30 seconds. The participant watched only one video before starting the session. Then, the applications of PECS phases started.

**Maintenance.** It was held in three sessions, one month, one month and fifteen days and 2 months, after the intervention. All maintenance sessions were identical to baseline sessions without any assistance or incentives provided.

**Social Validity.** A social validity questionnaire was distributed to the participant's parents and teacher to assess their perceptions about the intervention. It contained four short questions about the intervention process.

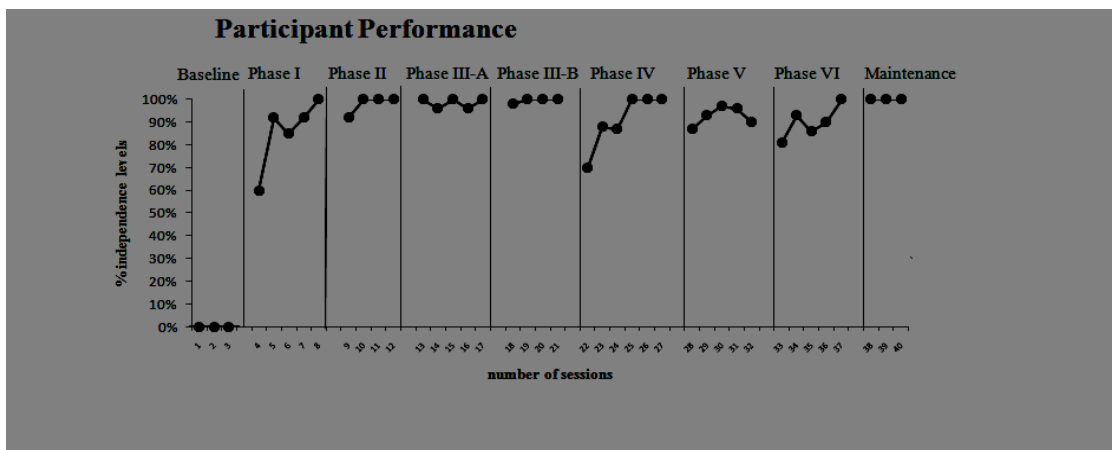
#### **Results and Discussion**

The participant presented a performance with many hits since the beginning of the PECS intervention associated to the VM. During the Baseline session the participant remained unsuccessful because he ignored the figure in all sessions, removing the item from the communication partner hand.

Already in action, according to Figure 1, in phase I, with 5 sessions the participant got the criterion for phase change that was to get 100% accuracy in three consecutive sessions or the average of 5 sessions was greater than 80% of hits. In phase II, needed 4 sessions. In phase III-A, 5 sessions, in Phase III-B, he needed 4 sessions to reach the phase change criterion. In phase IV, V and VI 5 sessions were required for each phase. A total of 37 intervention sessions were performed, which shows quick learning, because the sessions occurred in the period of three months with meetings of three times per week.

In maintenance, where there was no intervention, in the three sessions the student has demonstrated an excellent performance, as shown in Figure 1. This phase results showed that the student was not dependent on the VM assistance, because the intervention could be removed without any damage in the learned skill execution.

#### **Figure 1- Student performance at baseline; intervention and maintenance**



In line with the results presented here, some studies show the advantages of combining VM to PECS implementation, such as: Cihak; Smith; Cornett; Coleman (2012); Smith; Hand; Dowrick (2013); Collins (2012), all stressed that the results showed fast learning and generalization relative to the desired behavior.

About the social validity questionnaire, the teacher and the student's parents said that the PECS associated to VM was of great importance as it helped him in moments of people interacting, developed his visual discrimination skills, enriched vocabulary, and demonstrated fast learning.

### Conclusions

The results showed that the Video Modeling can be an effective and fast technique to teach the picture exchange communication system for individuals with intellectual disabilities, because the participant can benefit from the technique that helped in understanding the desired behavior for each phase, providing him to reach the determined criterion at each stage in a few sessions.

### Acknowledgments

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## **Rehabilitation Needs of Teenager Students with Low Vision and Blindness**

Zelia Zilda

State University of Campinas – UNICAMP  
[zeliaz@fcm.unicamp.br](mailto:zeliaz@fcm.unicamp.br)

Lourenço de Camargo Bittencourt

State University of Campinas – UNICAMP

Rita de Cassia Ietto Montilha

State University of Campinas – UNICAMP

Maria Elisabete

State University of Campinas – UNICAMP

Rodrigues Freire Gasparetto

State University of Campinas – UNICAMP

Marina Bolsonaro

State University of Campinas – UNICAMP

Suelen Peairo Neto Lima

State University of Campinas – UNICAMP

### **Abstract**

The objective of this study was to identify the rehabilitation needs of adolescent students with low vision and blindness and to describe the interdisciplinary rehabilitation process offered by a university rehabilitation service. This exploratory study was conducted in 2013; the subjects were adolescent students who participated weekly in rehabilitation group activities. The identified rehabilitation needs relate to the use and adaptation of assistive technology resources (optical aids, non-optical aids and computers), the acceptance of the visual conditions, the expansion of interpersonal relationships and the improvement of academic performance and daily life activities. Because of the Interdisciplinary Rehabilitation Program, students became aware of their visual functionality and had their self-esteem improved. It all contributes to the better social inclusion of these adolescents.

**Keywords:** rehabilitation, inclusion, visual impairment, special education.

### **Introduction**

Vision integrates the individual into various domains, such as in motor, perceptive and mental activities (Lucas et al., 2003); vision loss may cause significant changes in peoples' routines, making their integration into society more difficult (Bittencourt et al., 2006).

Visual needs vary for each person, in each moment of their lives, and they are

influenced by culture and by emotional and social conditions. Such needs are easily perceived in practical aspects of life, such as in school, leisure and everyday life activities, or even at work. In order to optimize the adolescents' performance, partnerships are needed among some institutions: health service, school, family and specialized education are all important to it (Carvalho et al., 2005).

The Ministry of Education and Culture (MEC) recommends national basic education guidelines which guarantee direct access and retention of visually disabled students at schools, and also guide their inclusion in common classes. In spite of these policies, the inclusion process of people with specific educational needs in Brazil still faces obstacles for its full implementation. Thus, innovative practices have been developed not only at schools, but also in networks that offer specialized support, such as habilitation/rehabilitation services.

Professionals who work with education, habilitation and rehabilitation of adolescents who have low vision or blindness need to know this population, so they can elaborate a program to foster development, transmission of knowledge, apprenticeship and preparation for social inclusion – especially during this time of their lives (Ferroni et al., 2012), and all should be done according to each person's needs.

Adolescence, as a social category, is a creation from modern times (Ariés, 1981), and it should be studied because of the several implications that arise from it. It is a critical step in the person's history, characterized by a vital crisis in the search for identity. According to Osorio (1989), the acquirement of identity is the conscience an individual has of him/herself as a living being. This is the time for discovering values and limitations, in which family norms play a significant role. This period of life is characterized by group tendencies; consequently, group work is the therapeutic matrix where one can understand the expression of conflicts, and seek resolutions inside the group itself (Zimmerman et al. 1997). We know that the access and retention of disabled students in school should be guaranteed by the use of Assistive Technology resources – i.e., these resources enhance the disabled person's visual functioning for the daily activities. Assistive Technology resources can be classified into optical resources, non-optical resources, electronic and computer resources.

In a study, Gasparetto et al. (2009) show that educational Assistive Technology resources and equipment are still not available at schools; and when these are available, not all teachers know how to handle it, and sometimes these teachers do not know these resources at all. A research conducted by De Vitta, De Vitta & Monteiro (2010) proves that teachers who work in special and inclusive classrooms have access to distinguished material for the disabled students, but they report total ignorance on how to use it.

Non-optical resources are strategies that can be easily achieved by enlarging textbooks, notebook lines, school schedules, adequate lighting, reading and writing support accessories, higher contrast from darker graphite pencils, felt pens, contrasting colors (such as black ink on white paper, white or yellow chalk on dark chalkboards (Gasparetto, 2010; Montilha et al., 2006).

Rehabilitation programs are essential in promoting health for adolescents with blindness low vision; with these programs, students can thrive and participate actively in society (Bittencourt et al., 2006). So, this study intended to identify the rehabilitation needs of low vision and blind adolescent students, and also to describe the interdisciplinary rehabilitation process offered in a university rehabilitation service.

## **Method**

This exploratory study was conducted in a Brazilian University Center for Studies and Research, during the year of 2013; the subjects were adolescent students with low



vision and blindness. The following variables were taken into consideration: sex, age, educational level, visual acuity, diagnosis and prescribed optical aid. The adolescents were tracked weekly, during interdisciplinary group activities, by a team of social workers, pedagogues, psychologists, occupational therapists, a dietitian, a physiotherapist and speech therapy students. The team developed and performed a therapeutic project based on the needs presented by the students. Weekly attendances were centered on the concerns these students had.

### **Results and Discussion**

The studied population comprised 8 adolescent students (5 females and 3 males); their mean age was 16 years old. 25% of them attended elementary school and 75% had graduated high school at the time. Visual acuity in their best eye, with the best correction, ranged from 20/100 to 20/1200. 25% of the visually disabled patients were blind; the causes for blindness were Leber's Congenital Amaurosis and Retinitis Pigmentosa. Patients with low vision (75% of them) presented the following causes: congenital glaucoma (2 patients); corneal opacity (1 patient); congenital cataract (2 patients); and visual loss due to parameningeal rhabdomyosarcoma (1 patient).

The main needs of the group referred to the use and adaptation of assistive technology resources (optical aids, non-optical aids and computers), the acceptance of their visual condition, expansion of interpersonal relationships and improvement of academic performance and daily life activities.

We noticed that it is important to provide opportunities in the classroom for low vision adolescents to make use of their residual vision; this way, students can efficiently use their visual responses, regardless their degree of loss. This is the reason why the interdisciplinary approach on visual habilitation/rehabilitation programs is so important (Haddad, 2006).

The Brazilian Ministry of Education – Department of Special Education (BRASIL, 1999)– has provided basic educational material (a school backpack, notebooks with magnified lines, 6B pencils, black felt-tip pens, magnifying ruler and reading shelf support) for the visually disabled students of public schools. The federal government also develops the Accessible Book Project, for the visually disabled students that provide book copies in braille, Libras, spoken digital audio and digital formats and laptops (shipped with DOSVOX system, for individual use in the classroom and on educational activities) for blind students.

In spite of this public policy, we notice that schools are not yet physically prepared to receive blind and low vision students – schools still lack basic conditions to meet this diversity. Simple strategies, such as suggesting better placement of the student in the classroom, placing the student's desk closer to the chalkboard, using white or yellow chalk or dark chalkboards, contribute to minimize the main educational difficulties of these students (Gasparetto, 2010; Montilha et al., 2006).

### **Conclusion**

The adolescents' needs were achieved through the Interdisciplinary Rehabilitation Program. This enabled the students' awareness of their visual functionality, as it also improved their self-esteem and performance in daily activities, contributing to the social inclusion.

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## **Collaborative Partnership from the perceptive of inclusive international education**

Andréa Carla Machado  
Federal University of Sao Carlos - Brazil  
[decamachado@gmail.com](mailto:decamachado@gmail.com)

Cindy Vail  
University of Georgia- USA  
[cvail@uga.edu](mailto:cvail@uga.edu)

Maria Amelia Almeida  
Federal University of Sao Carlos- Brazil  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

The present research aimed to systematically observe, interventions carried out by regular and special teachers in educational institutions. Four teachers participated in the research of four schools, a rural and urban three in the city of Athens, Georgia in the United States. Were used for data collection four instruments that focused on observational itineraries. Data were analyzed according to established criteria, described and put into discussion. The results showed that the comments were consistent to conclude that: the observations in the classrooms were important to verify the shape of the development cooperation of the teachers in front of students with special needs, as well as the specialized care and monitoring and evaluation programs developed by teachers in the classroom provided subsidies for the construction of consistent use and service parameters and uses them as resources for assembling collaborative consulting programs in future research on the Brazilian reality.

**Keywords:** collaboration. schools. teachers. special education.

### **Introduction**

The educational partnership between regular and special education is known as collaboration and can be established in the form of two models: a-) in which the teacher collaborative consulting/professional special education promotes assistance to regular school teachers and indirect services to students; and b-) co teaching, in which teachers specialists work with regular school educators, providing direct services in the common room (Weiss & Lloyd, 2003).

Argüeles, Hughes and Shumm (2000) punctuate the collaborative work can both decrease distinctions of the roles carried out by professionals, as well as define such roles to contribute to a smooth functioning of the team involved, i.e. the collaboration involves commitment from teachers, school administrators, school system and the community. Generally the collaborative work involves a couple of teachers (regular and special education) where your arrangements may occur during fixed periods of time and their strategies will depend on the demand, the needs and characteristics of the students (Bauwens; Hourcade & Friend, 1989).

Jacob and Lena (1996) and Jesus (2008) point out that the fact the child present

difficulty of learning cannot be considered an isolated problem, considering that the scholastic failure interferes in the development and affective commitment intra-psychic processes, related to the formation of the child's personality, leading to behavioral problems. It is therefore necessary to provide special care to the child.

In Brazil, there are few publications within this theme of collaboration, specifically related to collaborative consulting (Machado & Almeida, 2010; Mendes, Toyoda & Bisaccione, 2007; Machado & Almeida, 2012), although some pioneering initiatives, being therefore more research to behold and contribute to our Brazilian reality.

This way, the importance of collaboration among education professionals, in the specific case between teachers of basic education and Special education specialist, for the development of students with severe learning difficulty complaints and behavior. That said, observations in other educational reality may contribute to possible renewals in pedagogical practices, access to new ideas, knowledge and, in particular, in learning how to start and consolidate inclusive educational changes for our context, Brazil.

Smith and Strick (2001) highlight the role of the regular teacher, along with the Professional Special education as a key item to identify and clear up the difficulties presented in schooling, learning both as a resounding behavior. In fact, the experience of these professionals in collaboration, as they reveal the authors mentioned above, it is crucial in learning situations in the classroom, on the observation of behaviors, on the observation strategies for solving, in observation of the student with respect to your positioning before questions and observation in relation to yield in the ratings and school development.

In addition to comments other strategies can be developed and used in the aid to the student's school performance, difficulties in the classroom accommodations (Brazil, 1999), access accommodations to the curriculum, restructuring of the school system, and work with family (Kim & Vail, 2011) and with the community. These strategies, which can be obtained through partnerships between educational institutions of other countries, being a critical collaborative work for the establishment, growth and dissemination of this modality that seems to be on the way to resolution of problems presented in the area of inclusive education.

In this perspective the present study aimed to systematically observe, interventions carried out by regular and special teachers in educational institutions.

## **Method**

The present research of qualitative-quantitative nature, that second Cozby (2003) is characterized as systematic observation, which provides a complete and precise framework to describe the environment, events and people observed, as well as allows you to study different behaviors.

Giovanni (1998) points out that projects that include research aimed at the importance of the study on collaboration between school and University, can generate innovative practices both within schools and the University. This study was approved by the Committee of ethics in research for humans of UFSCar on the demands contained in the resolution 196/96, the National Health Council with the protocol number CAAE-4246.0.000.135-10 under number 414/2010.

**Participants:** The present research 15 Basic American school teachers four classrooms. The classrooms of these teachers were selected by Professor of University of Georgia responsible for University/School program, which work collaboratively.

**Location:** The observations were performed in educational institutions indicated by

American teacher governed by the laws U.S.A. educational, located in the city of Athens, city near Atlanta capital of the State of Georgia, in the United States of America. This University offers academic organization and management models, where special education professionals – and supervisor of this project and Professor at the University of Georgia (UGA) works in the field of inclusive education Laureate by the current standards of that Federation.

The observations proposed were developed in the physical environment of their own classrooms of schools visited, which this space – living room – also is intended for educational support inclusive, as will be shown below in the characterization of schools:

Instruments: Data collection will be used four observation protocols, which are described below:

- 1-) registration Sheet-field diary of researcher containing spaces intended for direct observations and also inferences about the students observed following a script.
- 2-) observation Protocol of interventions carried out by professor, as well as these are planned.

#### Procedure of data collection and analysis

The survey was developed in the months of February, March and April (first half of 2013), at the University of Georgia and Athens city schools in the State of Georgia in the United States – USA. The researcher remained in physical space destined for observations (classroom), which were carried out in stages: first, the researcher received an indication of supervisor procedures to be taken in front of the observations. Then began the observations of teachers ' work on the model of collaboration, as well as in the preparation of their planning. In this perspective, also gave the note of the assistance provided to students who needed support in the area of special education targeting as annotations were carried out the evaluations, monitoring and interventions and classroom support plans. This being a qualitative and quantitative-oriented research, quantitative data collected were analysed according to its specificity. For analysis and interpretation of qualitative results content analysis was performed (Bardin, 1998). We'll cover the aforementioned method, primarily by the fact that he propose a deep understanding of what is exposed, going beyond the apparent, surface, seeking what is implied. The application of the method shall obey the following stages:-) pre-analysis (reading); b-) Exploitation of the material (coding and categorization); c-) data processing (inference and interpretation).

The quantitative data were analyzed through descriptive methods-measures of central tendency (COZBY, 2003). It should be noted that the results of the field journal were divided into standardized to facilitate their thematic analysis.

#### **Results and Discussion**

For best viewing of the data obtained, the results of this research are presented in four steps condensing with the instruments used and with the proposed objectives.

This information will open avenues for discussion, not just the relationships observed between teachers in the classroom, as well as for the programmers of interventions and strategies that facilitated the academic development of children with special educational needs in schools observed.

The research field diaries, which built, similarly, were important in observation of students. Field journals had intended to register by means of writing, attitudes, perspective, questions and impressions of and construction, the formative process of collaboration. According to Mendes, Toyoda and Bisaccione (2007) by means of the

field diaries can be reported, in a simple way, the factors involved in a job, which contributes a lot to the study of new forms of performance, as can be seen in the table below.

In table 1 we can observe the thematic categories that were divided the contents of the observations made by trainee field journals. Of the three themes laid out in the table below are excerpts that illustrate such topics.

The first theme relating to availability of collaborative work of teachers of the room observed that in all of them the teachers keep a practical exercise of collaborative work, dividing the tasks of daily schedules, showing turnover in teaching of students with more difficulty, including the student with special needs. Most works with small groups and these groups with different themes. It was observed a collaborative work as proposed in Argüeles, Hughes and Shumm (2000) where this work there is no distinction of roles, only the distribution of the same.

In the respect of the posture of the teachers in front of students with special needs and the rest of the room noticed that the excerpts relate some aspects quite widespread and viewed in the literature (Bauwens, Hourcade & Friend, 1989), i.e. the plans of teachers assisted in their daily conduct and prior to the posture students' needs.

With regard to the behavior of students observed in room we found that the behaviors are not mixed, because the teachers maintain a planning, planned activities and a work of collaboration between them in the living room, which facilitates the control of possible deviations in behavior. This result corroborates the prospect of Argueles et. al. (2000), where the systematization of work, teaching contributes to the success of collaboration and therefore the performance and behavior of students.

**Table 1. Category of daily referring to the thematic field of intern.**

Comments from Trainee/researcher (Themes)	Illustrative excerpts
	<p>"the work being done in the room was unison, the teachers had an agenda in day for Division of labour, they took turns in teaching a student with need" <b>Field journal, 3/21/13</b></p> <p>"the teachers at School 2 maintained a systematic approach in relation to contents taught, there was a turnover of teachers assistants compared the difficulty of children" <b>Field journal, 4/5/13</b></p> <p><b>Regarding the availability of joint work "collaboration"</b>"The teacher was working with Regent student difficulties with (between the teachers)necessity while the other teacher and her assistant were working in small groups". <b>Field journal, 4/18/13</b></p> <p>"in this room there was a room called the transition attached. All the teachers were accessing this room for need to work with students individually. There's a turnover between them". <b>Field journal, 4/4/13</b></p>
	<p>"All teachers of the room kept an order, was not observed in any moment the increase in tone of voice, neither the teachers nor the students." <b>Field journal, 3/8/13</b></p> <p>"The student of the School (room) 2 and his classmates attended reading wheel activity held by the teacher. In this activity of interaction the other teachers were watching and one of them noting" <b>field journal, 4/11/13</b></p> <p><b>As for the professor's stance vis-à-vis students regular and special in the classroom</b>individually with student who had difficulty" <b>Field journal, 3/28/13</b></p> <p>"Teachers of the room at the end of the period, such as reunião morning before starting the next period for pontuarem the difficulties of the students of room" <b>Field journal, 4/19/13</b></p>

"The students room 1 not present behavioral deviations, all students follow a routine that was fixed on the living room wall with figures". **Field journal, 3/22/13**

"There was a control of the room. Today at first before starting the training occurred class building evacuation in case of fire. All students in the room already knew what they should do in relation to the special colleague and with one another "  
**Field journal, 3/28/13**

"There was a resounding behavior of one of the students when this  
**As for the students ' behavior observed in the classroom took another toy ... immediately there was the intervention of one of the teachers"**  
**Field journal, 4/25/13**

"The autistic student of 4 room has its routine daily program along with the activity of other students. His demeanor was calm and focused on the activities. The other students tried to help him. **Field journal, 3/21/13**

In table 2 we see the items applied and developed interventions in classrooms observed. In all observed items there is a part that is intended for development activities, and how they were carried out. To this end, each item is illustrative excerpts, which exemplify the items observed.

**Table 2 . Items observed and applied interventions in classrooms observed.**

Items watched	Development	Illustrative excerpts (intern's notes on the instrument itself)
Classroom technologies	Activities carried out in digital whiteboard with the Power Point application and software	"Schools had government support to the implementation of technology in the classroom. Transform booklets for digital whiteboard and used Visual AIDS for learning. The Body Map <u>kerll</u> widely used to build activities with figures and relates them with letters and words. "
Protocols	Considerable numbers of protocols were used, both to assist in the evaluation, as well as in monitoring.	"Always the teachers were inventories of reading, writing, math, behavior. They applied the instruments to check the scores and then prepare the speeches. These inventories, for example, was: what will you teach, why? How? Which method is best for each student. "
Creativity in building materials and strategies	The activities are constructed by teachers.	"All activities were built by the teachers. With recyclable materials, as well as the activities with assistive technologies in all areas. There were books for visuomotora coordination, example, but other activities were built by the same teachers.
Strategies for behavior	There is a behavior-related planning, which previously is lifted by means of instruments or observation.	"To build and to intervene with behavior strategies was developed in one of the rooms a little planning and the corresponding to the monitoring, also checklist, inventory, specific roadmap, all to observe the behavior."
Reading and writing strategy	Relate to the kind of difficulties previously polled by teachers	"Worked with phonological awareness activities. Activities are abstract-concrete; activity of analysis and synthesis, sequences of events, agendas, fluency, comprehension, digitization of reading books with pictures (sounds), activity of shooting among students and publishing. "
Classroom environment for interventions RTI	In all the rooms observed RTI programs were applied by teachers in a room attached, as a complex, namely, extension of the classroom	"The Organization of the room was very important for learning. Opportunities occurred with planning, the environments were separated by learning center, where allowed-if teachers know the strategies, identify, make adjustments and give feedbacks.
Collaborative Teaching	Model of collaborative teaching a teacher teaches and the other notes. Collaboration is common, because the rooms always have more than 2 teachers	"A teacher teaching and other observed data to compose the teaching plan. Taught by groups (traded activities) focused on the difficulties of each one, there was less noise in the room due to concentration of students in activities. A teacher applies the exercises and the other may provide different strategies to increase understanding. Planning is essential for optimizing time "
ABI-intervention-based activities	Lesson plan is built on the basis of <i>"The teacher made a plan with goals, materials and activities for previous interventions, which underwent children (vocabulary, Motricity and also a book adapted into adaptations and modifications</i>	<i>Power Point) with animated figures).</i>

## Conclusion

The present study aimed to systematically observe, interventions carried out by

professors Regents in his performances in the classroom with attendances linked to American schoolchildren in the State of Georgia in the city of Athens. On this occasion, specifically, it can be observed that the teachers made the collaboration in all directions (planning, monitoring, evaluation) when observed the activities in classrooms.

Thus, the findings of this study made it possible to conclude that:

- the observations in the classrooms indicated were important to verify the shape of the development cooperation of the teachers in front of students with special needs;
- monitoring are considered by American educational institutions as an indispensable resource to track student performance, as well as in the construction of intervention programs; and,
- specialized calls developed by teachers in the classroom provided subsidies for intern build consistent parameters of attendances and use them as important resources for assembling collaborative consulting programs in future surveys.

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## **Cognitive-Linguistic Performance of elementary school indigenous children from Xukuros nation – Pernambuco Brazil**

Andréa Carla Machado  
Federal University of Sao Carlos  
[decamachado@gmail.com](mailto:decamachado@gmail.com)

Maria Amelia Almeida  
Federal University of Sao Carlos  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

The education and health of children with any learning disability is a democratic statement aimed at the inclusion of these individuals in classrooms; in the context of indigenous school this issue becomes tricky because there are only rare studies on surveys of pupils in indigenous communities, as well as great scarcity of knowledge, treatment and appropriate techniques for diagnosing and working with this population. Objective: to verify the cognitive linguistic performance of children from native Xukuru ethnic school-PE. Participated in the study school 65 Xukurus indigenous children from 2nd to 5th year of primary schools living in a village of Xucuru nation located in the Pernambuco state (Brasil), of both gender with age (a minimum of 7 and a maximum of 11 years, SD = 2.8), which were divided by age into five groups. We used the Cognitive- Linguistic Protocol Skills in collective and compared in age and education. The results demonstrated statistically significant differences for the study groups in all tasks of the test showing that the skills relating to tasks were being acquired along the seriation of school children. It was also evidenced that the task of saying all groups less than expected for your group/class. Steady as well, the importance of having the possibility of early identification and assessment so that difficulties can potentially be compensated and even surpassed in the surveyed area.

**Keywords:** learning disability, student, indigenous.

### **Introduction**

The earliest historical records about the Xukuru people dated 1659 and early 1660, are records of the same era of the history of Pesqueira, municipality of Pernambuco. The first contacts of the Xukurus from Urubá with non-Indians came through the Oratory Congregation a catechize mission conducted by the Father João Duarte do Sacramento (Silva, 2011; Gomes, 2006).

The indigenous school education model is a conquest of the Brazilian indigenous movement recognized by the Federal Constitution of 1988 (Silva 2000). Therefore, it becomes an indisputable right and incorporate this model the recognition of cultural aspects pertaining to the customs and traditions of each indigenous nation.

With this, the indigenous ethnic school scenario Xukuru emerges, also in other locations in Brazil, children who need to be monitored and assisted in their learning process, because some children have bad school performance compared to your group/class,

even getting appropriate interventions.

Thus, poor performance at school (MOU) can be defined as a school performance underwhelming for a given age and cognitive and linguistic skills (Moraes, Leal & Albuquerque, 2009; Capellini, et. al. 2010).

To this end, as part of an extension project that emerged from the data collected in a survey conducted in the year 2010, which aimed to analyze the current situation, as well as if existed and which were public policies for education indigenous. So, it was thought in that perspective, to conduct a survey of possible lags of children enrolled in schools belonging to the village in question. The purpose of this, was to trace the cognitive-linguistic profile on this population so that with concrete results, the competent organs responsible for the educational area, could develop effective programs to ensure quality in the education of indigenous children with a learning disability.

Entrance into the school for the schooling process requires a number of skills and competencies that constitute as a prerequisite for learning that will be carried (Balestrin, Cielo & Lazarotto, 2008).

Phonological skills (Capellini, et. al. 2007; Smythe & Capellini, 2008) are required for reading and writing, phonological awareness which will be one aspect to be integrated in word recognition. The written language should be considered a system of representation of language, which means learning the appropriation of a new knowledge.

Metacognitive and linguistic development occur jointly and interrelated. However, one cannot forget that other mechanisms of language processing components are present in order to underline the development of phonological awareness, which is completed when the writing is learned. These components are: the phonological working memory and phonological access to mental lexicon, which enable the processing and organization of language and are part of the support and its development. That way, they are requested by the central executive component in carrying out any task, including phonological awareness or phoneme-grapheme Association (Smythe & Capellini, 2008).

Thus, the objective of this research is to check the cognitive-linguistic performance of children enrolled in elementary school in Xukuru indigenous ethnicity, in the State of Pernambuco, Brazil.

## **Method**

This study was approved by the Research Ethics Committee of the Federal University of São Carlos- UFSCar, under opinion n° 414/2010. CAAE 4246.0.000.135-10. Participated 65 students in this study 1st to 4th grade of primary education, both sexes (58% boys and 42% girls), with average of 9 years of age (minimum 7 years and a maximum of 11 years, SD= 2.8) belonging to Xukuru ethnic, located in the municipality of Pesqueira, 300 km from Recife, capital of Pernambuco State, Brazil. Students who participated in the study also presented results of speech therapy, psychological evaluations and vision evaluations according to the instruments applied.

To this end, the participants were included in the study according to the inclusion criteria: students with learning difficulties complaints and screening in the areas mentioned above, and exclusion criteria: schools without complaint of learning-disabled and that failed in screening assessments of speech therapy, psychology and vision difficulties.

Schoolchildren were distributed by grades in the following groups:

Group I (GI) group composed of 19 school children having difficulty in learning, being

100% male with an average age of 7 years and 4 months (DP= 0.70), all belonging to the second grade of elementary school; Group II (GII) group composed of 18 school children complaining difficulty in learning, being 100% male with an average age of 8 years and 1 month (DP= 1.0), all belonging to the third grade of elementary school; Group III (GIII) group composed of 18 school children complaining difficulty in learning, being 80% male and 20% female with average age of 9 years and 7 months (DP= 0.70), all belonging to the fourth grade of elementary school; Group IV (GIV) group composed of 10 school children complaining difficulty in learning, being 80% male and 20% female with average age of 10 years and 9 months (DP= 0.70), all belonging to the fifth grade of elementary school; For the realization of this study were used the following procedures:-) the parents or guardians of the selected school have signed and agreed to the consent form for authorization of the study. b-) Cognitive Skills Assessment Protocol-version PAHCL-Language Conference. It was applied to collective version of the Protocol adapted to Brazil in all schools simultaneously by groups. This version consists of five tasks:

- Alphabet in sequence: the student should write the alphabet in sequence;
- Copy of forms, arithmetic: the student should copy four different geometric shapes;
- Arithmetic: the student should solve 20 simple arithmetic operations, including addition, subtraction, multiplication, and Division;
- Dictation (words and pseudo-words): the student should write 30 real words and 10 words pseudo-words;
- Immediate Memory (short term): the student should write 16 digits sequences, which may contain from two to nine digits.

The results of the collective version subtests are presented in the form of score, being assigned 1 point to each school setting. The test was conducted on the premises of the main school of Trusses, one of the villages of the Xukuru people.

The results were analyzed to compare the performance of school children by age group and education by means of statistical tests, which were used Tukey test and statistical analysis of equal proportions, as well as absolute and relative frequency tables to demonstrate the specificity of the analysis in relation to errors of the Portuguese language. For statistical analysis, was adopted the level and significance of 5% ( $\alpha = 0.050$  - significance adopted), i.e. when the significance calculated ( $p$ ) was less than 5% (0.050), so there was a difference (or relationship) statistically significant marked with asterisk); When the significance calculated ( $p$ ) were equal to or greater than 5% (0.050), so there was a difference (or relationship) statistically not significant, that is, a similarity. Data analysis was performed using SPSS (Statistical Package for Social Sciences), in its version 13.0.

The errors in the task dictation have also been analyzed qualitatively and the results brought into discussion. The misspellings analyzed, occurring in saying words was based on the model proposed by Moojen (Moojen, 2009) which comprises three categories:-) per phoneme/grapheme conversion errors consist of incorrect choice of letter/grapheme to represent the sound, occurring substitutions, omissions, additions, transpositions or inversions; b-) errors by ignorance of contextual rules represent a lack of consideration of the existence of certain rules that define the value of the letter depending on the context. This category can be subdivided into simple and complex rules (including the accent); c-) errors by ignorance of the irregularity of the language relating to choice of the consonant to represent certain sounds that indicate the origin of the word, some mistakes here classified have partial rules, like for example, L/U; X/Z; X/CH; Ç, etc.

## Results

There were statistically significant differences for the school performance of GI, GII, GIII and GIV for tasks of Cognitive Skills Assessment Protocol-Language. Were also analyzed qualitative data relating to implementation of the most frequent types of errors, the task of comparing the groups saying: I, II and III and IV, as well as the type of mistakes made by students in dictation task, which were observed and reported misspellings (Lucio & Pinheiro, 2011).

There are statistically significant differences for the performance of school children in GI, GII, GIII and GIV for tasks of alphabet, so copy, Dictation and immediate memory, with the exception of arithmetic task (table 1).

**Table 1: Distribution of standard deviation and p-value per group in the tasks of the evaluation Protocol of Cognitive Linguistic Skills – collective version.**

Tasks	Group	Standard Deviation	P value	
<b>ALF</b>	(I)	0.101		
	II	0.085	< 0.052 *	
	III	0.053		
	IV	0.069		
<b>CF</b>	(I)	0.101		
	II	0.088	< 0.052 *	
	III	0.054		
	IV	0.095		
<b>ART</b>	(I)	0.000		
	II	0.000	0.478	
	III	0.106		
	IV	0.126		
<b>DPA</b>	(I)	0.000		
	II	0.074	< 0.001 *	
	III	0.106		
	IV	0.158		
<b>DPSE</b>	(I)	0.000		
	II	0.074	< 0.001 *	
	III	0.088		
	IV	0.155		
<b>DT</b>	(I)	0.000		
	II	0.074	< 0.001 *	
	III	0.088		
	IV	0.158		
<b>MEIN</b>	(I)	0.000		
	II	0.074	< 0.001 *	
	III	0.088		
	IV	0.158		

*Caption:* **ALF** – alphabet;**CF** – copy of form; **ART** -Arithmetic; **DPSE** – pseudo-words dictation; **DPA** - dictation of words; **MEIN** – immediate memory.

## **Discussion**

This study aimed to verify the cognitive-linguistic performance of children enrolled in elementary school in Xukuru indigenous ethnicity.

Thus, the results of the task of writing the alphabet have shown that there is a need to promote new intervention programs to assist in the acquisition and development of practices that include in its core principles of the system of the English language, as well as essential elements for logical reasoning math (Capellini, et. al.,2007).

With regard to the dictation of words and corroborate results pseudo-words literature (Lucio & Pinheiro, 2011), because the contrast between the read/write performance of real words and pseudo-words is known as the lexical effect. It is expected that the real words, for orthographic representations, semantic and phonological pre stocked in the lexicon, are read/fastest and correctly spelled than pseudo-words, whose pronunciation/spelling (not existing in the lexicon) is built on phonological route, by using grapheme-phoneme decoding (reading) and phoneme-grapheme (written). As real words and pseudo-words can be read/phonological route spelled, but only the actual words may be read/spelled lexical route, the lexical effect (the advantage of real words in relation to pseudo-words) suggests using the lexical process. However, a strong effect of lexical, i.e. read/write pseudo- words, well slower than real words, indicates a deficiency in phonological process.

Despite these considerations on writing, the examination of different levels of regularity for pseudo- words (Lucio & Pinheiro 2011) must generate a significant effect. Regular and irregular items for real words and pseudo-words should produce errors that demonstrate ignorance of contextual rules well predictable, which will provide information regarding not only the rhythm as well as the order of acquisition of these rules for writing.

When we observe tasks related to copies of shapes and immediate memory we find that these tasks are also important for the development of the other, as for example, arithmetic. Tasks such as these should be part of the investigative and monitoring processes developed by teacher in classroom (Fletcher, et al, 2009).

In summary, the findings showed that literacy seems to promote the development of verbal language skills, working memory, as well as much of the phonological awareness tasks.

The results showed that, in the first year of elementary school, about half of the students have demonstrated difficulties in tasks applied to check the development of alphabetic writing system. In the 2nd year, the results have improved, once students have managed to write the words alphabetically, even to submit some exchanges of letters. These results resemble the performance of students in the evaluation of "Brazil Little Test" (Capellini, et al. 2010).

The findings in this study also makes you think: If the alphabetic writing system is an object by itself, it is necessary to develop teaching methodologies which take the school, on a daily basis, reflect on the properties of the system and gradually learn and automate its conventions. The understanding of the properties of alphabetic writing requires the development of phonological skills that the school should promote rather than wait for the students discover by him/her self. The phonological awareness promotion can be performed in a broader reflection on the properties of the alphabetic system, should benefit from, obviously, the "materialization" that the writing of words provides to schools.

The results of this study show the importance and need for investment in public policy, in relation to the preparation of the curriculum proposal with establishments of goals to be achieved in each year of elementary school, is in the realization of a work of teacher

education with discussion on the construction of effective literacy practices.

And the results of this study offered grounds for the following conclusions:

□ The collective version of cognitive-Linguistic Skills Protocol noted statistically significant differences between the series to its tasks of: alphabet, arithmetics, copy, dictation, and immediate memory, where we were able to verify that the tasks relating to skills were being acquired along the seriation of indigenous school children;

□ In this study it was shown that in the task of saying words and pseudo-words groups: I, II, III and IV are short for their age and education, proving that needs to be emphasized in teaching the understanding that there is a relationship between letters and the sounds of speech, and taught the generative mechanism of the alphabetic system of the English language, the basis of the learning process of reading and writing.

□ Even indigenous school children showing differences in years of schooling, the involvement of misconceptions regarding the structure of the word, as well as type of error regarding the Portuguese orthography also deserve attention for new programs on teaching of reading and writing and processes involving aspects of mathematical logic are developed for students of this community researched.

In this perspective, the first grades of elementary school become an important period for the identification of losses in the development of linguistic and numerical skills. Thus, the education professionals have to be empowered to identify indigenous children at risk for learning difficulties, orienting family members and, if necessary, forward to multidisciplinary rehabilitation and get an etiologic diagnosis.

A key factor is the possibility of improvement of situations of disadvantage in learning in indigenous school children that means of identification be offered so that appropriate interventions can be performed early with these children. In this way, such difficulties can potentially be compensated and even exceeded.

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## **Assessment of the Move Curriculum approach in the city of Paulínia-SP**

Carolina T. Reis  
Universidade Estadual de Campinas (UNICAMP)  
[caroltreis@hotmail.com](mailto:caroltreis@hotmail.com)

Maria Inês R. S. Nobre  
Universidade Estadual de Campinas (UNICAMP)  
[inesrsnobre@hotmail.com](mailto:inesrsnobre@hotmail.com)

### **Abstract**

It has been questioned if the isolated clinical treatment results in important gains in the child's performance in everyday environments. The Mobility Opportunities Via Education (MOVE®) curriculum is designed to assess and treat functional motor skills with emphasis on motor learning in the school environment. The objective of this study was to understand the perception of the teachers and assistants regarding the MOVE curriculum in a special education school in the city of Paulínia-SP. This is a qualitative case study, which was conducted using semi-structured interviews with the professionals who used MOVE in the school and posteriorly categorical data analyses. With the application of the MOVE program in the school, the importance of team work and motor learning in everyday environments were emphasized and the professionals started having a more human view while taking care of the patients. MOVE was shown to be efficient in the perception of the professionals, promoting more motivation in the children and a more human approach in their treatment

**Keywords:** Evaluation of Results of Therapeutic Interventions, Motor Skills Disorders, Rehabilitation

### **Introduction**

Current rehabilitation methods are focused on global motor control, multidisciplinary actions and functionality, with the aim of ensuring that the negative adaptive changes related to disuse and immobility are minimized after a brain injury (Carr & Shepherd, 2000). A functional therapeutic approach, focused on the everyday demands of each child determines a greater motor acquisition compared to classical therapies (Ketelaar, Veermer, Hart, Beek & Helders, 2001).

This difference may be related to the fact that during the performance of activities and daily routine tasks the incapacity becomes apparent. In addition, more dependent individuals accomplish a less variety of daily activities having less participation in social activities and recreation (Mancini et al., 2002) This being, rehabilitation should cause the patient to become fully adapted to the environment (O'Sullivan, Schmitz & Fulk, 2013)

The theories related to motor control have gone through major changes and currently have also been linking their concepts to the importance of treatment with functional goals, the stimulation in areas the child goes to regularly and the orientation to families (Campbell, Palisano & Orlin, 2011).

The MOVE (Mobility Opportunities Via Education) Curriculum is a program that can be used for the assessment and treatment of motor skills and seeks greater functionality for children with severe disabilities (Bidabe, 2003; Thomson, 2005).

The curriculum is based not only on the clinical experience of the professionals involved in the program, but also on experimental researches and on the knowledge regarding neuroplasticity such as the ability of reorganization of the cerebral cortex (Bidabe, 2003; Thomson, 2005).

To use the MOVE Curriculum in Brazil it was necessary for the researcher to evaluate and adapt the philosophy to the Brazilian reality. The curriculum was first used in a special education school in the city of Paulínia- SP.

## **Methods**

This is a qualitative case study and the scientific project was approved by the ethics committee of UNICAMP (Universidade Católica de Campinas) therefore fulfilling all requirements for the execution of the study in human beings.

The research was conducted in a special education school in the city of Paulínia-SP that provides support in the areas of education, physiotherapy, occupational therapy, speech therapy, nursing, psychology, equine therapy, hydrotherapy, adapted physical education and social service. The school also has teacher assistants, who perform the duties of changing diapers and clothes, feeding, positioning and looking after the well-being of the students.

The subjects of this study were the professionals who used the MOVE philosophy in the school between the years 2008 and 2009. Seventeen semi-structured interviews were conducted and posteriorly transcribed and subjected to a process of categorical content analysis. All of the subjects authorized the publication of the interviews for research purposes.

The categories selected after a thorough reading of the interviews, were: The importance of humanization in healthcare, the importance of teamwork and the importance of motivation and everyday environments in motor development.

## **Results and Discussion**

### **The Importance of Humanization in Healthcare**

The humanization of healthcare is the pursuit of an ideal, appearing on many fronts of activities, with many meanings and has represented a set of aspirations for moral perfection of actions and relationships between the people who are involved (Puccini & Cecílio, 2004; Mancini et al., 2002)

It is essential to understand human development in different conditions, providing subsidies to support assessment strategies and more appropriate therapeutic intervention, centered on the individual, their quality of life and dignity (Puccini & Cecílio, 2004; Mancini et al., 2002).

The importance of treatment that focuses on these issues was also perceived by the professionals:

"I didn't see my job as, well, something completely technical anymore and it was more humanized, you know. I mean, all the contact with the children, to be able to provide better conditions for them, you know, to take care of them as human beings"- Interview 14

### **The Importance of Teamwork**

Along with proposals for humanization, the value of teamwork is critical for the treatment to be really focused on the needs of each individual (Puccini & Cecílio, 2004).

For the expansion of learning opportunities in children to occur in an appropriate manner, it is extremely necessary for the entire team to work together. This allows motor learning opportunities for the children to occur continuously throughout the day (Thomson,2005) The interviews showed that with MOVE, the professionals began to realize the importance and benefits of teamwork and began to feel more active within the team of professionals that stimulate the children's development:

"So, you realize that today the assistants are also capable of developing this work. I think this is very stimulating for us. This makes us really want to participate. We look and see that, cool, physical therapy can have nice results and it's something I can help with too. "- Interview 1.

#### The Importance of Motivation and Everyday Environments in Motor Development

Many therapists who considered the nervous system as the only responsible for the development of motor skills, are now recognizing factors such as motivation and the environmental context in which the skills occur as fundamental for developmental changes (Carr & Shepherd, 2000).

It is extremely important that therapists recognize the factors present in each person's everyday life that can change their motor skills and outcomes, not forgetting that the physical and environmental factors along with motivation and support to the child, interfere with the functional gains of the children (Bartlett & Palisano, 2000)

"The joy, they are a lot happier when we use MOVE, when we take them out of the chair and do the activities suggested. I think this is a very positive issue, a very positive thing "- Interview 4.

It was also possible to observe that through the use of motor skills in daily life and the application of MOVE, the children now have global motor progress:

"Even in the matter of stretching, stuff like that, I see that the children improved greatly. You can notice the difference between what we thought were limitations and what the children can do now" – Interview 5.

#### Conclusions

With the implementation of the MOVE curriculum in the school, the professionals realized the importance of a humanized approach, considering the benefits of teamwork, motivation of the students and the promotion of opportunities for motor learning in everyday life so that the child acquires functionality and independence. It is essential to carry out further studies to assist in adapting MOVE to Brazilian institutions and promote the effectiveness and efficiency of this curriculum in Brazil.

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## **Culturally and linguistically responsive evaluation practices**

Corinna V. Cole  
Sam Houston State University  
[lls\\_cvc@shsu.edu](mailto:lls_cvc@shsu.edu)

Catherine C. George  
Sam Houston State University

Sharon A. Lynch  
Sam Houston State University

Philip R. Swicegood  
Sam Houston State University

### **Abstract**

With the significant increase in numbers of English Language Learners (ELLs) entering U.S. public schools, the need for highly qualified professionals in all areas of education is also increasing. This paper describes the Bilingual Educational Diagnostician Program at Sam Houston State University. This program arose from the need to have culturally and linguistically responsive assessment practices ensuring fair and unbiased assessments for ELLs. As this program trains bilingual, biliterate, and bicultural teachers to conduct fair evaluations, appropriate placement of ELLs in special education will be guaranteed.

**Keywords:** English Language Learners (ELLs), bilingual educational diagnostician

### **Introduction**

Demographics in the United States and Texas

Immigration patterns in the United States show a massive influx of individuals who speak multiple languages, including Spanish. Between the years 2000 and 2010, the total Latino population in the United States increased by 15.2 million people (U.S. Census, 2010). In Texas, Latino numbers grew from 6,669,666 in 2000 to 9,460,921 in 2010 (U.S. Census, 2010), with a significant increase of 37.6 percent of the total Texas population. Research in the field highlights the shortage of bilingual, bicultural, and biliterate evaluation professionals; the lack of best practices knowledge by English-only evaluators; and the need for trained interpreters who can help examine ELLs (Alvarado, 2011; Flanagan, Ortiz, & Alfonso, 2013; Rhodes, Ochoa, & Ortiz, 2005).

The current demand for education professionals in every area of bilingual and ESL education in the United States is enormous (U.S. Department of Education, 2013). There are very few university programs designed to prepare their special education evaluation students to meet the current educational demands of ELLs. As the ELL population continues to grow, the shortage of trained evaluation professionals continues to negatively affect the educational outcomes of students who need both specialized assessment and instruction in the areas of second language acquisition and special education. To meet the demand of such needs, Sam Houston State University in

## Huntsville, Texas has created the Bilingual Educational Diagnostician Program. Culturally and Linguistically Responsive

### Assessment Practices

The Bilingual Educational Diagnostician Program is designed to equip future evaluators with a specialized set of professional knowledge and skills. The educational diagnostician seeks to ensure that the results of assessments and evaluations are part of a carefully conceived and reflective process. This broad orientation is embodied in the following:

“The overarching assessment strategy for addressing diversity issues is to implement culturally valid assessment procedures that are not biased toward the learners, their cultures, or their progress in acquiring English as a second language. This reflects both selection of appropriate assessment instruments and assessment competence in implementing and interpreting assessment results.” (Hoover, 2009, p. 69)

Prestigious professional organizations recognize the importance of this type of educator preparation. The Council for Exceptional Children (CEC) has a set of Advanced Professional Standards (2012) for the preparation of educational diagnosticians. Some standards deal with the knowledge base that these professionals should possess: (a) effects of the cultural and environmental milieu of the student and the family on behavior and learning, (b) over/under representation of individuals with cultural and linguistic diversity who are referred for assessment, and (c) needs of different groups in a pluralistic society.

Many of the professional competencies of the bilingual educational diagnostician revolve around concepts of equality, fairness, and respect for diversity. Others are devoted to specific evaluation competencies involving the measurement devices used as well as the administration and interpretation of student responses. Most importantly, bilingual educational diagnosticians obtain observational and interview information about each student's' Basic Interpersonal Communication Skills (BICS) versus their Cognitive Academic Language Proficiency (CALP) (Cummins, 1984).

### Legal Requirements

The federal law in the United States mandates the evaluation professionals to select nondiscriminatory instruments and procedures (Individuals with Disabilities Education Act, IDEA, 2004). Special education evaluations must be completed using the student's "native language or other mode of communication and in the form most likely to yield accurate information" (IDEA, 2004). Bilingual educational diagnosticians are able to conduct an evaluation in the language most familiar to the student thereby increasing the likelihood that results will provide valid information regarding the student's true strengths and weaknesses. When using inappropriate assessment instruments, methods, and procedures, results may emphasize ELLs' lack of English language proficiency versus low abilities, resulting in incorrect diagnosis of behavioral, communication, or academic deficits.

## Method

### Description of Program and Curriculum

In order to meet the need for bilingual educational diagnosticians, our university has developed a targeted program consisting of seven didactic courses, three assessment courses, and two practicum courses. Didactic courses include a study of second language acquisition, a survey of disabilities with a school-site study, a methods course for mild-moderate disabilities, a behavior intervention course, a seminar in cognitive and low-incidence disabilities, a course that addresses family support and in-home

training, and a seminar that explores current issues in special education including legal issues.

The Bilingual Educational Diagnostician Program mirrors our established program for regular educational diagnosticians. However, we have made a few programmatic changes including the substitution of a second language acquisition for a course in emotional and behavioral disorders. All required assessments for the National Council for Accreditation in Teacher Education (NCATE) are part of both the Bilingual Educational Diagnostician Program and our regular Educational Diagnostician Program, although the program of study differs slightly.

## **Results and Discussion**

### **Outcomes of the Program**

The program gives graduate students the opportunity to further their education and to prepare them to advocate for students and parents that are sometimes unprepared to deal with special education issues. The role of bilingual educational diagnosticians extends beyond that of examiners; they become parent educators, advocates for the students and their families, and language interpreters as well as interpreters of the language and culture of special education.

School districts benefit from their bilingual teachers' participation in our program because the future diagnosticians will be highly qualified professionals helping to identify ELLs with disabilities and making placement recommendations in the most appropriate settings for their success. The program provides graduate students with the unique opportunity to form strong bonds with other students in the program. Furthermore, graduate students reported their personal satisfaction of having the opportunity to demonstrate to their children and students, that in spite of the language barriers, they were able to follow their version of the "American dream."

### **Issues during the Program**

Some issues and concerns have been encountered in the program. Several graduate students recommended specific orientation meetings outlining the program prior to beginning the first semester to give students a clear vision of the entire program. Most of the graduate students indicated that the demands of teaching full-time and taking two classes per semester were considerable. Other students highlighted their challenges with scholarly writing as their command of the English language differs greatly.

## **Conclusion**

As the ELL population continues to grow in the United States, the public education system must adapt to meet the demands of students with disabilities whose native language is not English and who are not yet proficient in English. Texas is rapidly becoming the state with the fastest growing Latino population in the nation (U.S. Census, 2010). In response to this need,

Sam Houston State University has created its Bilingual Educational Diagnostician Program, which trains certified bilingual teachers as evaluators in the field of special education. The program will also raise awareness for the need of other certified bilingual teachers to join the forces and become part of a program that will significantly influence the Texas public school system. Finally, graduate students in the program fulfill their personal dreams of one day changing the image of the Latino population in the United States from one of takers to one of highly qualified professionals giving back to a country that has provided them with so many opportunities for growth.

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## **Embracing Inclusion with Ohio's Four-Year New-Teacher Residency Program**

Crystal E. Kaiser  
Ashland University  
[ckaiser@ashland.edu](mailto:ckaiser@ashland.edu)

### **Abstract**

An innovative, evidence-based, four-year new teacher residency emphasizing inclusion preparation has recently been developed and implemented in the state of Ohio (U.S.). As the first four-year teacher residency in the nation (currently completing its' third year), this program is now a mandated state requirement for both regular (general education) and special education teachers, serving as a bridge from formal university teacher preparation programs to their formally entering the profession. Based on field-test data clarifying typical skill levels of Ohio beginning teachers, a four-year postgraduate curriculum was developed, designed to be overseen in the schools by veteran teachers. The essential inclusion skill of differentiation for a wide range of students with special needs was identified as one of the three weakest areas for new teacher education graduates. For this reason, inclusion is a central focus of the new teacher residency.

**Keywords:** residency program, inclusion, regular education teachers, special education teachers

### **Introduction**

In 2009, the state of Ohio (United States) passed state legislation to create an Ohio Resident Educator Program. The purpose of this program was to create a new teacher licensure structure to include an initial, non-renewable four-year teacher residency, similar to the residencies of physicians in this country, to begin immediately after they complete their university-level teacher preparation in education, and as a guided transition to independent professional practice.

Research has indicated a high attrition rate in the U.S. for teachers at approximately the five-year point. This program has been instituted, in part, to provide new teachers with a higher level of support within their first four years in an effort to stem the attrition pattern at year five. In addition, it is hoped that student progress will not be adversely impacted in the first few years of having a newly-graduated, and thus inexperienced teacher, as a one-to-one assigned Teacher Mentor will be there to assure student progress. In other U.S. states with mentoring programs (e.g. Oregon), students whose first-year teacher had an assigned Teacher Mentor have reportedly made significantly more academic progress than students of first-year teachers without mentor support.

Ohio conducted field research preliminary to the design of this program, in which the three weakest areas of new teacher graduates were identified by employers. These were found to be:

1. Differentiation for children with differences in learning style or rate or with special needs of any type, such as children with disabilities who may have an individualized educational plan, those without need for a written plan but whose documented disability

- may require accommodation in school, those who demonstrate significantly advanced achievement levels, and non-fluent English language learners
2. Basic elements of lesson design, including understanding the specific lesson purpose
  3. Purposeful and accurate reflection on one's own teaching

State training and certification for mentor teachers and summative assessment facilitators

Basing their work on this data, the Ohio Department of Education then proceeded to design the Resident Educator Program to emphasize these specific three areas of need within the larger and more comprehensive context of all seven Ohio Standards for the Teaching Profession, a template representing all the knowledge and skills currently expected for all Ohio teachers. When the first-year of the residency had been designed, veteran teachers from around the state were invited to participate in a rigorous two-day training in how to serve in the new role of Mentor for resident educators in their schools. At the conclusion of this training, these teachers were designated as Ohio state-certified mentors for the Ohio teacher residency program. Subsequent topical modules were made (and continue to be made) available for these mentors, as well as for their building principals, in order to optimally support the new program and to assure its success.

Specific areas of focus were identified for each of the four years of the residency, and different mentoring model options were outlined for different years. For the first year, for example, the required option is a one-to-one mentoring model, thus providing optimal support for the brand- new teacher graduate. In the second year, and based on the progress of the new teacher, a mentor may recommend one of several model options for continued mentoring support.

An important feature of the Ohio Resident Educator model is that mentors play no evaluative role of the resident. That function is designated to be the role of the building principal, sometimes in coordination with other subject matter specialty coordinators within the school or district. The mentor's role is to be a coach, a support, and a veteran or more experienced teacher to provide guidance and objective feedback.

While performance assessments are seen as more authentic, in Ohio basic tests of educational and pedagogic knowledge must also be passed prior to the issuance of the four-year, nonrenewable Resident Educator License, though another performance-based test (the EdTPA or Educational Teacher Performance Assessment) is currently being field-tested and considered as another likely future requirement for initial licensure in Ohio, to be administered in the final semester before graduation. One advantage of the EdTPA is its close alignment with the RESA, thus giving new graduates a sample of what is to come at the conclusion of their residencies.

#### Mentoring model options

Mentoring model options available for the second (and subsequent) years include:

1. One-to-one mentoring
2. A Cohort Model in which a small group of e.g. Year Two Residents meet regularly with a Mentor, but can also contact that Mentor individually as needed for support
3. A Co-Teaching Model in which a Mentor Teacher co-teaches a given class along with a Resident Educator, providing support as needed

Residents may also change models within a given year as needed, for example, beginning a year with one-to-one mentoring, but then transitioning to a Cohort Mentoring Group in January, or even back again to the one-to-one mentoring model if the cohort model does not seem to provide sufficient support to enable them to progress

satisfactorily.

#### Children with special needs

An important special focus on children with special needs within the Resident Educator program includes multiple guided opportunities to select focus children performing at very different achievement levels within a given class, and to formally monitor both their progress and the effectiveness of individualized and differentiated interventions designed to enhance their progress over time. This process may include children with identified disabilities and written individualized educational plans (IEPs) as well as English language learners and children who may be identified as gifted or achieving at exceptionally high levels academically.

#### How residents demonstrate skills through formative and summative assessments

Resident Educators (REs) are required to formally assess their own progress and performance at the conclusion of each year of their residency through a Formative Progress Review (FPR), though they are also asked to do this continuously throughout the year in relation to more specific units or lessons. There are specific FPR forms provided which clarify what the resident is to specifically reflect upon regarding their practice for each year. The Mentor reviews these forms and provides confidential and informal feedback for the resident which is not shared with any outside person (including the principal or program coordinator). This confidentiality is viewed as essential to maintaining the integrity of the mentor-resident relationship. These annual progress reviews are also not sent to the state, but are considered the sole property of the resident. The Resident is required to set measurable, specific and attainable annual goals for themselves, based on their year-end progress review. The Mentor reviews these goals as well, providing specific feedback, guidance and support as needed.

In the third year, most Residents will have progressed sufficiently in the development of their initial practice to be ready to take the summative assessment, called the Resident Educator Summative Assessment (RESA). This performance-based assessment is objectively scored nationally based on a common rubric, by a veteran teacher trained to reliability in the RESA scoring. A performance-based assessment is viewed as a more authentic way to assess skill levels for teachers than a paper-and-pencil test, and also more closely mirrors the ongoing performance-based assessments they will receive throughout their careers in the field.

The uploaded RESA documents will consist of videotaped lessons, artifacts, lesson materials, student work, reflective commentaries, pre- and post-assessment results and other evidence of student learning. When complete, these documents are then electronically sent to a vendor subcontracted by the state, who in turn, sends the materials to a previously-trained RESA scorer, who may be anywhere in the country and thus would not know the Resident Educator personally. The RESA scorer's process entails assigning specific scores to each of five uploaded tasks, based on a scoring rubric on which they have been trained to reliability, and they may not ask questions or in any way communicate with the resident, but must evaluate materials on their own merits.

Third year Residents deemed ready to take the national performance assessment are also assigned a Facilitator, whose work with the Resident may be online, and whose role it is to coach the Resident Educator toward successful completion of the RESA, including technological aspects of online submission. The state has developed a two-hour online

training for veteran teachers who would like to participate in facilitating a Year Three Resident Educator's completion of their summative performance-based evaluation. It should be noted that the role of the Facilitator is not to supplant, but rather to supplement the continuing role of a Teacher Mentor.

At the successful conclusion of this training, these veteran teachers would then be designated as Ohio state-certified RESA Facilitators. Their role would not replace, but rather would supplement the role of the On-Site Mentor. Their communication with the Resident would be primarily or exclusively done online. Their role would be to help the Resident to understand the procedural requirements of the RESA, including uploading videos of lessons taught, along with reflections and student work samples.

It typically takes a full year to complete the RESA, which involves submission of evidence and artifacts including video lessons, lesson plans, reflective commentaries, and student work samples. It is the structure of the Resident Educator Program to then focus on professional growth and leadership planning in their fourth year, after the RESA has been passed. In this fourth year, the RE is supported through learning communities and teacher teams, as well as a Mentor and is still considered a Resident Educator, now learning more about the larger professional roles they may play outside the classroom. Thus, all Ohio teachers complete a four- year Residency. It should be noted that some residents may not be judged to have progressed sufficiently to be ready to take the RESA in Year Three. Those Residents will be given additional support to be ready to take the RESA in Year Four.

#### Breadth of implementation

The Resident Educator Program in Ohio is implemented very broadly throughout the state. Both public and private schools, from preschool through and including high school are all a part of this program. Additional implementation occurs in hospitals and in online or virtual schools. Essentially, anywhere there is a new teacher, this program is in operation, with very few exceptions, those few involving certain private schools with no state requirements to participate.

#### Accountability of university teacher preparation programs

Ohio's new Resident Educator Program is integrally tied to a comprehensive state system of university accountability for the quality of its teacher education graduates, including both public and private teacher training institutions of higher learning. Specifically, each Resident Educator's performance will be tracked, with group results being reported publically by university as numbers and percentages of successful graduates from their program. One element tracked is the length of time it takes residents to be considered ready to take the RESA summative assessment (ideally in Year Three).

Another, perhaps more critical data source tracked is the student progress of each of the children taught by the Resident Educator each year. The academic progress of each student in each of several subjects is monitored, and the numbers and percentages of students who achieve to expected levels for each Resident Educator is closely monitored, as is done for all teachers. Once again, these data are then shared publicly by university as an indication of teacher preparation quality. It should be remembered that the new teachers will all have assigned Teacher Mentors to help them with any identified student progress challenges along the way.

A final data component is how many Resident Educators were able to successfully pass the RESA on their first attempt. Residents must submit five tasks, and each is scored separately. Any task component not passed must be resubmitted. Only when all tasks

have been successfully passed is the Resident Educator then eligible to apply for a five year renewable professional educator license.

#### Implications for inclusive teacher education programs

Universities are entering a new age of accountability for the quality of its teacher graduates and their demonstrated ability to effect real academic progress for every student they teach. New technological expertise currently embedded in teacher education programs will now be formally tested by online performance assessments integrally tied to teacher licensure. If these new standards for our teacher graduates and for our universities can eventually result in even better instruction for all our children, including and especially those with special needs, then this will all constitute a most worthwhile endeavor.

## **Inclusive Education for Persons with Disabilities: A Universal Human Right?**

Donna Marie  
Campbell Webster University  
[campbedm@webster.edu](mailto:campbedm@webster.edu)

### **Abstract**

Over the past 50 years, international human rights advocates have declared, "Mankind owes to the child the best that it has to give." In an effort to spearhead efforts to promote human rights across the world, the U.N. Millennium Development Goals (MDGs) established eight goals, one of which advocated universal education for all children. However, children with disabilities were not specifically addressed in the MDGs, or in the Education for All (EFA) initiative. And, while statistics on the education of children with disabilities in many regions and nations around the world are lacking, the consensus is that only 50% (or less) are completing primary education (World Health Organization, 2004). This paper will examine international conventions to establish and promote the rights of children and the rights of persons with disabilities, through the lens of Education for All (Dakar, 2000) and the Millennium Development Goals, and progress towards inclusive and universal education.

**Keywords:** Inclusive education, Education for All, Millennium Development Goals, disabilities, human rights

### **Introduction**

The right to education has long been recognized by the nations of the world as fundamental human right. Adopted in 1948, the Universal Declaration of Human Rights, Article 28, declares, "Everyone has a right to education" (United Nations, 1948). Education is seen as the means, by which the world can achieve peace, eradicate poverty, promote development, and allow for intercultural dialogue (UNESCO, 2013). Access to free, compulsory primary education is essential for eradication of poverty.

Children were among the first groups to be addressed. Thirty years after the Declaration of the Rights of the Child later, the principles of the declaration were formally adopted by the UN General Assembly as the Convention on the Rights of the Child on 20 November 1989. Two articles of the convention are particularly relevant to this paper:

Article 23 (Children with disabilities): Children who have any kind of disability have the right to special care and support, as well as all the rights in the Convention, so that they can live full and independent lives.

Article 28: (Right to education): All children have the right to a primary education, which should be free. (Convention on the Rights of the Child, UN, 1989)

While it is clear from the convention that all children, including those with disabilities have a right to free, primary education, the Convention on the Rights of Children was ambiguous as to how and where education is to be afforded to children. However, the explanation offered in Article 23, "so that they can live full and independent lives" implies that rightful access to special care and treatment, and education, should result in promoting responsible citizenship and participation within one's community and society,

or, in other words, inclusion within the social, economic, educational fabric of society. Ten years later, in a concentrated effort to reduce poverty across the world, the U.N. Millennium Development Goals (2000) established eight goals, one of which addresses universal education for all children. In the same year, the World Education Forum (Dakar, 2000) produced the Dakar Framework for Action, which endorsed the framework of Education for All, conceptualized ten years earlier in Thailand. Six measurable goals, intended to focus efforts on meeting the learning needs of all children, youth and adults by 2015, were developed. Goal 2 set as its target, universal primary education for all children.

Children with disabilities were not specifically addressed in the MDG's, nor were they specifically targeted in the Education for All initiative. It was not until the Convention on the Rights of People with Disabilities (CRPD) was approved by the United Nations in 2006, that this oversight was rectified. Article 7 of the CRPD mandates that children with disabilities be accorded all human rights and freedom available to other children, while Article 24 clearly articulates the rights of persons with disabilities to education. In particular, the article states that governments should ensure that, "Persons with disabilities are not excluded from the general education system, and that children with disabilities are not excluded from free and compulsory education, or from secondary education, on the basis of a disability" (Article 24, Section 2. (a), Convention on the Rights of People with Disabilities, 2006).

#### Progress Towards Achieving Universal Education

Data from the UNESCO Institute for Statistics 2011 database (EFA Global Monitoring Report, 2013), indicate that enrollment in primary schools in developing regions reached 90 per cent in 2010, up from 82 per cent in 1999, which means more children than ever are attending primary school. However, progress has slowed in the past 6 years, and in 2011, approximately 57 million children of primary school age were still out of school. Literacy rates (as defined by the percentage of persons over the age of 15 who can read and write) are increasing, albeit slowly. Globally, 123 million youth (aged 15 to 24) lack basic reading and writing skills. Sixty one percent (61%) of them are young women.

With respect to children and youth with disabilities, the available data is disappointing. Using findings from the World Health Survey, conducted between 2002 and 2004, the World Health Organization in collaboration with the World Bank, published a comprehensive summary of the status of disabled persons across the world (WHO and World Bank, 2011). Children with disabilities are less likely to complete primary school than their non-disabled peers, and the difference was more pronounced for female children with disabilities. Only 41.7% of females, and 50.6% of males with disabilities reported completing school compared to 52.9% of non-disabled females, and 61.3% males. Furthermore, the same survey shows that primary school attendance rates among students with disabilities was considerably lower than their non-disabled peers from the same age group. These findings are confirmed by Gottlieb, Maenner, Cappa, and Durkin (2009), and by Mitra, Posarac, and Vick (2013). For example, Gottlieb et al. (2009) report that in 8 of 18 surveyed countries, children screened positive for disability were significantly less likely to attend primary school. Overall, 29% of children screened positive for disability did not attend school, compared to 22%. Similarly, Mitra et al. (2013) report that in 14 of 15 countries surveyed, significant differences were found between the percentage of individuals with and without disabilities who had completed primary school. The type of disability also appears to be a factor in school attendance, with attendance rates generally falling lower for intellectual and sensory disabilities.

(UNESCO, 2014).

### **Conclusions**

What conclusions can be drawn about universal education and the right of disabled persons to inclusive education? First, we have a long way to go to achieve universal education for children and youth with disabilities. As reported earlier, on the world scale, only one of every two individuals with a disability is estimated to have completed primary school. However, Colin Low (2013) argues that these figures are likely to be underestimates. The International Council for Education of People with Visual Impairment estimates that there are over 6 million visually impaired children in the world, and over 90% are uneducated (The Educator, July, 2013).

Secondly, people with disabilities world-wide have been overlooked and marginalized by governments, as well as by governmental and non-governmental agencies. For example, children and youth with disabilities are not mentioned in EFA, or in the MDG actions plans. Data collection systems have not included questions that address the needs of individuals with disabilities. Only since 2005 has the Multiple Indicator Cluster Surveys (MICS), collected by UNICEF, included questions regarding the risk for disability. Similarly, data collected by the UN, and for the most part, national governments, on school enrollment, attendance, intake rates, and survival rates do not disaggregate by disability or type (or model) of education delivery. Therefore, comparative information about how many students with disabilities are enrolled and attending school, as well as, where and how they are educated, is unavailable at this point. This lack of information impedes the ability of governments to plan, organize, and deliver services to their citizens with disabilities. Their invisibility to decision-makers lowers the priority level in resource allocation for special student services.

Given the current state of evidence, universal education for children and youth with disabilities will remain a goal beyond 2015. And at this point, universal inclusive education is not on the horizon. However, if we define inclusive education broadly, that is to say, education that provides all children with access to a meaningful and relevant curriculum, under the authority of a government agency, and delivered in the least restrictive environment (WHO-World Bank, 2011), Costa Rica offers an example of a developing countries that has made significant progress in educating youngsters with disabilities.

Public education has a long history in Costa Rica, when it was mandated in the Constitution of 1869. Five percent of the Gross National Product is allocated to public education (UNICEF, data from 2008-2010). As a result, the country has one of the highest literacy rates in Latin America. The overall literacy rate in 2012 was reported as 96.3% (UNICEF, country data), and averages over 98% in adolescents and young adults. According to UNESCO, 96% of primary school age children attended primary school in the 2008-2012 data collection time period, with a survival rate of 91%. The out-of school rate of primary school-age children was 5% in 2011 and 7% in 2012. Data for secondary school-age students indicates that the number of out-of-school youth runs higher (11%), and that an even larger percentage of students drop out in the upper secondary levels (UNESCO, UIS).

Special education also has a long history, when the first special education school was opened in 1939. There are now 22 special education schools located throughout the country, in addition to special education classrooms and resource centers located in the local schools. The organizational structure of special education delivery was formalized, and a centralized administrative system put into place in the Ministry of Education.

According to statistics published by the Costa Rican Ministry of Education, 112, 850



students received special education in 2012, out of a population of 1,402,600 under 18 years of age, or eight percent (8%). If one subtracts the number of children birth to 5 years of age, the percentage approaches 11%. This percentage is within range proposed by UNESCO (10-15%) to estimate the percentage of individuals with disabilities worldwide, suggesting that Costa Rica has appropriately identified the large majority of youngsters with disabilities living within its borders. Approximately 14,400 students, (approximately 13% of special needs students) received intensive, or one-on-one (atención directa) special education services in 2012. Of these students, approximately 24 % were educated in local schools, 28% in special education schools, and 48% were educated in secondary schools (pre- vocational). During the same year 98,450 (or 87%) students received support services (servicios de apoyo). Ninety one percent (91%) attended local schools, 5% received services in a special education center, while 4% studied in secondary schools. Finally, only 9700 students, approximately 9%, are educated in special education schools and centers.

The example of Costa Rica illustrates that a nation, although "developing" economically, can make a significant difference in the lives of its citizens, especially those with disabilities. Over the past twenty-five years, Costa Rica has committed itself to transforming and adapting an educational system to meet the needs of all of its youth. It has passed legislation to promote the right to accessible education, established a strategic planning process, invested in teacher preparation and professional development, and funded creative initiatives to support inclusion. This small, but inclusive nation sets an excellent example for other nations of limited resources.

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## **“Inclusion, yes together we can do it!”**

Mansur Choudry  
University of Central Oklahoma and Special Care Inc.  
[mansurchoudry@hotmail.com](mailto:mansurchoudry@hotmail.com)

### **Abstract**

“Inclusion is a philosophy that brings diverse students, families, educators, and community members together to create schools and other social institutions based on acceptance, belonging and community.” (Salend 2005). “Inclusion recognizes that all students are learners who benefit from a meaningful, challenging, and appropriate curriculum, and differentiated instruction techniques that address their unique strengths and needs.” (Salend 2005). Over the last 20 years, there is no topic that causes more controversy in special education among teachers, administrators, and parents than inclusion. Inclusion represents the belief or philosophy that students with disabilities should be integrated into the regular education classrooms whether or not they can meet traditional curricular standards. The purpose of this study was to examine the advantages and disadvantages of the inclusion of students with disabilities into regular education classrooms. This study included children ages six weeks old to five years old that were included in an inclusive childcare setting. The progress of the students was monitored during their stay at the center.

**Keywords:** Inclusion, Main Streaming, Reverse Main streaming, Attitude, Least Restricted Environment.

### **Introduction**

There is no issue that causes more controversy in special education among, teachers, administrators’ and parents than inclusion. Inclusion “represents the belief or philosophy that students with disabilities should be integrated into the general education classrooms whether or not they can meet traditional curricular standards (Friend & Bursuck, 1999).

The process towards inclusive education is just that- a process. It can be a rewarding, yet difficult journey to create an educational system where excellence and equality walk hand in hand (Frost & Pearpoint, 2004).

The number of three-to-five year-old children who received special education and related services had increased 38.3% over the period from 1993 to 2003. More than one-third of children ages three through five with disabilities were educated in early childhood and reverse mainstream environments with non-disabled peers in 2003 (US Department of Education, 2005) The purpose of this study was to address the following three objectives:

1. To examine the extent to which a special needs child can be integrated into a classroom
2. To identify specific skill the teachers need to have to make the inclusion successful
3. To determine whether children’s disability severity, has an effect on the other typical children in the classroom.

This study was only done at the childcare center and has not been generalized or

compared to any other center.

### **Method**

The center has 175 children with and without special needs enrolled in the preschool and Afterschool program. Approximately two third are special needs and one third are typical children.

The disabilities of the children participating in the program have special needs due to a wide-variety of conditions, including spina bifida, visual and hearing impairments, autism spectrum disorders, attention deficit disorders, Down syndrome, and other physical, mental, chromosomal disorders and multi-disabling conditions. Children following typical developmental patterns comprise the other one-third of our population.

The children's ages enrolled at the center are from 6 weeks old to 21 years old. The study focused on ages 6 weeks to 5 years old.

The following step were taken to implement the study:

1. The children were enrolled irrespective of their disability, in the subject classes; attempt was made to keep the ratio, one- third typical and two-third children with special needs.
2. The teachers were appropriately trained to work with the special needs children to ensure good guidance.
3. Interactions between the special needs children and the typical children was encouraged to promote good social relationships.
4. The teacher recognized the strengths and weaknesses of each child and built on their strengths.
5. The teachers and parents had open lines of communication and had agreed on what other needs the child needs.
6. All children were included in all the classroom activities.
7. The implementing team comprised of the classroom teachers, physical therapist, occupational therapist, speech therapist and a behavior therapist.
8. All the children were taught the same curriculum; adaptations and modifications were made for the children as needed with recommendations from the related therapists.

### **Results and Discussion**

The following results were observed:

- An increase in self-concept and social skills in children with special needs
- Increased friendships between students
- Increased understanding of human differences
- Increase in self-esteem of parents
- Increase in academic achievement
- Changes in teacher's attitudes

There was a significant change in the teacher's attitude. Attitudes on inclusion can serve to support or act as a barrier. For inclusion to work, classroom teachers must be willing to acknowledge their responsibility for the educational program and success of every student in their classroom, including those with special needs.

This acceptance was demonstrated by teachers in that they structured positive and welcoming classroom settings, embraced the value of diversity, and viewed each student as a contributing member of the group.

There was a significant change in the student interaction among peers and their academic achievements.

Cooperative and parallel play increased among children of all abilities.

Parents reported increased self-esteem and reduction in stress, resulting in increased productivity at their work place.

The students who moved on to public school from the center, displayed more empathy and understanding of children with special needs in their classrooms.

### **Conclusion**

Inclusion is a highly controversial and emotional topic in education. Special, educators, regular educators, and administrators continue to have mixed reactions towards inclusion. Their attitudes are related to their success in implementing an inclusionary program. This success, in turn, is dependent upon administrative support, available resources, adequate time to plan and prepare, and the appropriate training that they receive to put into practice an effective inclusion program in their school.

There is and will continue to be considerable diversity in the classrooms. One driving force for successful inclusion must be an initial examination of the individual strengths and need of the students.

Another is the centrality of the classroom teacher in the day-to-day life of the student in particular, and the success of inclusion in general.

Classroom teachers must be allowed time to collaborate with specialist/support staff and to know they are supported by other stakeholders involved with the student.

Besides the classroom teacher who plays a major role in inclusion, the organizational structures necessary to support successful inclusion must be in place.

These structures include:

- A positive, accepting, collaborative school climate
- Manageable class sizes
- Consideration of the numbers and educational needs of students placed in the classroom
- Ongoing professional development for all teachers that is accessible, relevant and meaningful
- Adequate funding and resources
- Access to the services of specialist teachers and other specialist staff
- Time.... time to plan, time to consult, time to examine and revise practices, time to teach, time to connect with each student as an individual, and time to reflect on what is working and what needs to be changed.

### **Acknowledgements**

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## **Application of modelo f tutoring in Reading and writing tasks for children with developmental dyslexia**

Andréa Carla Machado  
Federal University of Sao Carlos  
[decamachado@gmail.com](mailto:decamachado@gmail.com)

Simone Aparecida Capellini  
University Paulista State.  
[sacap@uol.com.br](mailto:sacap@uol.com.br)

### **Abstract**

Developmental dyslexia is characterized by impairment in reading and writing as a result of changes in the cognitive-linguistic behavior. The goal of the research was to analyze and compare the performance on tasks of reading and writing in children with developmental dyslexia after a mentoring program. Participated in this study 15 children of both genders from 3rd to 7th grade public schools of a city in the State of São Paulo, with average age ( $M = 9.4$ ) and ( $DP = 1.08$ ) divided into GI-experimental group (7 children who received intervention) and GII – control group (8 children did not receive the intervention, they were matched according to sex and age group with GI). The children were subjected to the diagnostic survey of reading and writing and to the intervention program in Reading Recovery tutoring. The data regarding reading and writing tasks related to mentoring program were collected in CEES-Centro de Estudos de Educação e Saúde da UNESP. The results revealed statistically significant difference between the GI and GII, where children with dyslexia in the GI showed superior performance on the task of reading words and reading the book I in relation to children of the GII. It was concluded that the GI introduced significant advances compared to GII that did not receive mentoring intervention, demonstrating that due to variability of cognitive-linguistic profile of children with dyslexia, it is necessary to develop, mainly, in the school context programs with specific difficulties that focus on interventions of this population.

**Keywords:** dyslexia. Children. Reading. Writing.tutoring.

### **Introduction**

Developmental dyslexia is characterized by prejudice on reading simple words often involving cognitive-linguistic deficits, pointing also changes in motor skills and visuomotora, affecting individuals without disabilities sensory, free of significant and emotional commitment with appropriate educational opportunities (Snowling & Stackhouse, 2004; Fusco, Okuda & Capellini, 2011).

In this perspective, study (Valdois, Bosse & Tainturier, 2004, Castles & Coltheart, 1993; Germano, et. al, 2011) indicate that there is a variability in cognitive-linguistic profile of dyslexic maximizing the importance to develop intervention programs consistent with such losses, especially those who are reading and writing tasks in the same context. For example, whereas the flaws in the writing of the dyslexic children comprise mostly linguistic structures similar to those found in typical development

children: However, are persistent, popping up with more frequency and prevalence (Zorzi & Ciasca, 2008).

The reflexes of orthographic difficulties, for example, experienced by the dyslexic children tend to be more extensive than in reading, since, in addition to cognitive requirement imposed by his own writing, the Portuguese is less transparent for writing than for reading (Mousinho, Correa & Mosque, 2010)

With children identified as at risk, on the basis of this selection, an additional short-term intervention. This intervention can evolve from small groups for individual classes based on the needs of the child. Progress monitoring is used to measure the response of children for intervention. Those who do not respond to additional intervention are considered to be at risk for dyslexia and can benefit from a more specialized education provided within a context of special education (Machado; Almeida, 2012).

That said, there are a wide range of investigations into mode and instructional procedures (Wanzek & Vaughn, 2008; Vellutino & Scanlon, 2002) provided outside the regular classroom to assist children who have difficulty in early reading and writing skills. Mentoring is a mode in which the tutor offers a follow-up single to the student seeking to improve results. Mentoring-based interventions contribute to the development of reading and writing skills of the child, and is a facilitator for the performance via context of the classroom. In other words, the intensive intervention in the form of tutoring is held individually in the educational area, whose tutor helps students to overcome their difficulties, becoming an important mediator element for effective pedagogical interaction and academic performance (Machado & Capellini, 2014; Machado, 2009).

In this way, children with developmental dyslexia diagnosis can be benefited with the opportunity to participate in interventions that aim to offer activities focused on instructional tutoring. On the basis of the above, this study aimed to analyze and compare the performance on tasks of reading and writing in children with developmental dyslexia after a mentoring program based on the model of RTI.

## **Method**

This study was conducted after approval by the Research Ethics Committee of the College philosophy and Sciences of UNESP-campus de Marília-SP, under Protocol No 1589/2008. The present study is characterized as an experimental study conducted with municipal public school children in the city of Marília-SP, were met at the Center for the study of education and health – CEES/UNESP.

Participated in this study 15 children with the diagnosis of dyslexia interdisciplinary development of 2nd to 6th grade of elementary school the public network the city of Marília-SP, with age range of 8 to 12 years old ( $M = 9.4$ ) and ( $DP = 1.08$ ) of both sexes, being 75% of male and 25% female divided into:

-Group I (GI): composed of 7 children with the diagnosis of dyslexia interdisciplinary development, which received tutoring, met at the Center for the study of education and health – CEES/UNESP; and,

-Group II (GII): composed of 8 children with the diagnosis of dyslexia interdisciplinary development met in the Center for the study of education and health – CEES/UNESP, which did not receive tutoring. The requirements for the inclusion criteria were: Children with eyesight and hearing and cognitive performance within the standards of normality-described in handbooks of the EWCS; children at risk for dyslexia proven development by CEES assessment; Never having participated in intervention programs, educational or neuropsychological speech therapy. The requirements for the exclusion



criteria were: Children with eyesight and hearing and cognitive performance below the standards of normality-description in charts; genetic syndromes or other syndromes; Hearing impairment; Visual impairment; Mental Deficiency.

For the realization of this study were used the following procedures:

a-) post Informed consent form: As National Health Council resolution 196/96 CNS, prior to the start of evaluations, the parents or guardians of patients selected signed the post Informed consent form for authorization of completion of study.

b-) diagnostic Survey of reading and writing (pre and post-test): This instrument was applied individually in children both the experimental group-GI, as well as on children belonging to the control group-IGI, lasting one hour each application. The instrument that evaluated the performance of children in six tasks: The task of writing concepts (1), is asked to identify sixteen concepts (the front of the book, where read, where it starts to read, for which direction to go, the meaning of punctuation marks, among others). In the task of writing free of words (2), the child is asked to write as many words that meet in a blank sheet during the time of five minutes and then read them. In the task of writing the words dictated (3), the child was asked to write four words (a frog, a dissílaba otherwise have one-car, a sat-toy and a polissílaba-chocolate, chosen from a list of previous words) and two simple sentences — "Picu eat cake" and He drinks milk ". In the task of identification letters (4) requested that the child recognize uppercase and lowercase letters of the alphabet and appoint a Word with each letter. In word reading tasks (5), it was requested that the child read a list composed of 14 simple and complex words. The task of reading books (6), the first book was illustrated ("the Famous Seal" by Sonia Junqueira – series Starlet) containing 111 compound words by syllables simple and easy to understand and the second (was extracted from the Primer popcorn, Paul b. Abdullah) containing 106 words composed of simple and complex syllables, the absence of figures and more complex phrases, in addition to the implicit outcome.

c-) mentoring program: was performed at the laboratory of learning Deviations (read) the Centre for the study of education and health – CEES/UNESP of Marília in eighteen individual sessions lasting an hour each with weekly frequency. Thus, the program followed the following steps:

1-) re-reading made by student or read in conjunction with the researcher\tutury of a book I read in the previous session; 2-) recount the story deals earlier and identifying the letters made by the student through playful activities with focus on letter-sound relationship (movable alphabet letters, written on paper, magnetic Whiteboard bond); 3-) oral and written separation of words into syllables to the child look at the sounds; 4-) writing of sentences by the student, from the recount and assembling the same history of the book (Mount); -5) separation of sentences into words, words into syllables (Mount); 6-) introduction of a new book and reading, with the help of researcher\tutury of this book. It should be noted that both the diagnostic Survey, as well as the mentoring program used in this research was based on Reading Recovery Program proposed by Mary Clay (Clay, 1993).

The results were analyzed statistically, used the Wilcoxon test and Kruskal-Wallis test to check possible performance differences in the tasks between the study groups and variance analysis, and was adopted the significance level of 5% ( $p = 0.050$  \*). For data analysis program was used SPSS (Statistical Package for Social Sciences), in its version 13.0.

## **Results and Discussion**

In table 1 you can check the average, standard deviation and the calculated value of "p" for Group I (GI) on the score from reading and writing tasks. The results revealed significant differences for the reading of words and reading the book 1, in children with dyslexia who participated in interventions.

**Table 1. Average, standard deviation, and median value of "p" for the performance of children of GI for scores in reading and writing tasks.**

Pair of Variables	n	Average	Standard deviation	Minimum	Maximum	Median	Significance (p)
CE_PRÉ	7	76.20	18.52	37.00	100.00	75.00	0.929
CE_PÓS	7	75.13	13.84	56.00	100.00	70.00	
EL_PRÉ	7	64.73	23.53	16.00	94.00	63.00	0.201
EL_PÓS	7	72.67	20.91	40.00	100.00	76.00	
ED_PRÉ	7	75.13	22.53	19.00	100.00	74.00	0.056
ED_PÓS	7	82.67	18.39	34.00	100.00	90.00	
IL_PRÉ	7	86.00	15.44	42.00	100.00	90.00	0.344
IL_PÓS	7	88.67	10.15	70.00	100.00	90.00	
LP_PRÉ	7	71.47	26.17	21.00	100.00	78.00	0.012 *
LP_PÓS	7	79.20	26.23	21.00	100.00	92.00	
LL1_PRÉ	7	75.53	28.59	0.00	100.00	87.00	0.020 *
LL1_PÓS	7	84.20	17.43	43.00	100.00	90.00	
LL2_PRÉ	7	70.33	33.52	0.00	100.00	85.00	0.451
LL2_PÓS	7	76.53	22.11	40.00	100.00	86.00	

Pair of Variables n Average Standard deviation Minimum Maximum Median Significance (p) Caption: EC-concept of writing; EL-free Writing; ED-written under dictation; IL-letter identification; LP-Reading of words; Were observed-reading book 1; LL2-book reading 2.

Table 2 presents the mean, the standard deviation and the value of "p" for the Group 2 (GII) as to the score from reading and writing tasks. The findings showed no statistically significant differences in any task of reading and writing proposed by mentoring program, i.e. children of GII that did not receive intervention, not advanced in the tasks.

**Table 2. Average, standard deviation, and median value of "p" for the performance of the children of the GII for scores in reading and writing tasks.**

Pair of Variables	n	Average	Standard deviation	Minimum	Maximum	Median	Significance (p)
CE_PRÉ	8	83.00	6.93	75.00	87.00	87.00	1.000
CE_PÓS	8	83.00	4.36	80.00	88.00	81.00	
EL_PRÉ	8	59.67	26.69	35.00	88.00	56.00	1.000
EL_PÓS	8	58.33	16.07	40.00	70.00	65.00	
ED_PRÉ	8	67.00	21.38	50.00	91.00	60.00	0.285
ED_PÓS	8	88.33	2.89	85.00	90.00	90.00	
IL_PRÉ	8	90.00	2.00	88.00	92.00	90.00	0.317
IL_PÓS	8	92.67	6.43	88.00	100.00	90.00	
LP_PRÉ	8	77.00	5.57	71.00	82.00	78.00	0.109
LP_PÓS	8	84.00	8.54	75.00	92.00	85.00	
LL1_PRÉ	8	89.00	3.46	87.00	93.00	87.00	1.000
LL1_PÓS	8	88.33	0.58	88.00	89.00	88.00	
LL2_PRÉ	8	79.67	6.11	73.00	85.00	81.00	0.285
LL2_PÓS	8	83.00	5.20	80.00	89.00	80.00	

Pair of Variables n Average Standard deviation Minimum Maximum Median Significance (p)Caption:  
EC-concept of writing; EL-free Writing; ED-written under dictation; IL-letter identification; LP-Reading  
of words; Wereobserved-reading book 1; LL2-book reading 2.

In this study, the situations were compared pre-and pós-testagem in children with developmental dyslexia, in which the GI Group received intervention with reading and writing tasks with mentoring and GII did not receive the intervention program. Having a breakout performance against the tasks analysed the GI group. In this way the losses presented by children with dyslexia leads to the understanding that these children have learning disabilities, and are in need of educational activities targeted to assist in school performance.

In relation to the concept of writing tasks and letter identification it was found that the children of the GII showed no significant differences compared to the GI. However, the elements of these variables, such as letter recognition, directional movement of writing, knowledge of the sounds of the letters should be worked on anyway, because children with dyslexia have losses in the process of literacy, where these elements are fundamental for good academic performance in the context of the classroom (Davies, Cuetos & Glez-Seijas, 2007).

Free writing tasks and written under dictation was also not observed differences between the groups involved in the study, at pos-test. However, these results can be explained due to words used for these tasks belong to the category of regular words, i.e. words that have letters in its structure with unique sounds, a sound for each letter, without present ambiguity.

The results found in this study will meet the studies that indicate the factors interlinguísticos (Germano, Pinheiro & Capellini, 2012; Davies, Cuetos & Glez-Seijas, 2007) as responsible for the differences found in surveys conducted in some languages – differences in regularity or transparency of your spelling, because it is known that there are differences in the ease with which children acquire the skills of fitness among the languages. Thus, dyslexic children who speak Portuguese (a transparent language) achieve success in using some alphabetical skills with regular words, as found in this study, for example.

The studies in this aspect (Capellini & Lanza, 2010) remind us that, although the main sign of dyslexia is often a problem of reading, the deficit in the writing is more properly considered one of several possible behavioral manifestations of an underlying cognitive deficit. Therefore, the professional involved in the child's schooling process must pay attention also to the acquisition, as this spelling ability needs to be crafted so that future losses are mitigated.

The findings of this study point out that the tasks of reading words and reading books, are related to phonological awareness skills, attention and short-term memory ability. However, we cannot say in this study the direct relationship of such functions, but we can consider that these functions mentioned above can influence on academic performance. So is mister stress that specific interventions directed to the area of injury of children with dyslexia support to assist effectively the teaching of reading and writing (Days & Avila, 2008; Capellini & Lanza, 2010).

In another qualitative analysis in the tasks of writing writing Concept, writing of single words and writing dictated, the children evaluated presented different results within the same condition, because it is considered according to Valdois et. Al. (2004) and Castles and Coheart (1993) and Germano, et. Al. (2011) the different manifestations in the cognitive-linguistic profile of Dyslexic.

Thus, the findings of the study point to individual differences children with dyslexia compensatory, because it is known that in the absence of the phonological code types – its deficit, other compensation strategies are developed (Olson. 1984; Rack, 1985). These results will meet their studies (Cossu, 1999) that indicate the interlinguistic factors as responsible for the differences found in surveys conducted in some languages – differences in regularity or transparency of your spelling. To some extent, the didactic approaches reflect the nature of the task to be learned, and there are growing evidence that the demands of learning of reading and writing differ between languages, Portuguese (considered a transparent language) and English (opaque language), for example. However, today it is known that there are differences in the ease with which children acquire the skills of fitness among the languages. Thus, Dyslexic readers who speak Portuguese (a transparent language) achieve success in using some alphabetical skills with regular words, as found in this study, for example.

### **Conclusion**

From the results of this study concluded that there was a significant improvement in some reading and writing tasks when these were administered in an intervention program with tutoring. With proposal for advancing the process of reading and writing of a child with dyslexia, such a model also features an effectivity in relation to reducing false-positive cases in relation to the disorder, thus offering a wholesome way to help children with dyslexia in the schooling process.

From the aspects pointed out, we can consider that the results of this study have practical implications for prevention, mainly focusing on the tasks of reading and writing as important activities to assist in the preparation of interventions aimed at decreasing the failure of children who have developmental dyslexia. Yes, the literature suggests that the school experience of children with developmental dyslexia, when enriched with activities conducive to the development of strategies can provide a substantial enhancement in the development of these skills.

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## **Teacher's Perceptions of the Education of Children with Special Needs**

Amanda Fernandes Santos  
University of Minho, CIEd  
[amandafernande@gmail.com](mailto:amandafernande@gmail.com)

Luís de Miranda Correia  
University of Minho, CIEd

Anabela Cruz-Santos  
University of Minho, CIEd  
[acsantos@ie.uminho.pt](mailto:acsantos@ie.uminho.pt)

### **Abstract**

Nowadays not only teachers and parents hope for the schools to become inclusive, all the society seems to understand this need. However, when we talk about inclusion are we thinking about the same thing? Do teachers have the same perceptions about their student's needs? In order to answer these questions we conducted this quantitative study, whose main objective was to understand how teachers perceive the education of students with Special Educational Needs (SEN). The data was collected through a questionnaire composed by 25 items divided into three clusters: [1] Attitudes; [2] Resources; [3] Collaboration. Participants were 249 elementary school teachers in Braga, Portugal. Results showed significant differences in relation to the participant's perceptions, taking into account gender; academic qualifications, illustrating that higher qualifications have more effects on perceptions; and professional experience. The results indicate that although participants recognize the importance to implement the philosophy of inclusion in Portugal, it is necessary to survey in other Portuguese cities, intending, if the same results are found, to raise awareness of specialized training for the teachers and for all professionals that support children with SEN.

**Keywords:** Special Education; Teachers Training; Elementary School, Special Needs

### **Introduction**

In Portugal, in the 70's, education has undergone a significant change, leading national schools to open its doors to all children. This process, besides originating a much larger participation of children and adolescents in public education, has resulted in a profound change in the way children with Special Educational Needs are addressed.

This change became even more evident with the publication of the Law n.319/91, of August 23rd, although it was still evident that both the regular and the special education system, operated in different fields, stressing situations of segregation and exclusion of a significant number of SEN pupils, pointed out by the attending staff, particularly those with significant SEN in special classes, special schools and institutions (Correia, 1997).

However, the search for new processes that were to promote the success of these school students leads to the development of a movement calling for the inclusion of pupils with significant SEN in schools' mainstream classes, nearby their homes whenever possible,

which should be provided all support and specialized services according to their characteristics, capabilities and needs. This generated the movement of inclusion that, in Portugal, begun receiving special attention particularly after the conclusion of the "World Conference on Special Needs Education: Access and quality", that took place in Salamanca, in June 1994. This Conference stated a declaration, the Salamanca Statement on Principles, Policies and Practices that should guide the education of pupils with SEN, inspired by the principles leading the movement of inclusion and the "recognition of the need to act in order to achieve schools for all - institutions that include all individuals, accept the differences, support learning and respond to individual needs of each and every one" (p.iii).

In the light of these events, Portugal started building an educational system that is likely to consider and respect the principle of equal opportunities, bearing in mind the importance of providing a free and of quality education for all students.

Thus, with the Law n.3/2008, Portugal seems to have apparently opened the way for the inclusion of the "traditionally excluded ", which are mostly the students with significant SEN. The law, therefore, seems to have as its theme the principle of zero rejections, proclaiming that no student should be excluded from quality education.

If on legislation inclusion seems to gain significant ground, in national schools the quest remains, since it is important to consider the academic inclusion in the school context. Simultaneously, it is necessary to identify a set of principles whose practical fulfillment give an operational dimension to the confidence in inclusion, setting real and facilitator paths to achieve the concept of school for everyone.

From the foregoing we take that the path to build a school for everyone is not easy, nor to build or accomplish. They are complex in its design and in implementation, even when there is strong will. In this context, it is urgent to develop studies to contribute to the deepening of several reflective questions that lead to the construction of a school for all, where the rights of students with significant SEN are ensured through enhanced attitudes and dynamics implementation of organizational and pedagogical inclusive cultures. It is therefore in this perspective that the present study is introduced, although its subjects are initially only the teachers of regular education and special education. This is due to the assumption, as stated by Correia and Martins (2000, p. 17) that "with the rise of inclusive practices, we witness a much greater involvement of regular education teachers in serving students with SEN and a significant change in the role of the special education teacher " and continues "teachers play an important role with regard to the success of inclusive practices and their attitudes appear to be directly related to their behavior".

## **Method**

Participants of this study consist of 249 primary teachers of 52 school of Braga District. Of these 249 teachers, 202 (81%) were female and 47 (19%) were male, aged between 27 and 62 (M=44, SD=.640). As for the length of professional experience, participants have from 5 to more than 30 years of professional career (M=between 16 and 20 years, SD=1.592). With regard to academic training, participants have qualifications from magistracy degree to PhD, with the majority (65.5%) holding a degree course.

In this study we used the questionnaire developed by Correia (2005) - "Perception of teachers regarding the education of students with Special Educational Needs", in order to get to know the perceptions of regular teachers, with regard to the education of students with SEN in schools.

This questionnaire has two parts, the first is related to demographic data, which includes the variables of gender, age, academic qualifications, professional experience and time

belonging to the Schools' Group. The second part consists of 25 items, divided into three groups, on the perceptions of teachers regarding students with special needs education. Items are sorted based on the Likert scale with four response options, namely: strongly agree (SA), agree (A), disagree (D) or strongly disagree (SD).

The survey also contains an explanation of its purpose and assurance of anonymity and confidentiality in data processing.

All school groups of the Braga District were contacted by the researchers in order for them to redirect the on-line available questionnaire to teachers of the 1st cycle of basic education.

## Results and Discussion

### Descriptive Analysis

The following data will be presented according to a descriptive analysis, divided into three factors of the questionnaire, namely: attitudes, resources and collaboration.

The first group includes items 1 , 2 , 4 , 7 , 11 , 13 , 14 , 15 , 16 , 20 , 21 and 22 , and refers to the attitudes of teachers against the inclusion of pupils with SEN in mainstream classes . Table 1 shows the frequency of participants' responses

**Table 1: Attitude**

*Table 1*

#### Attitudes

Item	SD	D	A	SA
1. All students, including those with SEN, have the right to learn together	1,2%	6,4%	48,2%	44,2%
2. Pupils with SEN fit well when inserted in regular classes.	2,4%	25,7%	63,5%	8,4%
4. Student without SEM accept their colleagues with SEN		4,4%	63,5%	32,1%
7. The needs of students with SEN make them vulnerable in regular classes.	2,8%	30,5%	57,4%	9,2%
11. Leadership in a school is crucial to the success of an inclusive philosophy.			64,7%	35,3%
13. The regular education teachers should be responsible for all the students who are put under his duty.	6,4%	27,7%	49,0%	16,9%
14. Students with SEN are more successful when integrated in regular classrooms.	4,4%	32,5%	55,4%	7,6%
15. Students with SEN jeopardize those without SEN.	12,0%	48,6%	34,5%	4,8%
16. Regular education teachers object to the integration of SEN students in their classes	9,6%	47,4%	39,8%	3,2%
20. Student with SEN have the right to attend regular classes whenever this is possible.	0,8%	1,2%	54,2%	43,8%
21. My school is prepared for the inclusion of students with SEN.	10,4%	23,3%	53,0%	13,3%
22. Regular education teachers are prepared to meet the needs of students with SEN	10,0%	52,6%	34,1%	3,2%

This group seems to reveal that regular teachers are in favor of the inclusion of pupils with SEN, whenever possible, in regular classes, but much remains to be done. We stress the importance of teacher curriculum to cover special education, and the effective participation of school leadership in the educational inclusion.

The second group, "resources", explores the issue of the interdisciplinary team and the existence of a school structure that promotes the inclusion of all students who require adaptation.

The third factor show us that the existence of an interdisciplinary team that meets the needs of students, alongside with parental involvement, is required. In theory, participants proved to know exactly what research supports, and back the need to



develop an IEP for students with significant special needs, in order to address all their needs and capabilities, with due monitoring of its evolution.

### **Conclusions**

The results of this study lead us to conclude that participants consider it important that the implementation of an inclusive philosophy in Portugal must not neglect factors such as collaboration, curricula adaptations, creation of Individualized Education Programs and parental involvement in the education of students with SEN, aspects that are in fact considered in the literature.

Dettmer, Thurston and Dick (1999) emphasize the need for collaborative working, stating that the goals of inclusion will not be accomplished if it is not carried through. Also, Correia (2008), Hallahan and Kauffman (1991), when referring to collaboration, demonstrate its importance in the formation of teams for student support, leading to the development of effective education for SEN students' interdisciplinary teams. However, participants reveal that there are not enough human resources in schools so that it becomes liable to create these teams so they can meet the needs of all students with SEN in regular schools.

Furthermore, participants agree that the primary responsibility of meeting the needs of all students concerns to regular education teachers. However, as mentioned above, when regarding to children with SEN, there is a series of curricula adaptations for which the regular education teachers may not be prepared, and in these cases, the collaboration of other educators may be required, particularly the special education teacher.

Finally, based on the findings of this study, so that an inclusive philosophy is likely to be implemented successfully in schools nationwide, it is essential to consider a number of measures, which include the effectiveness of leadership, collaboration, use of learning strategies based on research, curricula adaptations, parental involvement and specialized resources (Correia, 2008). We believe that without these measures it will not be possible to promote quality education for all students as proclaimed by the movement of inclusion. However, alert as in claimed by Correia (2008), more than half of the students with SEN in Portugal do not obtain appropriate education according to their needs at the moment, since most of these assumptions are not being respected. Thus, according to the results of this study, it would be advisable that the system promotes discussion in order to better train all agents involved in the education of students with SEN as well as boosts a meaningful dialogue among all school staff, parents and community in general, in order to rethink the existing legislation.

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## **The interlocution between teachers who attend the handicapped student**

Bianca Regina de Lima Salomão  
Secretaria de Educação do Distrito Federal  
[salomaobianca@gmail.com](mailto:salomaobianca@gmail.com)

Amaralina Miranda de Souza  
Secretaria de Educação do Distrito Federal

### **Abstract**

Our work aimed at investigating a way of systematizing the specialized care in order to maximize the action of the teacher in her/his service to the student with special educational needs in the resource room. The project of research was set on the basis of the results of a previous study, realized with teachers of resources rooms (SALOMÃO, 2011), which indicated the need to organize the service offered in this environment.

We chose the methodology of research-action. The study was realized in a resources room of a public school of the central area of Brasília, involving a teacher of special education, a teacher of regular classroom and a student with intellectual handicap attended by those two professionals. In this paper, we present a part of the research focusing the analysis of the interlocution between the teachers whom were the subjects of our research. The results that we obtained showed that the systematization of this work, besides clarifying the role of the teacher who works in the resources room, demonstrated to be an effective way of organizing and coordinating the work realized in the educational environment. The focus on the goals defined jointly helped the teachers to seek better attendance strategies. The implementation of a schedule of bi-weekly meetings between the teachers allowed a work in partnership and made possible to follow the evolution of the learning process of the student.

**Key-words:** Inclusive education. Resources room. Specialized Educational Attendance

### **Introduction**

In the context of inclusive education, the resources room are an important means of support in the process of teaching and learning of the student with education needs (SEN) For the student to receive effectively the support she/he needs to boost her/his learning process, besides the resources, it is indispensable that the professionals who attend her/him get the adequate training and be in the attendance of her/his educational demands.

### **Method**

The methodology used in our research – qualitative approach – is based on the principle that, in order to understand the universe of human relationships, the researcher needs to become involved in the research, to be able to understand the facts and situations, without possibility of exemption or neutrality. The case study and the research-action complemented the methodological path chosen for our research.

The planning of the actions of the research prescribed, as first step to be taken, the

initial assessment of the student. After that initial identification, it was possible to draw to attendance to the student, so as to systematize the attendance, in order to satisfy his real educational needs. From the joint definition of the goals realized by the two teachers who attend the student, we have planned all actions developed in the resources room by using the computer, since this resource was defined in such a way to boost the range of the goals proposed in the above mentioned planning.

The research work began in march, 2012, and took three months and 20 days of involvement with the subject of the study, and of contact with the intervener and with the school environment of the research.

The research took place in a public school of the Federal District, located in the Pilot Plan, in the central area of Brasília, in Brazil, which provides only the first stage of Basic Education (from the 1<sup>st</sup> to the 5<sup>th</sup> year of scholarship). This school attends about 170 students and it is pioneer in the attendance of students with SEN.

The two teachers who participated in the research have applied to the teacher position. One of them is a teacher of AEE in resources room, and the other is regular teacher in a classroom of inverse integration of the first year of Basic Education. We deem it important to inform that, in order to preserve the identities of the subjects of the research, fictional names shall be used to identify them in the text. The teacher of resources room shall be identified as “Ana”; the regular classroom teacher, as “Bia”; and the student, as “Caio”.

In May, in the beginning of the research, the select student was 7 years and 7 months old. Caio was evaluated by the Equipe de Apoio à Aprendizagem da Secretaria de Educação, in 2011, which referred him to attend a class of inverse integration designed for attendance in the context of intellectual handicap, for the year 2012.

The organization of the analysis of the collected data was done accordingly with the stages of the technique proposed by (2011), that organizes them in three phases: a) pre-analysis; b) examination of the material; and c) treatment of the obtained results and its interpretation.

We should like to highlight that, during all of the procedures of the analysis of the research data, always has been present the concern with relating and to referencing the material selected to analysis and with the theoretical foundation, in the light of the research goals.

### **Results and discussion**

One of the tasks of the AEE teacher is establishing the articulation with the regular classroom teachers and other professionals of the school. Even being that task a responsibility of the teacher of the resources room, some recent research indicate that there is a lack of articulation between those professionals (SALOMÃO, 2011; RODRIGUES, 2012; TARTUCI et al, 2012).

As a way to foster the articulation between the main professionals who are responsible for the process of social inclusion, we have proposed, as a research intervention, the realization of bi-weekly meetings between the teachers of AEE and regular teachers. We have held, altogether, five meetings, with the duration of about half hour each, which gave rise to discussions, always objective, about matters relative to the learning process of the student Caio. We observed, through the verbalization of the professionals, the perception that the work realized with the students with handicaps was much unvocalized. Both felt that they were working isolated from each other, and that was a factor of discouragement.

After the implementation of the working partnership proposal, we verified that the possibility of discussing and evaluating the progress of the actions with the students in

the two environments was positive and fostered the mutual support between the two professionals. The meetings were a space for them to share their difficulties and also their successes.

As those meetings took place, it was evident the importance of the partnership work between the professionals, to foster the process of academic inclusion. The setting of goals, the exchanges realized and the visualization of the range of the goals were aspects that improved the work with the student.

The work of articulation between the professionals of AEE and those of the regular classroom needs to be understood as a key factor in school inclusion. To make priority the articulation of these professionals is a way of guaranteeing the support that the student with SEN needs during her/his academic path, and also to improve the quality of the education provided. According to Marchesi (2004), the good teachers are revealed more easily in the schools that have the adequate conditions to support the efforts of each professional and to create an environment of collaboration.

After an initial assessment, that served as the basis to the design of the individualized planning of the student, the first bi-weekly meeting took place, where the results of the pedagogical evaluation and the planning were presented to the regular classroom each.

The teacher of AEE realized the first interventions through the actions taken until the day of that meeting, that included a visit to the classroom of teacher Bia, the previous knowledge of the pedagogical standing of Caio, as well as the clearness of the goals to be attained in the trimester.

In that first meeting, teacher Bia could know all previous work realized before Planning of the AEE, and the opportunity to add and opine about it. The moment was characterized by settling of the agreement and of the partnership in the work. From the planning, teacher Ana made it clear the role of teacher Bia, what tasks she should perform in the resources classroom. On the other hand, teacher Bia learned about the existence of a professional who knew “her student” and who would be able to help her to conduct the learning process. In that first meeting, it was implicit that both teachers could count with each other and, thus, they would not have to develop their work isolated any more.

Marchesi (2004) states that a project jointly designed by the team of teachers reveals itself to be a powerful toll of change, when the education as its goal the apprenticeship of a student with SEN. He adds:

The quality of an educational project is related with other two variables: the existence of a coordinated teacher team and the positive attitudes of the teachers. These two dimensions are greatly intertwined: positive attitudes foster cooperation between teachers in order for them to work in a common project [...]. However, not always this is the case. A good cooperation demands positive attitudes, but also an effective direction, that gather everybody's efforts and helps to solve problems (MARCHESI, 2004, p. 36).

The statement of this author was verified in the moment of the beginning of the research, in the initial interview, when teacher Bia verbalized her concern regarding the conduction of Caio's learning, since he was attending the class for a little time and presented a phase displacement relatively to the group of the students.

The teacher of AEE understood the need to intervene in that initial phase, with the objective of guaranteeing the partnership and of opening paths to facilitate the interlocution with teacher Bia. We understand that this intervention revealed to be adequate and, with the other actions, it presented very positive results.

After the second bi-weekly meeting, the regular classroom teacher showed to be more receptive to discuss and to talk about the problems related with the way of conducting activities in the classroom and about the adaptations to be realized in the curriculum.

The support and the guidelines that she was receiving were considered, and the partnership work started to point to new ways an action, with the purpose of, thus, diminish the dilemmas of teacher Bia, which were especially related to the curriculum and with the ways to act in order to give her full attention to the student Caio.

As concerns the student, in the first meeting, teacher Bia, related his high level of dependency to realize the activities proposed in the classroom. Some relationship problems were mentioned in the initial interview.

Still related with the second by-weekly meeting, teacher Bia stated with enthusiasm Caio's evolution on his social skills (sharing his snack with his classmates, diminishing of his requests to leave the classroom) and a greater level of independence to realize the activities.

Those statements lead us to understand that the professional started to see the student with a new look. A more positive attitude allowed her to highlight Caio's progress, a signal that she was more involved and satisfied with the conduction of her work.

In the discussions, it was highlighted recurrently, the level of dependency of the student to realize his activities. This difficulty was related by the two teachers and also by his mother, which brought to the attention of everybody do need to, first of all, be attentive to the child's needs, being necessary to work the autonomy of the student, providing him with activities that he would be able to realize, independently, and that stimulated him to assume a more active stance.

In the meetings, we discussed ways of proposing to Caio activities that stimulated his development so as to foster in him a greater level of autonomy to decide, choose and develop initiatives.

In the following meeting, the two teacher defined the integration of Caio's mother as an effective participant in his attendance process. Her mother received orientations provided by the two professionals, to allow and stimulate her son to realize the daily activities that he was capable do perform, independently. In the recordings taken from the final interview realized with Caio's mother, we can identify that she welcomed the professionals' orientations and the initiatives taken by the mother to foster the level of independence of her son.

## **Conclusion**

We verified that the articulation of the teachers, promoted by the bi-weekly meetings, has demonstrated to be efficient to find means to facilitate the access of the student to the curriculum. The meetings realized were referred to, by the regular classroom teacher, as an advance in the pedagogical work designed to support the student with SEN.

We have also verified that the definition of the goals to be reached by the student in the bimester, as well as the understanding of the need of an effective adequacy of pedagogical strategies, were important steps to make it possible the advance in the process of the student's learning. The work in collaboration and with common goals facilitated the access of the student to new experiences of learning.

It is fundamental that the teacher follows and recognizes the learning of that student, identifying the level she/he is in, when designing some concept and, from those observations, be capable of offering pedagogical conditions for her/him to act with success, to reflect and, finally, to create new hypothesis.

The respect by the process and the timing of learning of the student needed to be, constantly, taken into consideration, so the imposition of the rhythm of the other students and of the curriculum, designed for the class, was not excessively demanding.

Assuring that the planning is used as a way to orient and foster the actions established

between the teachers of AEE and the regular classroom teachers is a great step. We know, however, that to make it possible for these actions to happen in a synchronized way, it is necessary to prioritize the work of articulation of the professionals responsible for the inclusion of the student with SEN.

In our research, the bi-week meetings have shown to be effective as a way of supporting the process of the student's learning. In that perspective, it is necessary to consider the needs of each individual and the reality of each school, to establish the regularity of the meetings between the teacher of AEE and the regular classroom teachers, but, mostly, it is necessary to reinforce the importance of establishing them!

To that end, it is necessary work to modify the speech and the practice that are being followed, and to stimulate the teachers to develop skills and to find their role as educators in the perspective of inclusion and, thus, fostering the configuration of a new process of action in the schools.

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## **Secondary General Education Teacher Efficacy Beliefs about Students with Special Educational Needs**

Brad Walkenhorst  
Saint Louis University, St. Louis  
[bwalkenh@gmail.com](mailto:bwalkenh@gmail.com)

### **Abstract**

The idea of integration and inclusion, of oppression and exclusion within education is on the front burner in today's culture of education. This paper will examine a sliver of the structure of education that a discussion can ensue around this structure that provides a platform of exclusion and conversely allows for the discussion of integration and inclusion to be held. With this in mind, I intend to examine if a part of this structure is developed through pre-service and in-service instruction of general education teachers within the public school system. This paper will present the findings of the authors research as well as discuss the implications of the findings and suggest areas for further research. The author will look at the implications of labels as it expressly relates to serving students with Special Educational Needs within the classroom. This paper will talk about the usefulness of certain design elements in the research and the implications associated with them.

**Keywords:** Efficacy, Inclusion, Special Education, Special Educational Needs, Teacher Beliefs, Teacher Efficacy, Teacher Education

### **Introduction**

The biggest common issue facing our public school is leaving students behind academically and the implications for inclusion. The changing reality of our public schools and variety of socioeconomic and psychological backgrounds of the students dictates that general education teachers are prepared to teach all students who enter their classrooms. Due to the changing laws concerning students with special educational needs, teachers are seeing an even wider diversity of learners within their classrooms. Current educational laws dictate that students are educated in the least restrictive environment, have equal access to the general education curriculum, and attend to the fullest extent possible the school setting of their non-disabled peers. This has led to an increase of students with special educational needs within the general education classroom (Swanson, 2008). With this in mind it is essential to explore how pre-service instruction and in-service professional development on pedagogy and curriculum design have influenced the beliefs of secondary general education teachers within the public school system.

The purpose of this study was to explore the role of pre-service and in-service instruction on teacher beliefs regarding their ability to teach students with special educational needs within their classroom. The aim of the study was to determine whether a link exists between pre-service and in-service instruction including both induction and ongoing professional development on special education pedagogy, curriculum design, instructional methods and teacher beliefs towards students with special educational needs. The results of this research generated recommendations to both teacher education programs as well as professional development committees in



school, specifically relating to the special education roles and methodologies portions of the program. As a possible consequence of this research, teacher education programs may be able to identify areas of deficits as described by general education teachers.

## **Method**

This study was designed with the intention of identifying the impact pre-service instruction and in-service professional development has on secondary general education teachers' beliefs about having students with special educational needs within their classrooms. The research design selected for this research was a mixed methods approach. The mixed methods approach consists of an inquiry that combines or associates both qualitative and quantitative forms of research. The research consisted of the use of multiple modalities of data collection, including the utilization of an online survey instrument and a focus group.

The survey consisted of 31 likert-scales, multiple choice questions focused on the data elements of demographics, education/training, and teacher efficacy beliefs. The questions pertaining to teacher efficacy beliefs were created based on the teacher efficacy scales developed by Anita Woolfolk-Hoy(Hoy, 2014; Woolfolk Hoy & Spero, 2005). Included in the survey were questions asking participants to rate their confidence in implanting specific instructional strategies as well as where they believe that a child with a certain special educational need should be placed along the continuum of services.

The population of this mixed-methods case study consisted of secondary general education teachers at a large Midwestern suburban public school district. The total secondary classroom faculty was 216 general education teachers. The reference population for this study was the entire secondary education faculty of the large Midwestern suburban public school district.

The broad domains included in this study are as follows: How do secondary general education teachers perceive their pre-service, induction (including mentoring programs) and in-service preparation for educating students with special educational needs within their classroom? This is then broken down into the following three sub-questions.

- 1) How do secondary general education teachers believe that their pre-service instruction prepared them with the tools and knowledge to successfully teach students with special educational needs?
- 2) How do secondary general education teachers believe that their first year induction/mentoring programs prepare them with the tools and knowledge to successfully teach students with special educational needs?
- 3) How do secondary general education teachers believe that professional development prepared them with the tools and knowledge to successfully teach students with special educational needs?

The data elements that make up the domains were demographics, education/training, and teacher efficacy beliefs. The three data elements were identified as essential to the research based on a thorough literature review and established teacher efficacy scales.

All initial respondents to the survey received an e-mail invitation to participate in the Focus group. Fifteen people responded to the invitation of which twelve were not able to participate due to personal obligations or timing conflicts. The Focus group was held with the three whom self-selected to participate. The members of the Focus group consisted of a math teacher, a science teacher, and an English/Social Studies teacher. Members of the Focus group ranged from teaching two years to teaching more than ten years. All three members followed the traditional path to certification. Two of the members received their teaching certificate through Universities located in Missouri and

one from a University in North Carolina. All participated in pre-service instruction, some form of beginning teacher induction, and professional development. While the Focus group was small it did represent the respondent population.

The focus group structure utilized the following procedure. The participants were presented with a preliminary summary of results from the survey instrument. These results were categorized into the broad domains of Pre-service Instruction, Beginning Teacher Induction/Mentoring, Professional Development, and efficacy beliefs regarding placement of students with special educational needs. The researcher went through each of the data elements for each domain and provided a brief summary of results from the survey instrument. Participants were asked to respond to the summary on whether they felt that the results accurately reflected their experience in the school setting, and what factors may have played a role in shaping the results.

### **Results and Discussion**

Teachers received an initial e-mail invitation that contained a link to the survey as well as instructions on how to access the survey. The survey was sent to 216 general education teachers within one Midwest suburban school district. Thirty-three teachers responded and completed the survey for a survey completion rate of 15.28%. The survey was accessible to participants for two weeks. Participants who did not initially respond in the first week received an e-mail reminder generated by Qualtrics. The survey remained open one week after the sending of this e-mail.

The focus group allowed for further exploration of the idea that students who have special educational needs could be successful in the general education classroom. The focus group members suggested that while they themselves could effectively teach these students additional factors must be considered in choosing an appropriate classroom placement.

...your salary, your MAP scores, your EOC scores, they are tied to your name, and then it becomes maybe that...this setting, this gen-ed [general education] setting isn't appropriate for a kid who has XYZ issue. This opens another whole issue [because] now we are talking money and my personal namesake is tied to this [student's success].

... I'm fighting a losing battle if you are using that score [EOC] as a judgment factor, I'm not going to choose to teach those difficult learners if I can, because, it already involves a different kind of learning than recall, and now it possibly reflects on your salary, and make those kids that need the most help the bad guys, and possibly even help teachers with the most experience avoid those kids with the most significant problems even though their teaching and experience may be of help to them.

This voiced concern by the focus group on the possible negative effects on teacher evaluations based on student performance may explain the survey data that showed hesitancy for teachers to identify that it is their classroom that students with special educational needs should be placed. Survey respondents indicated 45% of the time that students with intellectually disabilities should be educated somewhere else besides their classroom, and 25% identified that students with specific learning disabilities should be educated outside of their classroom. High stakes testing and the perception that aggregate student performance scores as opposed to individual student growth will be utilized to determine teacher effectiveness during teacher evaluation has an impact on general education teachers willingness to choose to have students with special educational needs within their class.

### **Conclusions**

Some conclusions may be tentatively drawn from the survey/focus process. In response to the first question-

Question #1 how do secondary general education teachers believe that their pre-service instruction prepared them with the tools and knowledge to successfully teach students with special educational needs?

Overall two-thirds of the respondents (n=21) indicated that their pre-service coursework gave them the skills to effectively teach students with special educational needs. Further discussion within the Focus group showed that teacher confidence levels in working with students with special educational needs increased when they had a chance to interact with actual students and work within the classroom with students with special educational needs. Practicums and internship experiences were viewed as crucial parts of effective pre-service teacher education programs by the focus group. Additionally, the opportunity to observe actual classrooms and reflect with teachers about instructional strategies and specific teaching moments and specific cases was identified as beneficial.

Question # 2 How do secondary general education teachers believe that their first year induction/mentoring programs prepare them with the tools and knowledge to successfully teach students with special educational needs?

Survey respondents and the Focus group members both indicated that this area of teacher education was the least effective in teaching instructional strategies for working with students with special educational needs. The Focus group indicated that the content of programs was too broad and specific suggestions for working with students with special educational needs were not offered. Focus group participants indicated that beginning teacher programs did not focus on the specific needs of secondary education teachers. One Focus group member commented, “The best things about those meetings, when they pull you out for those meetings it gives you a day off to recover”.

Professional conversations with mentors both official and unofficial was recognized as the most effective part of first year induction/mentoring programs. Focus group members stated several times that the unofficial mentors who stepped in to help the new teachers by providing support, guidance, and a listening platform were the most powerful agents for professional change and strategy acquisition. However, it is noteworthy that this type of incidental, on-site coaching by colleagues was not described as part of the official beginning teacher induction/ mentoring format. This development of professional relationships within the building and department was seen as a positive necessary part of developing beliefs about effective teaching of all students.

Question #3 how do secondary general education teachers believe that professional development prepared them with the tools and knowledge to successfully teach students with special educational needs?

Professional development was identified the means of providing the respondents with the most tools and knowledge to successfully teach students with special educational needs. Professional development was defined as any education received after beginning the teacher/induction program was initiated, whether it was district sponsored or additional college coursework. Members of the Focus group felt overwhelmingly that classes taken after certification (Master hours, Master plus hours) focused more on instructional strategies than did their pre-service training experiences.

Focus group members also suggested that professional development was also seen to include interaction between peers and colleagues as they solved specific classroom-based problem scenarios. Problem, scenarios may include the development of a unit, addressing the needs of a student, or general classroom management. Members of the Focus group felt that the interaction at the professional level really helped to support them and help them develop the skills needed to be an effective teacher. Focus group

members discussed their desire to have more collaborative time at the professional level but felt the pressure for student performance on state mandated tests.

The inclusion of students with special educational needs within the general education system is only going to increase over the next years. Working under the current framework of NCLB and the movement toward Common Core State Standards the responsibility for the education for all students within the classroom will fall more on the shoulders of general education teachers. This is especially true for general education teachers at the secondary level. This study adds to the overall body of literature, however, the findings uncovered other areas that warrant future research.

The limitations of this study suggest that exploration of the research question at other sites would be warranted to determine whether the conclusions would be similar. The use of different data collection strategies and target populations within other school system settings would permit comparisons and contribute to a better understanding of the topic. Further research should also focus on general education teachers' educational philosophy and their perception of the role of secondary education in their students' lives.

Further research is needed in the area of the effects high stakes testing has on teacher efficacy beliefs and the inclusion of students with special educational needs in the general educational setting. While this study shows that professional development and pre-service instruction have some role in developing teacher efficacy beliefs about students with special educational needs it is important to note that the following themes emerged from the research. 1) The need for in-classroom time for pre-service teachers, reflection and professional dialog regarding teaching practices. 2) Incongruity or the discrepancy of where an instructional strategy was introduced and when the teachers learned how to utilize the strategy effectively. 3) The simple knowledge or a superficial knowledge of instructional strategies or special education labels is not sufficient to increase teacher efficacy beliefs. It is suggested by the data in this limited study that repeated interaction, reflection, and professional dialogue may help to equip secondary general education teachers to work with most students. This finding is consistent with recent published studies on teacher efficacy beliefs. See (Malinen, Savolainen, Engelbrecht, Xu, Nel, Nel, & Tlale, 2013; Malinen, Savolainen, & Xu, 2012)

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## **Could my writing really improve? An Exploratory study using SRSD and ICT in the classroom context**

Catarina Liane Araújo

[catarinaliane@gmail.com](mailto:catarinaliane@gmail.com)

University of Minho, Institute of Education – CIEd

António José Osório

[ajosorio@ie.uminho.pt](mailto:ajosorio@ie.uminho.pt)

University of Minho, Institute of Education – CIEd

Ana Paula Martins

[apmartins@ie.uminho.pt](mailto:apmartins@ie.uminho.pt)

University of Minho, Institute of Education – CIEd

### **Abstract**

The research regarding the model of Self-Regulated Strategy Development (SRSD) in writing has proved its effectiveness, mainly in improving the writing and the development of metacognitive skills in students who struggle with writing. Similarly, according to research, well known technological tools can benefit the learning of writing skills. Today, children are becoming experienced users of digital communication and are increasingly familiar with writing digitally and on-line, resulting in relevant changes in the attitudes, beliefs and behaviors of teachers and educational communities. One of the gaps that we have identified is the absence of studies that combine SRSD with Information and Communication Technologies (ICT). Thus, this paper aims to present an early stage of an adaptation of SRSD to the use of ICT complying with theories and concepts, scientifically tested to be effective in improving the quality of writing skills. This adaptation includes the use of technology as a means of solving problems both in linear writing and in multimodal writing. According to evidence-based research, we are assuming that there exists an association between SRSD and ICT which can improve the quality of the writing process carried out by students.

**Keywords:** SRSD, writing, struggle writers, multimodal texts, ICT.

### **Introduction**

Writing is a key skill and one of the most fundamental and powerful learning tools used to demonstrate knowledge and communication (Bruning & Horn, 2000; Cruz, 2007; Harris & Graham, 2013). However, the process of learning and the development of writing skills are quite complex (Delano, 2007) and time-consuming, depending on the knowledge, strategies, capabilities and desires (Harris & Graham, 2013, p. 69) of an individual. It is also important for the writer to have the capacity to dominate knowledge and a set of processes which involve the composition of texts.

Written production is a highly complex process that plays a key role in life. Given the complexity of the sub processes involved, it is often observed that students have difficulties in this area, as mentioned by Persky et al (2003) cited by Graham and Perin (2007, p. 7) "70% of students in grades 4–12 are lowachieving writers". There are

students with Specific Learning Disabilities (SLD) and struggling writers that lack important knowledge about the writing process. Students also have difficulties in creating ideas and selecting topics, making little or no prior planning, revealing a lack of strategies to produce and organize texts. Similarly, they have difficulties with the mechanics, which interfere with the writing process and the engagement in the review. They also tend to exaggerate the role of the mechanics of writing and may overestimate their writing skills. In addition, the writing of these students is less polished, consistent and effective than that of their peers (Karris, Graham, & Mason, 2003; Santangelo, Harris, & Graham, 2008). These difficulties in writing may seriously affect the learning process of students and "can also interfere with students participating fully in social and civic activities as forms of writing" (Harris & Graham, 2013,p.66).

Some students end up experiencing failure in writing, which may lead to a strong dislike of writing, abandon writing or reveal a negative impact on social and occupational activities. In the Portuguese context, "the average national [Portuguese] rating competence in 2011 (...) writing [stood at] 65% (...) highlighting the need for systematic teaching that encourages basic technical knowledge of Fundamental Textual Organization for the creation of automation and resourcefulness/autonomy required in the writing process of the subsequent levels of schooling. " (GAVE 2011, p. 15). Similarly, in 2012, the results obtained in these same tests decreased to 60% and again "highlighted the need for a systematic teaching that encourages knowledge of the basic techniques of textual organization in line with the development of the subject"(GAVE 2012, p. 17).

Little et al. (2010) stated that: "the complexity of the writing process, and learning to write, however, requires a more complex intervention, which, ideally, should be introduced early in a student's education." (p. 158). In this sense, the SRSD model which includes POW and TREE strategies (Harris & Graham, 2005), have been investigated for their application in the composition of opinion essays (Mastropieri & Regan, Spring 2009). The results have shown that students with and without SLD showed marked improvements in their writing, especially in the quality, knowledge of the writing process, approaches, attitudes and self-efficacy (Graham & Harris, 2009), which were maintained and generalized in relation to other types of writing (Graham, Harris & Santangelo, 2008).

In parallel, given that the writing communication process is constantly changing, largely due to technology, we agree with MacArthur (2009) who stated that we need to develop new environments for writing and forms of written communication. Technologies are an active part of society and influence the communication process. Their current role in society and their rapid advances have created opportunities and challenges for the development of children's writing (Bunting, 2009; Beach & Friedrich, 2006; MacArthur, 2006; Karchmer, 2001; Kleiner, 2007; Safford, 2010). In this sense, one of the new forms of more empowered writing by technology is multimodal writing. Current technologies and multimodal texts have contributed to the enlargement of the perception of the elements that are involved in the writing process and the dynamic write-read text. Actually, the process of writing multimodal texts includes new components such as design, production and presentation (Edwards-Groves, 2011) and, the use of knowledge and mode of meanings (Cope and Kalantzis, 2002). In the same way, creativity is an important component in the writing process using ICT (Kellogg, 2008).

Similarly, we know that children increasingly have early contact with ICT, demonstrating high efficiency, vibrancy and interest in exploring technological devices such as computers, smartphones and tablets (Safford, 2010). Technology offers students

an intrinsic motivation to engage in interesting and authentic writing tasks (Kellogg 2008). However, schools continue to advocate conservative pedagogical practices that do not conform to the current socio technological context (Jonassen, 2007).

In a cognitive perspective, the use of ICT aims to promote meaningful learning and intellectual partnerships between technological devices and students, in order to improve students' performance in the writing of argumentative opinion texts. Thus, cognitive tools such as semantic networks, intentional information search engines, visual representation tools, multimedia publishing tools, real time conversation environments involving students and representing an efficient and effective way to integrate computers in schools. These technological tools can be used across the curriculum to get students to think deeply about the content they are studying. "Cognitive tools are intellectual partners that facilitate knowledge construction and reflection by students" (Jonassen, 2007, p. 33). Thus, technology is assumed as an educational partnership which supports the construction of meaning in situations where learning can take place, not about or by applying technologies, but with them, promoting diverse thinking and enhanced by a collaborative network of students in the acquisition of skills for life.

This is of particular importance in this investigation, since it is not known whether any research has resorted to the use of ICT in the application of SRSD, and given that ICT provide powerful interactive and flexible tools for the teaching and completion of quality writing for students with and without SLD (Beach & Friedrich, 2006; MacArthur, 2006; Karchmer, 2001; Kleiner, 2007).

## **Method**

This case-control study will be based on an observational study of two 4th grade groups. It seeks to compare the groups and some of the basic causal support attributed: whether the use of ICT improves the outcomes of: a) writing elements; b) number of words; c) the number transitional words; d) quality; e) self-efficacy; f) attitude; g) approach to writing; and h) motivation.

Similarly, we will carry out an exploratory study with a mixed methodology for description of how to use ICT in writing, especially in terms of multimodal opinion essays writing. This option appears to provide the characteristics of the problem under study and the small number of studies on this topic.

In this research, we intend to compile various scientifically tested theories and concepts to be effective in improving the quality of writing and, adapt SRSD in the context of technology. Thus, the purpose of this investigation is to identify, describe, analyze, understand and evaluate the impact of SRSD using ICT in the quality of opinion essays (linear and multimodal texts) produced by 4th grade students with and without writing problems, as well as the self-efficacy, attitude, approach to writing and motivation of students regarding writing and SRSD.

We also intend to include the following objectives: 1) to describe and adapt SRSD and its use using ICT, 2) to describe the changes resulting from the use of ICT in the quality of opinions essays using the strategies of self-regulation among students who are struggling writers; 3) to identify and analyze the effect of SRSD using ICT in the quality of argumentative opinion texts; 4) to evaluate self-efficacy, attitude, approach to writing, motivation of students related to the use of SRSD in context of ICT in the composition of opinion essays and 5) propose intervention strategies.

**Participants and Setting** - In this randomized controlled study, 8 classrooms in the 4th grade (N=208, 4 experimental groups and 4 control groups) of schools in Braga, Portugal, through evidence-based research in writing strategy instruction. In each school, there will be 2 classrooms (1 control group and 1 experimental group).

The classes involved in this study will be randomly selected and matched in pairs based on socioeconomic resources and teacher characteristics about practices of teaching and learning of the Portuguese Language. WE will then examine the effects of ICT and follow up support on the writing of classes of 4th grade students in terms of writing gender elements for opinion essays, number of words, number of transitional words, quality, self-efficacy, attitude, approach to writing, motivation; integrity of the SRSD instruction in context of ICT; and teachers' and students' judgments of the social validity of SRSD + ICT.

The definition of students struggling in writing is provided by three analysis measures: 1) identification by the teacher regarding the writing skills of their students; 2) the scores demonstrating that students in the pretest and 3) formal assessment of students, performed according to the national assessment.

Students with low levels of writing competence in the three evaluation measures will be considered as struggling writers. Similarly both classes must present a balanced level of students with writing difficulties. We will also describe the instruction of the control group through a survey about their classroom instructional practices in writing by Graham in that Cutler and Graham (2008).

Intervention: Self-Regulated Strategy Development for writing in the context of ICT For several years, the use of the SRSD model for the writing of opinion essays for primary students has been studied (c.f. Araújo, 2011; Graham & Harris, 2009). Graham and Harris (2003) have shown positive effects on the quality, length and knowledge of the writing process for students with and without writing problems. In this sense, we intend to apply the strategies POW + TREE, according to the procedures defined by SRSD (Harris, Graham, Mason, & Friadlander, 2008). However, because it is an adaptation to the ICT context, it introduces some new elements, including multimodal writing opinion essays and problemsolving strategies in writing using ICT, based on scientific evidence (databases or articles). These introductions and changes to the model respect the principles of this flexible model and have been authorized by its authors. We will then present an overview of the use of ICT in the context of the SRSD model to better explain the process of adapting the model and, a statement that will be used in classes in the experimental group.

#### Outcome Measures

Pretest, Posttest and Maintenance Assessment - Before starting any work, the students from each class (control group and experimental group) are asked to write two prompts (linear opinion essays on paper and multimodal opinion essays on computer) on consecutive days for all students in their classrooms. There is also a guide with directions for students when writing texts. All classes will be evaluated on the same day and at the same time. The topics covered will be familiar to students to avoid influencing the quality of the text due to any lack of prior knowledge regarding the topic. Students may choose one of three guiding questions for the written opinion essay. In the posttest and maintenance, students from each class (control group and experimental group) will be asked to write two texts (opinion essays and a linear multimodal opinion essays) after the intervention of the SRSD model in the ICT context, with the experimental group again - posttest and again after half the total time of the intervention with the experimental group - maintenance and the process will be the same as the pretest.

Written prompts - Written prompts will also be evaluated through analysis of all elements presented in the text, according to the procedures developed by Scardamalia, Bereiter and Goleman (1982). In the case of multimodal opinion essays, we will assess



the methods of presentation, design and creativity. The texts will only be scored according to the procedures defined by Graham and Harris (2013).

Number of words and number of transition words - The number of words will be recorded on the computer using Microsoft Office and verified by the authors. In turn, the number of transition words will be counted manually according to the function and purpose assigned and defined by Mateus & et al. (2003).

Quality of written opinion essays - The evaluation will be done according to a scale that we have built based on the Portuguese National Program for 4th grade students and given 7 items on the structure and text organization and 4 items regarding spelling, grammar and handwriting in English conventions.

Approach to writing, writing motivation (attitudes of writing) and Self-efficacy of writing - For the evaluation of the approach to writing, writing motivation (attitudes of writing) and Self-efficacy of writing draw on Likert Scales used for Graham, Kiuahara, Harris, and Fishman (in press). As regard the writing motivation (attitudes of writing) scale some items from a scale developed by Brunning, Dempsey, Kauffman, McKim, and Zumbunn (2013) and other items were adapted from a scale developed by Graham (see Graham, Berninger, & Abbott, 2012; Graham, Berninger, & Fan, 2007). In the case of Self-efficacy for writing, some items were taken from the self-efficacy scale developed by Brunning et al. (2013).

Approach, attitudes and self-efficacy in the use of ICT in writing - We will use a scale referring to each item above which was rated on a five-point Likert-type scale which was adapted from Krauss e Hoyer (1984), and Meyer e Poon (1997).

Treatment Fidelity - The reliability of the implementation was assessed using a checklist (developed by the authors of this study) with the set of procedures to follow in each of the sessions with the experimental group. In turn, the teacher of the respective class will, during the sessions, check whether all the steps listed in the checklist for each lesson were completed. In the same way, the statement will follow pre-defined criteria.

## **Results and discussion**

Given that this study is in the development stage, any information concerning the results cannot be advanced, but hopefully, there will be statistically significant differences in the experimental group: a) quality writing, b) element c) number of words; d) number of transition words, e) self-efficacy; f) attitudes (and motivation) and g) approach to writing between the pretest and posttest, especially in the multimodal opinion text. We further hope that these changes may be maintained after the intervention. For the control group, we did not present significant improvements between pretest and posttest in both text opinions (linear and multimodal).

## **Conclusions**

The nature and pedagogy of writing need to be revisited and re-envisioned in order to reflect current trends as the use of technology is fast becoming more viable and highly visible in children's social worlds (Downes 2002; Pluss, 2007; Zevenbergen and Logan, 2008). Writing practices have changed because of ICT and the ubiquitous presence of technology in the textual lives of people (Edwards - Groves, 2011).

We consider that this study may contribute to enhance the benefits of the SRSD model and ICT in the writing of argumentative opinion texts by students with and without writing problems or SLD writers and encourage the writing of multimodal opinion texts in formal learning contexts.

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## **Effects of Behavior Support Intervention in a Thai Inclusive Classroom**

Chanisa Tantixalerm  
Chulalongkorn University, Bangkok-Thailand  
[chanisa@gmail.com](mailto:chanisa@gmail.com)

### **Abstract**

This paper presents findings from a research on the effects of function-based intervention on problem behaviors of three 4th graders at risk for learning difficulties in one of the model inclusive schools in Thailand. Participants' behavior information was collected using functional behavior assessment (FBA) strategy. The behavior support plans for all participants were developed based on the recommendations of the team including administrator, classroom teachers, special education teachers, parents, and behavioral consultant. The team worked in collaboration to conduct behavior support plans and implemented the plans during the academic year 2013. Single-subject study result revealed that intervention modified to accommodate needs for all participants had a potential to reduce problem behaviors in classroom. Inclusive education in Thailand is also discussed along with the findings to help promote understandings for current situations.

**Keywords:** Inclusive Education, Positive Behavior Support, Function-based Intervention

### **Introduction**

For decades, Thailand has embraced the country's commitment to improve education for all, as the numbers of children with special needs accessing basic education has significantly increased and legislative progress on rights of these children has been more evident [e.g., The Persons with Disabilities' Quality of Life Promotion Act B.E. 2550 (2007); the Persons with Disabilities Education Act B.E 2551 (2008); the National Persons with Disabilities' Quality of Life Development Plan (Volume III) B.E. 2550–2554 (2007–2011)]. With forces driven by primary international norms and movements, the Salamanca Conference on Special Needs Education in 1994 and the 1st World Conference on Education for All held in Jomtien, Thailand, in 1990, Thailand has moved educational policies and implementations in a more inclusive direction during the subsequent years. In 1999, the government promoted integrated education policy and began to mainstream students with disabilities in general education schools. By 2011, there were almost twenty thousands network integrated schools across nation serving approximately 250,000 students with disabilities (Bureau of Special Education Administration, 2011). With the ultimate goal to achieve inclusive education policy, in 2011, the Thai Ministry of Education also promoted 445 schools across the country as "model inclusive schools".

Inclusive education, according to the current Thai context, is an educational provision that goes beyond integrated placement of students with disabilities in general education classrooms. Inclusion is rather to provide education for all students at the beginning of

their education based on equal rights to a quality education and individual needs for educational services so that students reach their full potential and better quality of life (Bureau of Special Education Administration, 2011).

Despite the innovative streams of inclusion policies and implementations, Thailand is encountering the challenge of the “inclusion concept” which can be interpreted in a variety of ways. Similar to many developing countries, the Thai government has been unclear of how to make all classrooms inclusive among policy makers and practitioners (Ainscow, Booth, & Dyson 2006; Miles & Singal, 2010). Attempts to include students who are demonstrating academic difficulties and behavioral challenges in general education classrooms are also not very successful (Chinchai, 2010; Onbun-uea & Morrison, 2008; Vorapanya & Dunlap, 2012). According to previous studies, problems has risen from misconceptions of inclusive education, the lack of knowledge and skills among teachers for assessment, behavior support, and intervention techniques for students with special needs in general classrooms, the lack of collaboration among relevant stakeholders such as administrators, classroom teachers, special education teachers, and families, and the lack of research in real-world situations for behavior and academic interventions.

**Misconceptions.** Thai document and studies regarding education for individual with disabilities or special needs in general education classroom published during 1999-2014 described concepts of integration, mainstreaming and inclusive education as they are the same thing. When educators believe that inclusive education is the same thing with integrated education, they content that special education teachers should responsible for the educational provision since the beneficiaries go to students with disabilities (Maria, 2013). Research found that general education teachers often maintain negative attitudes for inclusive education, largely due to their lack of understanding for special needs (De Boer, Pijl, & Minnaert, 2011). On-going miscommunication on the concept of inclusive education is rather apparent among people responsible for inclusive education in Thailand such as policy makers, implementers, administrators or principals, parents and students themselves.

**Lack of Knowledge and Skills for Teaching Students with Special Needs.** As teachers encounter increasing pressure to incorporate needs of all students and provide best practices to achieve outcomes for all, many teachers leave students who are unable to follow class activities in vein. The most important problem is the lack of provision of educational services for students who are in need of helps including those who are at risk for all types of learning problems. Students who are at risk might not be diagnosed with a disability but exhibit difficulties in following classroom activities. Without early academic and behavior intervention, these students, according to studies (e.g., McIntosh, Chard, Boland, & Horner, 2006) are at high risk to fail when they get to higher grades. In Thailand, Vorapanya and Dunlap (2012) found that most of the time students with special needs mainstreamed in general education classrooms were identified by an outside agency (i.e., medical agency).

Once the schools accepted the students, they reported having problems with assessment due to inadequacy of screening and assessment protocols, staff who are able to administer testing, and financial support to improve screening process. Moreover, the teachers struggled with developing educational plans and monitoring progress of the students.

**Lack of Collaboration.** Although Thailand, like other Asian countries, establishes highly collectivist culture, research indicated that this cultural regime influences individuals to move through changes with the group and avoid disagreement with group decision (Apichatabutra, 2007). Based on this rationale, teachers or parents may not have inputs

or opinions during meeting for students' support plan. They then to passively agree with whatever the administrators said. In a study, school leaders reported that teachers and other school specialist felt uncomfortable maintaining a student education plan meeting (e.g., individualized education program: IEP) in collaborations with other people (Vorapanya & Dunlap, 2012). It was found that parents also did not participate in their child's education plan meeting and did not understand how it is important to their child education. It might be because they get use to top-down authority commands more than bottom-up collaborative work in dialogue.

**Lack of Research Results Generalized to Real-World.** As in other countries, Thai schools are certainly in need for a well develop systematic intervention for students at risk for learning problems in classroom. To assist school in implementing inclusive education practices, it is necessary to identify interventions that can be applied in real-world setting of schools and general classrooms by everyday educators (Cook et al., 2012). Existing literatures across cultures are in favorable with intervention that can deal with behavioral problems while academic skills of students can be improved. The studies provided that the development of inclusive practices requires more than methods of teaching special needs in inclusive classrooms (e.g., Cook et al., 2012; De Boer et al., 2011; Maria, 2013; Wang, McCart, & Turnbull, 2007). The implication is that a methodology for developing inclusive practices must take account of stakeholders within a school context to work in collaboration.

In addition to the above challenges, in many developing countries, there can be issues around shortage of staff and desire to uphold a superior professional expertise over others that may hinder collaborative processes for inclusive education (Miles & Singal, 2010). Considering these prevailed barriers, there is a need for a systematic procedure to provide teachers and schools with tools to implement services for students at risk for learning difficulties in general education classroom effectively and efficiently.

**Function based intervention.** Ample evidence from empirical research supports the use of functional behavior assessment (FBA) to guide academic and behavior intervention for students who demonstrate problem behaviors in classrooms (Ingram, Lewis-Palmer, & Sugai,

2005; March & Horner, 2002; Stahr, Cushing, Lane, & Fox, 2006). The FBA approach is defined in numerous studies as a systematic process of acquiring information about behaviors including the events that predict occurrence and nonoccurrence of the behaviors and maintain the behaviors across time prior to developing proper interventions. Effects of function-based intervention were found on behaviors of students in special education and general classroom settings as well as on students with academic difficulties and behavior problems (Cook et al., 2012; Ingram et al., 2005; Apichatabutra, 2009; Simmons, Fuchs, Fuchs, Mathes, Hodge, 1995). Compared to traditional approaches to discipline in which interventions were selected to match the type of behavior (e.g., aggression) or disabilities (e.g., specific learning disability), a function based approach to behavior support rather build a comprehensive intervention that address antecedent or consequence variables controlling student problem behavior. It then has a potential contribution to reduce problems of students because predictors and consequences that maintain problem behavior are removed and appropriate behaviors (i.e., replacement behaviors) are taught at the same time. Components such as direct observation tools help teachers pinpoint who needs helps, while analysis of behaviors helps identified types of supports that students need. Discourse was also developed among people in charge of students' education. The function-based intervention approach, however, reflects the United States mainstream cultural values in many ways, including individualism and personal choice (Wang et al., 2007). More

study is needed to document how this intervention approach can be applied to students outside the mainstream US classroom.

Based on the above rationale, this research aims to investigate the effects of function-based academic and behavior intervention on reducing problem behaviors of students who are at risk for learning difficulties in a Thai general education classroom.

### Methods

**Setting.** The study was conducted during the academic year 2013 in a 4th grade general education classroom contained 24 students and 2 classroom teachers. The school site is a small 300-student public elementary school located in a suburban area of Bangkok, Thailand. The school was selected as a model inclusive school due to its previous successful integration practices for students with special needs. The school has approximately 30 school staff members including administrators, general teachers, and special education teachers. Special education teachers make 25% of the staff. Most staff members received a bachelor degree (76%) with experiences more than 20 years in teaching profession (38%) and 0-5 years teaching students with special needs (49%). When asked to rate their knowledge on inclusive education and relevant services, most school staff rated medium to high level. However, the direct observation data showed that when problem behaviors occurred, most teachers ignored and did not apply any evidence-based techniques to reduce the behaviors. General education teachers also believed that students with special needs in their classroom are responsible of special education teachers not theirs. Only teachers with special education backgrounds and administrators realized that they need to provide services for students at risk for learning problems.

**Participants.** Three male students aged 9-10 enrolled in 4th grade general education classroom were selected for this study based on classroom teacher nominations and parent consents. The primary investigator who served as behavioral consultant verified students' behaviors using the FBA approach (i.e., interviews, direct observations, and functional behavior analysis). FBA information revealed that the participants exhibited a variety of problem behaviors in classroom. For Saran and Bulin, behaviors were maintained by task avoidances. For Patra, his behaviors were attention maintained. Demographic and screening data for the three participants, Saran, Bulin, and Patra, are depicted in table 1.

**Table 1. Demographic and screening data for student participants.**

Student	Academic Concerns	Antecedent Contexts	Problem Behaviors	Functions	Desired Behaviors
Saran	Reading and math at frustration level	-Unstructured and inexplicit instruction -Inattentive teachers -Hard task	Ignore class activities, look out and away from task, get out of seat, play with materials, talk to peers	Avoid task	On task, academic achievement
Bulin	Reading and math at frustration level	-Unstructured and inexplicit instruction -Inattentive teachers -Hard task	Ignore class activities, look out and away from task, play with materials, get off seat, use impolite language to tease peers	Avoid task	On task, academic achievement
Patra	Attention problems	-Inattentive teachers -Get disappointed -Changes in plan	Destroy and throw stuff in classroom, yell and talk out, disrupt classroom activities, draw pictures	Seek attention	On task Respect teachers and peers

Procedures. Data were collected using the FBA strategy including interviews with the students and the teachers, and direct observations of behaviors in various classroom settings to obtain useful information about variables contributing to the intervention plans. Specific purpose of these observations is to determine what behaviors the participants display in various situations, as well as antecedents and consequences. The behavior support plans for all participants were developed based on the recommendations of the team including administrator, classroom teachers, special education teachers, parents, and behavioral consultant. During meetings for each behavior support plan, the behavior consultant shared FBA information including antecedent contexts and behavioral functions for 3 participants with the team. Two research assistants trained to exceed 95% inter-observer agreement completed 15-min observation sessions. Data collection occurred during one academic year (12 months) with a 3-months school break between intervention phase 2 and maintenance phase. During the baseline, all participants received general education lessons (e.g., mathematics, Thai, social sciences) from general education teachers. During intervention condition, function-based interventions were developed, implemented, and monitored by the team. As part of the intervention, Saran and Bulin received explicit small group lessons from a special education teacher who adapted curriculum content to match their instructional level.

As part of Patra intervention, the team let him keep “a good behavior notebook” for daily behavior rating by teachers and parents. Patra also was taught to talk to adults (e.g., father) that he trusted when he got frustrated. After 3 months school break, the interventions reconvened but with some modifications in practices, fewer frequent behavior monitoring and team meetings (i.e., maintenance condition).

Design. A single-subject concurrent multiple baseline design across participants was initially used to examine the effects of the intervention. Due to extraneous variables in natural classroom settings (e.g., schedule change, canceled class sessions), the design was augmented to include ABAB reversal analysis for 2 participants. Data were analyzed through the inspection of plotted graph, mean, and range.

## Results and Discussion

Baseline. Across 3 participants, the average percentage of intervals with problem behaviors was 66% (range 15-98%) in the baseline condition. Saran’s data revealed average 76% (range 30-100%) of off-task behaviors showing an increasing slope and high variability of data pattern. Bulin’s data displayed 51% (range 13-96%), high variability but no established trend. During baseline 2, the data showed average 86% (range 84-88%) for Saran and 88% (range 73-100%) for Bulin. A high variability of data pattern with no established trend was observed for Patra (M = 70%, range 2-100%) during the baseline phase.

**Table 2. Means and ranges for problem behaviors during baseline, intervention, and maintenance phases.**

Percentage Intervals with Problem Behaviors										
Student	Baseline Phase 1		Intervention Phase 1		Baseline Phase 2		Intervention Phase 2		Maintenance Phase	
	M	Range	M	Range	M	Range	M	Range	M	Range
Saran	76%	30-100%	2%	0-4%	86%	84-88%	1%	0-2%	25%	0-82%



Bulin	51%	13-96%	7%	4-10%	88%	73-100%	1%	0-2%	36%	0-100%
Patra	70%	2-100%	32%	0-80%	-	-	-	-	10%	0-64%
Total	66%	15-98%	14%	1-31%					24%	0-82%

Intervention. An average percentage of intervals with problems with behaviors for all participants during the intervention was 14% (range 1-31%). Data for Saran and Bulin indicated a low variability of data pattern (range 0-4% and 4-10% respectively). However, Patra's data showed overlapping data points with data points for the baseline phase. Increasing trend was established for Patra.

Maintenance. During the maintenance condition, the average percentage of intervals with problem behaviors was 24% (range 0-82%). Data for Saran and Patra showed much

lower average level (M= 25 and M=10 respectively) and decreasing trend. The trend, nonetheless, was not established for Bulin due to the high variability of data.

Figure 1. depicts a functional relationship between the intervention and problem behaviors for all 3 participants.

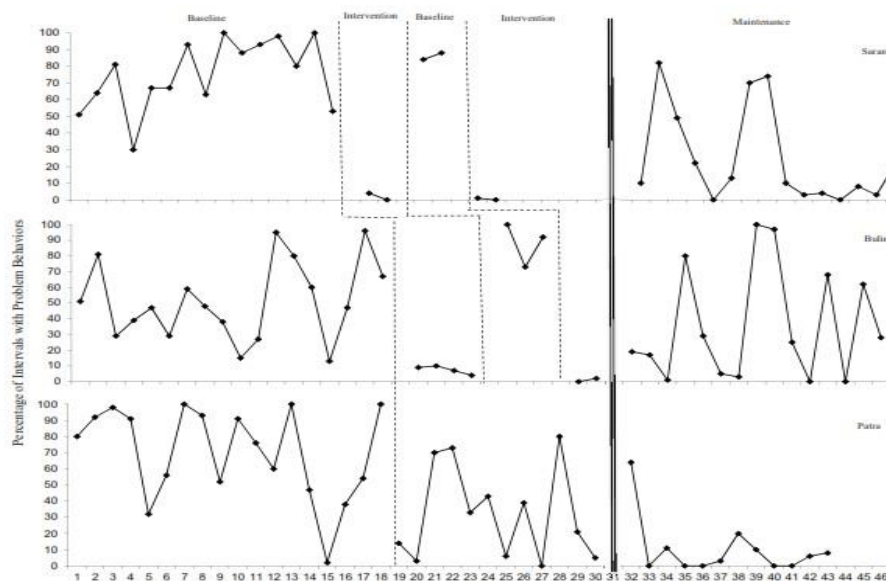


Figure 1. Effect of function-based intervention on percentage of intervals with problem behaviors during baseline, intervention, and maintenance phase.

The results revealed evidence that the interventions based on the FBA information and collaboration of the behavior support teams were effective in decreasing problem behaviors for all participants. The FBA hypothesis stated that when the participants received unstructured instruction from inattentive adults, problem behaviors occurred. Therefore, changes in the behaviors were attributed partly to changes in behaviors of the administrator, the teachers and the parents. When they adjusted their attitudes and changes their behaviors to be more attentive and open, students may positively change (Maria, 2013). The committed sense of accountability of teachers was also extended to students themselves and their parents. Changes also were attributed to the behavior support plans developed in collaboration by the behavior support team. As many studies

showed that inclusive schools emphasize the professional expertise working as a team (Ainscow & Sandill, 2010).

The results also demonstrated that intervention that can improve performance of at risk students are identified as early screening, small group, and explicit instructional delivery principles with additional instructional time devoted to deficit academic skill in addition to instructional time in general classroom (Harn, Linan-Thompson, & Roberts, 2006). This research was limit to explore only behaviors in classroom but did not study student academic achievement. In this case, we recommend that future research pay attention to improving skills such as reading, writing, or mathematics of students at-risk for learning difficulties in inclusive classroom using comprehensive behavior intervention in combination with techniques such as teacher-directed group reading or feedback oriented (Simmons et al.,1995). The study results also press the importance of training on the formation of positive social attitudes towards inclusion as well as the expansion of in-service training to enhance general educators' knowledge and skills in teaching students with special needs.

Another consideration from this research is that a country policy might be problematic when develop and promote inclusive education without a clear understanding of the concept

of "inclusive education for all" not "inclusive education for students with special needs".

### **Conclusions**

This study contributes to the literature on the effects of function-based intervention on reducing problem behaviors for students at risk for learning difficulties in an inclusive classroom. Changes in students' behaviors can be accounted for team-based comprehensive interventions including mutual collaboration from families. It is found also that inclusive education in Thailand is currently associated with the expansion of integrated or mainstreamed schools. Despites challenges of adapting to the international standards, Thailand is on its way to make an inclusive classroom become a place where a student who cannot follow instruction and mainstream curriculum are not seen as „problem“, but as challenge“ for teachers to re-examine their practices and become more open and responsive.

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## **An on-line social network in the field of multiple disabilities**

Clarisse Nunes

Escola Superior de Educação do Instituto Politécnico de Lisboa

[clarisse@eselx.ipl.pt](mailto:clarisse@eselx.ipl.pt)

### **Abstract**

Our research aimed at finding out how Social Software tools can be used to support parents and teachers of students with multiple disabilities in order to meet their needs, to help them share their experiences, and to provide information as well as resources in the field of multiple disabilities. The on-line social network, created by NING platform, was boosted for eight months with 45 participants (teachers and parents). The participants became implicated by sharing information, as well as commenting and reflecting on it. The social network was rated very positively by participants. The data indicates that participants were more reactive than proactive. The on-line social network had a very positive impact for teachers but it was not motivating enough to interest and engage parents in the proposed activities. We concluded that the potential of Social Software is enabled by the use it is given by the participants.

**Keywords:** Multiple Disabilities, Parental Involvement, Teacher Training, On-line Social Networking, Social Software

### **Introduction**

The Education for All (Unesco, 2000) allowed students with multiple disabilities to start attending regular schools. But their education requires specialized materials and human resources. To meet the needs of these students in Portugal, the special education law (DL 3/2008) created the possibility for regular schools to have specific support units. This has led to an increase in the number of teachers involved in the education of these students. However, most of these teachers are not sufficiently prepared to meet the needs of such students and their families, partly due to a lack of training in multiple disabilities. So, many teachers have experienced numerous setbacks. In addition to that, and as a result of their lack of confidence, most of these teachers do not share their knowledge and successful experiences, nor have they tried to problem solving and clarifying doubts by interacting with other professionals.

We did not have access to the results of empirical studies focusing on the needs and difficulties of these teachers. Those who were part of our study (n=30) highlighted difficulties related to teaching practices, lack of access to resources and the need for training in multiple disabilities. But not only teachers showed difficulties. Parents of such students also showed difficulties and worries in gaining information regarding their rights and difficulties associated with social, family, financial and emotional support. Results of other researchers conducted with parents of students with multiple disabilities also indicate similar difficulties (Amaral & Gil, 2008; Zaidman-Zait & Jamieson, 2007).

Current technological tools, like social software, may be established as a resource to facilitate access to information and support, as well as to support interaction among people with similar experiences (Zaidman-Zait & Jamieson, 2007). Some studies explain how Social Software and Social Networks can be used in formal education to: i)

increase the effects of lifelong learning (Tiryakioglu & Erzurum, 2011); ii) promote social interaction among students (ibid), and provide support and collaboration (Veletsianos & Navarrete, 2012); iii) offer a means for people to participate in interactive dialogues, which may lead to learning (Gunawardena et al., 2009). However there is little research on the use of these tools in non-formal or informal learning: general, and multiple disabilities in particular. We did not find any type of research focusing on special needs. Given these arguments we wanted to find out how the Social Software tools can help to improve the practices of parents and teachers of students with multiple disabilities. This study analyzes how the Social Software tools may be used to: (i) promote the professional development of teachers who work with students with multiple disabilities, (ii) design contexts to promote communication and interaction between teachers and parents, and (iii) create on-line social networks.

### **Method**

This research aims at understanding how the design and development of an on-line social network can contribute to supporting parents and teachers of students with multiple disabilities. We defined three main goals: (1) To create and boost an on-line social network for teachers and parents; (2) To analyze the functioning and dynamics of this on-line social network in terms of how parents and teachers should participate and work with each other; (3) To study the potential of the Social Software in helping parents and teachers of students with multiple disabilities.

The research was developed in four stages: (i) preliminary research (context analysis, development of the conceptual framework and identification of existing resources); (ii) conception and planning; (iii) development of the proposed intervention (implementation, monitoring and reformulation of the online social network); and (iv) evaluation (functioning and dynamics of the social network, and final evaluation of the proposed intervention).

We used the Design-Based Research approach (Plomp & Nieveen, 2010) as a research methodology.

The study involved 15 parents and 30 teachers (25 special education teachers and five regular teachers) working with 66 students with multiple disabilities who attended 13 specialized support units, located in the Lisbon area.

Using the NING platform, we created an online social network entitled "multiple disabilities: parents and teachers in network" (<http://www.multideficiencia.ning.com/>).

The social network is an accessible and intuitive structure, with areas for sharing and learning. There are also individual pages, tools for inviting friends, giving presents, celebrating birthdays, sending and receiving email.

We used different techniques for collecting data: document research; questionnaires (six), interviews (27), observations (62) and computer-mediated communications. Data was analyzed using various methods: descriptive statistics, content analysis, and analysis of online social networks. Analysis was achieved through the use of the following software: PASW Statistic® 18; Microsoft® Excel 2007; Atlas.ti® 5.0; Netdraw and Ucinet® 6; and Google Analytics®. To ensure the credibility of the content analysis, we performed inter-coder reliability tests (Carmo & Ferreira, 1998). The reliability inter-codes involved the use of inter-judge agreements, following the Vala formula (Vala, 2005), which obtained a coefficient of 0.95.

### **Results and discussion**

The participants' motivation to access the online social network was quite different, some displaying a more active and dynamic behaviour than others. The relationships

established among the participants were inclusive, revealing an engaging mesh of connections among them. However, the magnitude of the interactions established among participants was not very high, particularly among the group of parents. The teacher' relationship showed that information was shared, and that there was an increase of communication and interaction practices.

The volume of shared information (n=333) distributed through a variety of tools display the vitality of the online social network. The participants considered issues related to educational practice as those of particular interest, including the use of assistive technology and the communication with students. Other subjects were also remarkable: the organization and functioning of units; student's activities; the students' evaluation and the adaptation of stories.

The participants became involved by sharing information, as well as commenting and reflecting on it. The ones, who shared resources, ideas, information and experiences, producing new information, and assuming a "creative" attitude, were regarded as displaying a proactive behaviour. The participants also reacted to information, experiences and resources that were shared on the online social network by the more proactive members. Their reactions mostly assumed the form of comments. The contents shared by the forum and blog tools gave rise to more comments. The interactivity patterns demonstrated dynamism in terms of structure, revealing moments of reflection and collaboration among participants, and thus, indicating a positive factor to the vitality of the online social network. The participants' levels of reflection and the intensity of interaction depended on the subject under discussion and the kind of resources that were shared.

The quality and the utility of the information available on the blog, as well as the relevance of the topics offered for discussion in the forum were underlined by teachers as «very good». These tools were considered the most useful and the strong points of the online social network. The teachers classified the overall quality of the social network as «very good» (mean value = 5.54), as well the quality of the resources and materials available (mean value = 5.69). The teachers considered their participation throughout the online social network as «reasonable», representing the less positively assessed dimension. They also felt that their participation in the online social network had a very positive impact on their teaching practice (mean value = 5.27).

Therefore investing in the creation of such resources and providing a means to expand knowledge and share experiences seem meaningful (Persky et al., 2009). The teachers showed a greater need to search for information on multiple disabilities and to exchange experiences rather than to simply chat and meet other colleagues.

Although teacher participation was more effective than parent involvement, in some cases there was an effective informational and social connectivity which became a new non-formal learning context for some participants, corroborating earlier findings (Pinto, 2011). We considered that the most active participants added value to the online social network, adopting proactive behaviours, which we call "Creative" and reactive behaviours which we name "Critical". These behaviours bestowed vitality upon the online social network and gave visibility to these participants, hence the classification of "Visible Participation". We observed more behaviours that were less proactive, so we consider that the culture of sharing has proven to be somewhat difficult to implement, which has also been reported in other studies (Persky et al., 2009). Many participants adopted more passive forms of participation: "collector", "spectator" and "inactive". We do not regard these attitudes and behaviours as giving visibility to the participants, and, therefore, we grouped them into another type of participation that we entitled "Invisible Participation".

## **Conclusions**

The use of network technologies focusing on people and objects gave rise to a simple, intuitiv and open structure that facilitated the establishment of social relationships, communication and interaction among members and an exchange of information, experience and digital resources (Pinto, 2009). The availability of teaching practice resources associated with the development of a diverse set of activities that fostered opportunities for socialization among participants led to sharing, reflection on practice, and joint problem solving. It also allowed for learning and building knowledge through the network. We concluded that these tools facilitated the social and technical support of the development of an online social network.

The dynamics of the online social network revealed the existence of a plural reality, whereby different levels of participation and involvement were observed. We concluded that the online social network did not have the same impact for both groups of participants (parents and teachers), so the sense of presence (social and cognitive) was not the same for all. For teachers, the online social network had a very positive impact. For parents, the online social network was not motivating enough to interest and engage them in the proposed activities. We assume that parents require a different approach, one that is more focused on support and less on learning.

We also concluded that the Social Software used responded to the needs presented by the teachers. The flexibility of these tools has generated multiple uses and helped create an attractive environment for a number of experiences associated with multiple disabilities. The online social network has established itself as a space for support, sharing, reflection and learning, especially among professionals, in an area that has not been suitably explored in terms of research: the education of students with multiple disabilities, with the help of social software tools.

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## **Validation of the Parent Report Language Use Inventory to Portuguese**

Cristiana Guimarães  
University of Minho, CIEd  
[cristiana.guimaraes@gmail.com](mailto:cristiana.guimaraes@gmail.com)

Anabela Cruz-Santos  
University of Minho, CIEd  
[acsantos@ie.uminho.pt](mailto:acsantos@ie.uminho.pt)

Leandro Almeida  
University of Minho, CIEd  
[lalmeida@ie.uminho.pt](mailto:lalmeida@ie.uminho.pt)

### **Abstract**

Language acquisition and development takes in account the child's interaction with the surrounding environment. Daily social interactions with people and communication with others allow the child to acquire language being pragmatics considered a system of rules that support the communicative use of language. Identification and assessment of children at risk for language disorders are crucial in order to carry out an effective early intervention. This study was carried out taking into account first, the relevance of pragmatics as a component of language, and second the lack of assessment tools in Portugal to assess these abilities. Therefore, the aim of this study consists on the translation, adaptation and validation of the inventory "Language Use Inventory" (LUI), to European Portuguese. The LUI is a standardized parent report measure designed to assess pragmatic language development in children within 18- to 47-month-old. All procedures recommended by test adaptation guidelines were adopted in this study. A pilot study was carried out with a sample of 120 inventories, answered by the parents/caregivers of the Portuguese children in the target age groups. Cronbach's alpha, which is a numerical coefficient of reliability obtained for the scale strongly confirm a very good internal consistency for the LUI-Pt with 0.97 for the total scale, and coefficients between 0,71 - 0,96 for the sub-scales. Preliminary results indicate the internal validity of the LUI-Pt for Portuguese children confirming its clinical usefulness as an assessment tool.

**Keywords:** Assessment; Language; Communication; Early Intervention

### **Introduction**

Development of pragmatic starts from early age when, in the interaction, the baby and mother make eye contact and exchange facial expressions. Within a few months the baby starts to perform shifts of vocalizations, imitation and respond to facial expression of the mother. The exchange of gaze and production of vocalizations mark the beginning of the communicative use of language and confirms that language influences social behavior (behavior of other people) (Dale, 1980; Dunst, 2000; Iverson & Goldin-Meadow, 2005; O'Neill, 2007; Owens, 2005).

In this paper results obtained in the pilot study are presented. These preliminary data result from the process of translation, adaptation and validation of the inventory

“Language Use Inventory: An Assessment for Young Children’s Pragmatic Language Development” (LUI) into European Portuguese. The study is part of a research project that intends to standardize the LUI for the Portuguese population, and to establish normative guidelines for the screening and diagnosis of language disorders.

### Method

The process of translation and adaptation of the inventory was extensive and complex, following the guidelines of other similar instruments. In relation to the translation and retroversion process a qualitative analysis was conducted in order to understand the relevance of all items/significance by parents/caregivers. This process includes several steps as a method to provide accuracy and validity of data (Almeida & Freire, 2008; Feldman, et al., 2005; Geisinger, 1994; Paul & Roth, 2011):

1. Request for authorization
2. Translation and Back-translation
3. Review of translation and socio-cultural adaptation
4. Thinking aloud

For this pilot study, 180 inventories were distributed randomly in day care centers and kindergartens located in the districts of Braga and Porto, Portugal remaining 120 to be analyzed; 36 were not returned and 24 were excluded according to the guidelines of the original instrument.

The participants of the sample were parents and caregivers of children, namely females (40.8%) and males (59.2%). Participant’s description considering gender and age groups is presented below (Table 1).

**Table 1:: Sample distribution**

Group	Age in months	(%)	Female
1	18-23	16.7	9.2
2	24-29	27.5	10
3	30-35	24.2	8.3
4	36-41	20.0	7.5
5	42-47	11.6	5.8

### Results and discussion

The LUI-Pt has 180 items in total, corresponding to the items of the original version. Most items (89%) corresponds to dichotomous responses, "yes" or "no" and the other items (11%) responses are classified according to a Likert type format, with the options "no longer uses" (only on subscale A) or "never", "rarely", "sometimes" and "often".

In the protocol, parents also provide information related to birth, general behaviors, health condition, language competencies of the child, and acquisition of another language in addition to Portuguese.

In order to verify the internal consistency index, Cronbach’s alpha coefficients for the three parts and the 14 subscales of the LUI-Pt were performed (PT Alpha). All coefficients obtained were compared with the original version (Alpha EN).

The three parts of LUI-Pt showed high internal consistency ( $\alpha > 0.98$ ). However, when analyzing each subscale results illustrate that the subscales A, C, G, H, I, K, M and N have high internal consistency ( $\alpha$  from 0,84 to 0.96), subscales D, F and J, have a suitable index of internal consistency ( $\alpha$  between 0.7 and 0.8) and B subscale, have a weak internal consistency of its items ( $\alpha < 0.3$ ). The subscales E and L consist on open questions and don’t present a numerical score, reason why they were not included in the final score of the LUI-Pt.

The three parts and subscales of LUI-Pt showed good reliability, except subscale B,

which showed weak internal consistency, which can be justified by the fact that, while the alpha coefficient of results variance depends on the number of items and on the total subscale, its calculation could be affected for being a subscale with only two items. Even so, the difference between the coefficient obtained and the coefficient found in the original version, qualifies greater heterogeneity of Portuguese parent responses to the two items, and may even justify the inclusion of more items in this subscale. Analysis of the alpha coefficients of both versions indicates that coefficients obtained in the translated version were similar to the original version, with a good reliability. This proximity is clear if we compare the total score of Part 2 and 3, for 161 items where the alpha coefficient was 0.99 for the original version and 0.98 for the translated version.

### **Conclusions**

The relevance of language in the child's cognitive-linguistic processing, from the earliest age, and the lack of evidence to assess the pragmatics of language in Portugal, justifies the purpose of this study: the translation and adaptation of the LUI. Since its original version illustrates clinical and educational utility in assessment of pragmatics competence in English-speaking children, the Portuguese version was conducted and is well proven. Psychometric properties of the instrument were analyzed, and internal consistency coefficients very similar to those obtained in the original version. Only one subscale showed an alpha coefficient greatly reduced, which seems to be explained by the existence of only two items. However, further analysis is justified, since Portuguese parents do not associate the same pattern of response to the two items. Also, one suggestion is related to a higher number of items in this subscale.

In future, standardization of the LUI will be conducted in order to obtain performance criteria and linguistic markers related to pragmatic skills in children 18- to 47-month-old. The aim of this research project is to develop an assessment tool usefulness for early intervention childhood, in order to provide an early diagnosis and contribute to an early intervention for children with language disorders and/or communication disorders.

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## **Inclusion of Students with autism in the early school in Brazil**

Cristiane Kubaski

UFSM

[cristianekubaski@gmail.com](mailto:cristianekubaski@gmail.com)

Fabiana Medianeira Pozzobon

UFSM

[pozzobonfabiana@gmail.com](mailto:pozzobonfabiana@gmail.com)

Carlo Schmidt

UFSM

[carlopsico@gmail.com](mailto:carlopsico@gmail.com)

Cleonice Bosa

UFRGS

[cleobosa@uol.com](mailto:cleobosa@uol.com)

### **Abstract**

The objective of this research is to investigate the teacher's perception of the inclusion process of their students with Autistic Spectrum Disorder – ASD – in the early school years, in the south of Brazil. A semi-structured interview about this process was used, which covered four dimensions: Presence, Participation, Acceptance and Learning. The Presence investigates if the educational practices with this student happen jointly or independently from his/hers classmates; the Participation aims to detect if the student is engaged in joint activities with classmates and teachers, providing data about the quality of the educational experiences. The Acceptance analyses the perception and posture of the classmates, teachers and the school members towards the student with autism, and lastly, the Learning heads to the academic, emotional and social earnings. Preliminary results regarding the interview of one of the teachers showed that the teacher: a) Recognizes the relevance of the social development; b) Proposes pedagogical practices that allow social interaction but also showed limited knowledge about the learning process of those students.

**Keywords:** Educational inclusion. Autistic Spectrum Disorder. Teacher's perception

### **Introduction**

The Autistic Spectrum Disorder (ASD) is a condition classified in the DSM-5 as a Neurodevelopmental Disorder that involves social-communicative and behavioral deficits (APA, 2013) and must be present since childhood.

One of the greatest benefits that an inclusive education can offer to children with ASD is the possibility of interaction with their peers, contributing to social skills development (Brazil, 2013). However the possibility of interaction cannot be ensured only by the presence of this child in the school environment.

The study of Wong and Kasari (2012), for instance, identified that students with ASD included in regular schools spend the most part of their time isolated in the school. It is important to consider not only the presence of these learners in the school but mainly the quality of their social interaction. Indeed, Brazilian studies about the conception of teachers in regards to the scholar inclusion are controversial. While some teachers think that inclusion in Brazil tend to be a simple physical placement of students into a

common space in the scholar community (Nunes, Azevedo & Schmidt, 2013), others demonstrate that the teacher understands the difference between integrating and truly including the student with disability (Camargo, Pimentel & Bosa, 2012; Sanini, Sifuentes & Bosa, 2013). This controversy can be explained by regional differences and educational level (for instance: Childhood education, Basic/ Elementary School education and Middle/ High School education). According to Booth and Ainscow (2002), inclusion involves learning with others and collaborating with others' learning which leads the student to be recognized, accepted and valued by what he or she is. Wherefore, we need to considerate indicators that incorporate more broadly the way that students with ASD are included to better understand the process. For this purpose, we will comprehend the inclusion based on the Booth and Ainscow's theoretical contribution (Booth & Ainscow, 2002) which proposes four dimensions for a scholar inclusion evaluation: Presence; Participation; Acceptance and Learning.

The Presence investigates if the educational practices with this student happen jointly or independently from his/hers classmates, including data about the school attendance and the place of this student in the school. The Participation aims to detect if the student is engaged in joint activities with classmates and teachers, providing data about the quality of the educational experiences. The Acceptance analyses the perception and posture of the classmates, teachers and school members towards the student with autism, including possible prejudices or segregations. Lastly, the Learning includes, not only the learning of scholar contents, but also heads to academic, emotional and social earnings of this subject.

Although there is evidence of the benefits of ASD students' inclusion at childhood education (Brazil, 2013) studies investigating students of the initial years are much less frequent, revealing an area deprived of research. Therefore, the objective of this research is to investigate the teacher's perception of the inclusion process of their students with Autistic Spectrum Disorder – ASD – in the early school years, in public schools in the south of Brazil.

## **Method**

### **Design and Participants:**

This is a qualitative study utilizing multiple exploratory cases (Yin, 2001). Five teachers of the first years of Brazilian public schools were selected for participating in the study. However, the partial results described in this paper include the analysis of the interview with only one teacher.

### **Instruments**

**Questionnaire about School and Student General Information:** It includes information on the structure of the school; identification data; number of students in the school, numbers of teachers, and; behavioral and academic information about the student with autism.

**Interview about the Inclusion of ASD Students:** It is a semi-structured interview with questions about the teacher's work with the ASD Student in the inclusive context. The interview was recorded and transcribed. The teachers' answers were examined by content analysis (Bardin, 2009), based on a priori established categories (Presence, Participation, Acceptance and Learning) of Booth and Ainscow (2002) and Humphrey (2008), and also based on the emergent subcategories that were identified. This project was approved by the Ethics Committee of the UFSM (Protocol number 14725313.4.0000.5346).

## **Results**

1) Presence: The student with ASD attends to school almost every day, in a regular classroom, except the ones when he attend therapy sessions: “He comes to school every day, and there is one day in the week that she[the mother] takes him to the occupational therapy, on Friday is the day that he doesn’t come, but if she doesn’t take him (to the therapy) he comes to school”.

2) Participation: The teacher’s report shows her difficulties in engaging the student in jointly activities with his classmates, which minimizes the possibilities of his interaction with classmates: “If the other students in the class, for instance, are copying something he is usually playing games...”.

However, although the participation in groups doesn’t occur very often, it is noticed that the teacher tries to facilitate his interaction with the others classmates by using games and story-telling: “I must think about something that he will be able to, after a while, interact with them. There are moments that we will have to sing or tell a little story, so we will sit on the carpet and he will be able to sit there among everybody”.

3) Acceptance: The teacher seeks to encourage other kids to understand the class mate in his own way: “So I started to bring little stories to work with the differences (...) then I told the story of the little pink sheep, that were different from the others, so now they look after him, protecting him and so they help him this way”. The teacher also reports that the employee responsible for student’s meal sees him as someone worth of pity, and so she, differently from his classmates, “favors him”: “She feels sorry for him and thinks he must receive snacks five or six times [a day], as long as he’s asking for”.

4) Learning: According to the teacher the student do not follow the teaching contents proposed by her. She tends to see him as someone unable to learn and that is a reason for her making little effort towards him : “Teaching him writing before the end of the year, only if I had a magic wand! I think it is not going to happen!”

## **Conclusion**

In relation to the dimension Presence, the partial results show the assiduity of the ASD student in a regular classroom, along with his classmates. The only reason why this attendance is not full is due to his therapies which are performed concomitantly with the scholar schedule. The analysis also reveals that some of the educational practices are developed in order to favor the social interaction, like games and storytelling.

About the Participation dimension, this student restricts himself only to the activities he wants to participate, and those are parallels to the activities offered to the class, which leads to little interaction opportunities with the classmates. Even so, the quality of interaction shows up as a concern of the teacher towards this student. The Acceptance dimension, even though the teacher’s efforts in explaining the differences of the ASD student to the class showed that his perception as a subject that doesn’t learn and has very much difficulties tends to unleash feelings of pity and na indulgent behavior among the employees and teachers, distinguishing him of his peers in the class.

At last, the Learning dimension demonstrated that the student shows a deficit in the learning performance, reinforcing the disbelief of the teacher about his learning abilities.

It is concluded that the proposal of understanding the inclusion by analyzing the Booth and Ainscow (2002) and Humphrey (2008) four dimensions was fruitful. By illustrating how specific dimensions of the inclusion process have been conducted, turned possible to identify the quality of the inclusion beyond the simple insertion of the students in the scholar environment.

These preliminary results showed a lack of teacher’s understanding of the learning development in children with autism which, if confirmed in further analyses, points to

the need of offering to teachers training based on the integration of learning and social development theories.

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## **Contributions of Collaborative Teaching for teachers and students with intellectual disability**

Danúcia Cardoso Lago  
Federal University of São Carlos  
[lagodanusi@yahoo.com.br](mailto:lagodanusi@yahoo.com.br)

Maria Amelia Almeida  
Federal University of São Carlos  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

The Collaborative Teaching is shaping up as one of the effective strategies in the education of targeted special education students. From this perspective, a participatory research was developed with mixed approach in two municipal education network aiming to describe and analyze the contributions of collaborative teaching for teachers and students with intellectual disabilities. Attending a special education teacher; four teachers of common education and five students with ID. The instruments used were questionnaires and semi-structured interview script, reading assessment sheets, observation script and field diaries. Results indicated the Collaborative Teaching as a service to support school inclusion, because the teachers increased their knowledge about ways of working with students with disabilities; ID students have developed both social and academic aspect, which supports this strategy as a model that could broaden the participation of students with intellectual disabilities in the common school context.

**Keywords:** Special Education, Collaborative Teaching, School Inclusion. Intellectual Disability

### **Introduction**

The enrollment children with special needs has increased considerably in the public schools of Brazil. According to the Decree 7.611/11 § 1º the following students are considered for educational reasons as having special needs: students with disabilities, pervasive developmental disorders and high ability or giftedness. So, in category disability are included students with intellectual disabilities – ID that in this study constituted the research participants (BRAZIL, 2011).

With enrollments increasing many of these educational proposals are being discussed, implemented, analyzed and evaluated worldwide. However, there are insufficient proposals aiming at the students with intellectual disabilities education in the ordinary classroom.

Countries with early experiences in school inclusion policies, such as United States, Canada and some European countries are implementing researches that involve collaboration among teachers of special and common education within the context of the classroom through collaborative teaching.

The Collaborative Teaching is a process in which a special education teacher works in an egalitarian relationship with a teacher from the ordinary classroom, helping him in his efforts both to make decisions as to develop pedagogical activities (Friend and Cook, 1990; Mendes, 2006).

In the international literature stand out in recent years the research conducted by Frade (2011), Kison (2012), Flores (2012) and Blank (2013) and in Brazil, Zanata (2004); Capellini, (2004) and Rabelo (2012). In general, the results of these studies indicated that the Collaborative Teaching can be configured as a strategy for increasing participation of disabled students in the ordinary classroom.

In this article, part of a doctorate research that aimed to develop, implement and evaluate a Collaborative Teaching Program with teachers and their students with intellectual disabilities - ID, was chosen to describe and analyze the collaborative teaching contributions, in educational, social and professional expansion terms, for teachers and students with intellectual disabilities - ID.

### Method

It is a participant research with mixed approach combining qualitative and quantitative aspects in the same study. The study was approved by the Ethics Committee on Human Research of the Federal University of São Carlos - UFSCAR through CAAE No 2907.0.000.135.10 and Opinion No. 478/2010.

Participants were a special education teacher; four regular education teachers and five students with intellectual disabilities. The participants identification can be seen in Figure 1.

RESEARCH PARTICIPANTS IDENTIFICATION	
TEACHERS	
PEE/P	Special Education Teacher - Researcher
P1 and P2	Municipal Education teachers of São Carlos, São Paulo
P3 and P4	Municipal Education teachers of Vitória da Conquista, Bahia
ID STUDENTS	
A1-SC and A2-SC	Municipal Education students of São Carlos, São Paulo
A3-VC, A4-VC and A5-VC	Municipal Education students of São Carlos, São Paulo

Figure 1: Research participants identification

The research was conducted in two municipal schools of two Brazilian cities as described in Figure 2.

EDUCATION NETWORKS WHERE THE STUDY WAS DEVELOPED				
School year		Place	Teachers	ID Students
Collaborative Teaching	Follow-up			
2011	2012	Municipal Education Network of São Carlos, São Paulo	P1 and P2	A1-SC and A2-SC
2012	2013	Municipal Education Network of Vitória da Conquista, Bahia	P3 and P4	A3-VC; A4-VC and A5-VC

Figure 2: Municipal Education Networks were the Collaborative Teaching was developed

The instruments were identification questionnaires and semi-structured interview script to participant teachers; reading evaluation forms for ID students; observation script and field diaries to the researcher.

Upon approval and acceptance of the ordinary classroom teachers and their students with ID received the researcher / special education teacher direct collaboration throughout the school year, with two weekly meetings in each ordinary classroom, making a total of eight to ten times per month and an individual meeting every 15 days, or as needed. Data were analyzed qualitatively considering the process and quantitatively aiming to evaluate the program's impact.

### Results and discussion

The reading skills assessments results demonstrated considerable advances in the educational development of the five ID students. These results corroborate the research developed by Pletsch (2010) and by research and studies surveyed by Cárnio and Shimazaki (2011), whose participants were ID students who had long being enrolled in public schools without any intervention or belief of teachers, administrators and family members in the academic potential of these students.

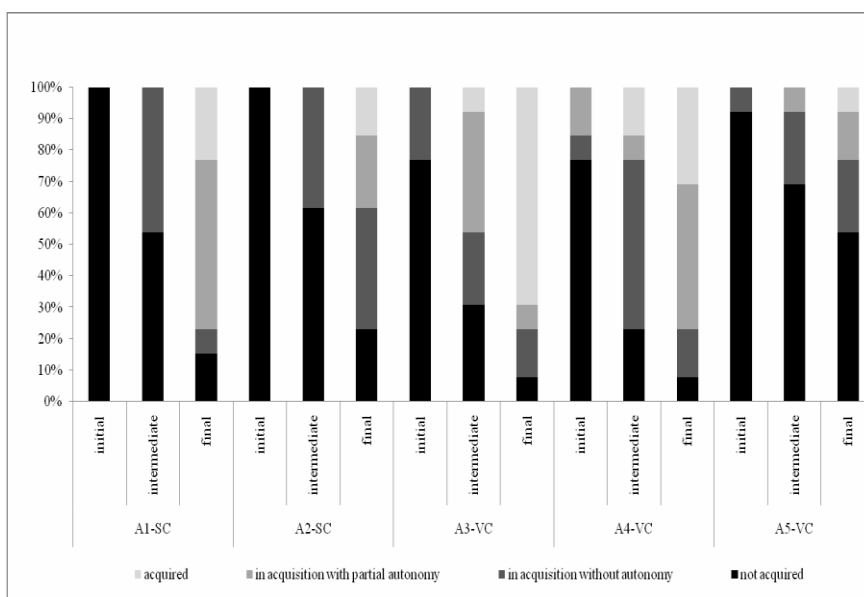
Data from this study also concur with researches based on collaborative teaching as studies developed by Capellini (2004) who worked directly with ID teachers and students, and by Kison (2012), Flores (2012) and Blank (2013) who did not work directly with students, but with teachers who have developed a collaborative partnership and stated in their depositions that students with disabilities have developed pedagogically from collaborative teaching.

In this paper will be described the results of Reading skill that aimed to identify the basic principles of reading according to the contents planned for the student school year, plus a poll about whether or not skills were acquired by ID students in previous years. The Reading skill had a total of 13 analysis categories, as shown in Figure 3.

SKILL	CATEGORIES
	Read texts
	Read sentences
	Read words
	Understand the overall meaning of texts read aloud.
	Oral reading from drawings, figures, posters, etc.
	Recognize letters
	Letters differed numbers
	Reading was part of their school life
	Reading was part of their family life
	Reproduced oral stories and events
	Related the objects name to their drawing.
	Narrated stories / events in chronological sequence and thread
	Perceived the Reading social function

**Figure 3: Reading skill categories.**

Figure 4 shows the development results of the five ID students in the Reading skill divided into initial, intermediate and final evaluation.



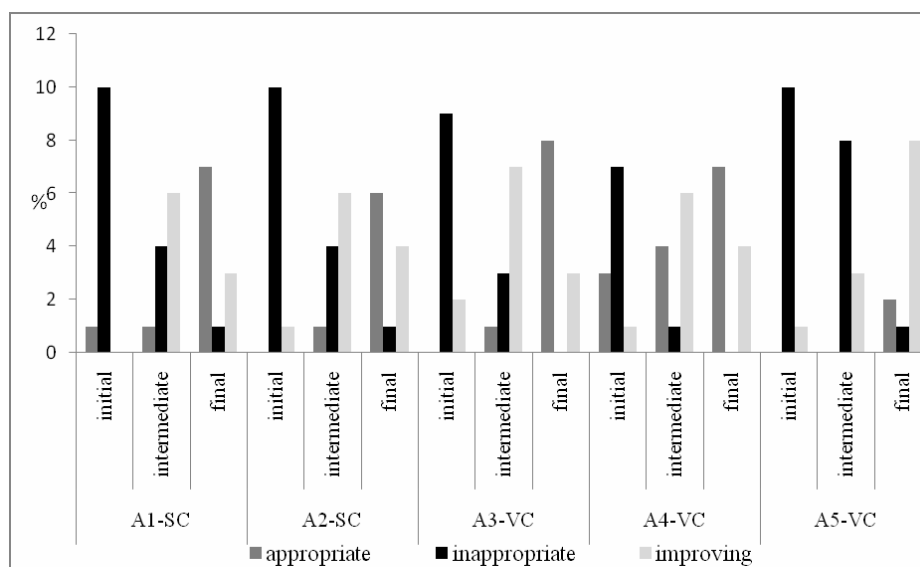
**Figure 4: ID students Reading: Initial evaluation, intermediate and final**

Some behavior aspects of ID students and the interaction between them and their colleagues were observed, because as Pinola, Del Prette and Del Prette (2007) research has pointed that the difficulties for ID students school inclusion are not related only to low academic development, but also to social interaction. The aspects observed during the operation are described in Figure 5.

CATEGORIES	SUB-CATEGORIES
	Infantile behavior
	Agitated behavior
	Respect the classroom rules
	Concentration during activities
	Autonomy with school supplies
	Emitted opinions on classroom matters
	Solve conflicts with peers without assistance
	Interacted with colleagues in the classroom
	Respected by colleagues
	Respected colleagues
	Positioned himself as a student in the class
	Participated in the extracurricular activities

**Figure 5: Social and behavioral aspects sub-categories observed in ID students**

ID students participants in this study had difficulties in initiating or maintaining social interaction. However, after the partnership, about 80% increased social and academic results. These results can be seen in Figure 6.



**Figure 6: Social and behavioral aspects of ID students: Initial, intermediate and final observation**

### Conclusion

The results of this study showed that systematic assistance offered through Collaborative Teaching fosters school inclusion of students with intellectual disabilities – ID. The pedagogical advances, presented by five ID students who participated in this research, are still below the grade / age contents. However, it became evident that the support and assistance from the special education teacher in the context of common classroom through this partnership helped to reduce the learning difficulties of these students, favoring or expanding their education.

The four participating teachers, in general, reported that having a special education teacher in the classroom has allowed them to experiment with different methods and teaching strategies, and encouraged them in finding new resources for students with disabilities, expanded their skills on activities adaptations for students with disabilities, expanded knowledge about the ways to assess these students, reflected on their perceptions of students with disabilities and on their teaching practices. For the researcher, a special education teacher, gains related to her professional magnification were very significant because through Collaborative Teaching she had the opportunity to experience in loco the dynamics of a classroom, the routine of an ordinary public school, plus to broaden her knowledge regarding transmission modes of specific content for both, ID students and the other students in the classroom.

It is hoped that the results reported here may contribute to the school inclusion of students with intellectual disabilities in the ordinary classroom, and demonstrate that it is possible a partnership between special education and common teachers that historically has served in separate way, which is not possible within a conception of inclusive school.

### Acknowledges

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## Use of graphic systems in the routine of regular classroom

Débora Deliberato and  
UNESP

[delibera@marilia.unesp.br](mailto:delibera@marilia.unesp.br)

Leila Regina D' Paula Oliveira Nunes  
UERJ

[leilareginanunes@terra.com.br](mailto:leilareginanunes@terra.com.br)

### Abstract

The school environment adapted to the diversity of students is an important goal, but it is a challenge when it comes to the diversity of students with disabilities. The aim of this study was to describe the use of graphics systems in the routine of a preschool classroom through a collaborative program. The study included a teacher, 22 children of a preschool classroom in a school in a state of Brazil, the mother of a child with disabilities and a special education teacher. A program of collaborative action was carried out among the researcher, the teacher and the students to insert the graphic system in the routine of educational activities for four months. The activities were recorded through a log book, filming and digital recording of interviews. The results obtained from the analysis of the themes identified that the children used the graphic system in the routine of the school tasks, the graphic system helped children in reading the words, the teacher facilitated the insertion of the graphic system from the mediation of the researcher, and the routine of educational activities planned by the teacher facilitated the insertion of the graphic system in the classroom among the students. The study reinforced the need for a training program aimed at school interlocutors to include students with disabilities.

**Keywords:** special education; inclusion; augmentative and alternative communication; teacher training

### Introduction

The concern of professionals and researchers to ensure the permanence of students with disabilities in regular schools has increased theoretical and practical actions, both in teachers' education and the implementation of programs involving partnerships between professionals from different areas (Deliberato, 2009, 2013; Nunes, et al 2011; Schirmer, 2011).

Regarding the area of augmentative and alternative communication, researches showed that the use of resources and strategies involving augmentative and alternative communication systems favors not only communicative skills, but also enables the participation of nonspeaking students with disabilities in educational activities programmed by the teacher (Rocha & Deliberato, 2012).

The school could be an important environment to foster the necessary support for children and youth with disabilities, the use of additional and alternative communication systems (Von Teztchner, Brekke, Sjothun, & Grindheim, 2005). In fact, the school has two challenges: to ensure support for the communicative skills of students with disabilities and non-speakers ensure the participation of the same student in the activities planned pedagogies in curriculum planning.

Adapt the school environment to the diversity of students is an important goal, but it is a challenge given the diversity of students with disabilities. The literature has discussed the need to train teachers in the use of different resources of assistive technology (Schirmer, 2011). In this context, the teacher's regular classroom and the other students should be trained in the use of resources and strategies adapted to participate in pedagogical tasks in conjunction with a disabled child. The area of augmentative and alternative communication has been an instrument for learning disabled child. Given these issues aim of this study was to describe the use of graphics systems in a room of the routine childhood education through a collaborative program.

## **Method**

This study is part of a larger research: Alternative Communication Technologies: resources and procedures for preschool students with disabilities; with the approval of Ethics Committee number 0446/2012.

The school selected for this study was indicated by a specialized institution in the monitoring of students with disabilities in regular schools in the city of Rio de Janeiro. The selection criteria for the classroom in the specified school was the lack of experience with students with disabilities in preschool.

Under this criterion, the teacher, 22 students, a professor from Special Educational Services (ESA) and the mother of a disabled child participated in the study. The activities were carried out in a preschool in the city of Rio de Janeiro, Brazil.

There were 22 students in the classroom: 17 girls and five boys, ages between four and six years old. According to the teacher's report, the classroom had novice students and students who could recognize the name, letters, numbers and establishing their hypothesis for writing. The teacher also reported that, in addition to the student with disabilities, there were students with difficult behavior who needed help from professional experts.

For data collection, the following instruments were used: Protocol for assessing nonspeaking students' communicative skills in family situation (Delagrancia, 2007) and the protocol for assessing nonspeaking students' communicative skills in school situation (Paula, 2007). In addition to the protocols, observation of the classroom routine through log book and filming of the activities involving the child with disabilities were performed. The activities planned for the selected program were made through the use of concrete materials (objects), pictures, pictographic images from Picture Communication Symbols communication system (Mayer-Johnson, 2004).

### **Organization of information collection**

The planned and organized activities were performed according to the model of action program in schools proposed by Deliberato (2009, 2013), for a period of four months.

### **Performed Procedures**

The data collection was divided into three steps, as described by Deliberato (2009, 2011, 2013). The first step was about establishing contact with the selected school and solving ethical issues requested by the city of Rio de Janeiro. Upon the permission of the responsible authorities, a first meeting with the administration and coordination was arranged at the school to discuss the selection criteria of the classroom participating in the program.

Still in step 1, an initial contact with the selected teacher was carried out and the teacher described the behaviors of the student with disabilities, through the communicative skills protocol (Paula, 2007). During that first contact, it was possible to identify that the



teacher had been aware of the behavior of the disabled student and had already contacted the Special Education Services (SES).

Then in step 2, it was possible to gather more information about the child with disabilities through the use of the communicative skills protocol made with the mother of the disabled student (Delagracia, 2007). Still in this step, it was possible to observe, present and discuss the adapted resources, through graphic systems, with the teacher and the other students in the classroom.

In step 3, as shown in Table 1, adapted resources through graphic systems were used for the activities planned by the teacher with the aid and guidance of the researcher. At this step, the work of the researcher in conjunction with the teacher and other students was important for the collaborative actions (Rock, 2013). At the end of step 3, an assessment of the work involving the teacher and the researcher was made.

Organization of the information for analysis

The recording of the protocol with the mother was transcribed in full, as well as the films made during the use of adapted resources to the student with disabilities. The information from the log book were organized chronologically, and the transcripts of the films and digitally recorded information were incorporated to the sequence of continuous recording done through

the log book to compose one single written text, for the purpose of data triangulation analysis according to Triviños (1992). This proposed analysis allowed the articulation of different sources of data collections constituting a single written text (Triviños, 1992).

## **Results**

After structuring and organizing information in a written text, themes were identified according to Bardin (2004). Significant selected units were defined as theme and sub-themes, since the content analysis could overlap between them. From the written text it was possible to identify the following themes and sub-themes described above:

The theme Classroom Routine was defined as the activities planned by the teacher and performed by the students during the school day. The sub-themes identified were: pedagogical activity and ludic activity.

The definition of Activity was supported by Rocha (2013): it is understood that the activity involves several tasks in sequence, i.e., to carry out an activity, several actions are required by the person who performs it. Thus, Pedagogical Activity was defined as the accomplishment of tasks planned by the teacher and performed in the classroom routine. While the Ludic Activity was the sequence of tasks when the students used different resources freely, without prior planning of the task sequence.

According to Rocha (2010), Resources are understood as school materials, teaching materials, games, toys, utensils used during meals and hygiene process the student, resources used for positioning, and other materials and utensils, in addition to CDs of songs, storybooks and poetry used by the student in the school context. The author defined as Adapted Resource materials that are modified to the specificities of the student with disabilities including adapted pedagogical resources in order to expand their motor, perceptual, communicative and pedagogical performance. The sub-themes Use of Adapted Resource for Classroom Students and Use of Adapted Resource for Disabled Students refer to the person who used the adapted resource in the school routine.

The definition of the theme Mediation was supported in the definition proposed by Obelar (2011) and adjusted for the present study, i.e., mediation refers to the role of the educator who is in the classroom, helping the children with or without disabilities in

school activities, through adaptations and differentiated materials, to develop, to learn and to experience school situations. The sub-themes identified relate to persons who performed the mediation, whether the teacher, the researcher, the Special Education Service (SES) teacher and even a joint action.

The theme Teacher Training was defined by all theoretical, practical and theoretical-practical information carried out with the regular classroom teacher or SES teacher. The sub-theme Initial Training was defined as all information regarding the initial training of the teacher and the sub-theme Continuing Education was the teacher's report her in-service training and (verbal and nonverbal) orientations of the researcher about the necessary adjustments for students with disabilities in the classroom.

On the theme Assessment, the following sub-themes were identified:

Assessment on Characteristics of Students: all information obtained regarding the abilities and needs of students.

Performance was defined as the production and quality of the student's action while participating in activities using the existing conventional and adapted resources in school, i.e., the results obtained by the student through his participation (Rocha, 2013).

Assessment of Working Conditions in the Classroom is the information about the physical conditions of the environment, as well as the pedagogical teaching materials used routinely.

## **Conclusion**

The results obtained by the analysis of the themes and sub-themes identified that the children used the graphic system in their routine activities, the graphic system helped the children in reading the words, the teacher inserted the graphic system from the mediation of the researcher, the routine of pedagogical activities planned by the teacher facilitated the insertion of the graphic system in the classroom with the students, providing support in the context of alternative language for the students in the classroom, the resources used through graphic system favored the participation of the student with a disability with the collaborative efforts between the researcher, the classroom teacher and SES teacher.

Although the study has limitations, mainly because it was designed with only one classroom, the results reinforce the need for collaborative action to work in the context of resource use in the area of assistive technology, but also indicated the importance of involving all children in the classroom in the context of new technologies, thus reinforcing the role of the competent communicative partner in the use of graphic systems.

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## **The process of collaboration having as a paradigm the model for addressing diversity (MAD)**

Fabiane Adela Tonetto Costas  
Universidade Federal de Santa Maria-Brasil  
[fabicostas@gmail.com](mailto:fabicostas@gmail.com)

Luís Augusto Miranda Correia  
University of Minho, CIEd  
[lmiranda@ie.uminho.pt](mailto:lmiranda@ie.uminho.pt)

Ana Maria Silva Pereira Henriques Serrano  
University of Minho, CIEd  
[aserrano@ie.uminho.pt](mailto:aserrano@ie.uminho.pt)

### **Abstract**

This paper analyzes the concept of collaboration from the perspective of a group of teachers working in an Agrupamento (Group of schools) in northern Portugal. This Agrupamento was chosen because its teachers were familiar with the Model for Addressing Diversity (MAD), which embraces the education of special needs students, including individuals with specific learning disabilities. Data was collected through a survey consisting of eighteen Likert-type questions. The results show that 60% of respondents had no opinion about the subject in question, 20% disagree and 20% agree that the school's leadership conducts the works and school's internal teams, by coordinating the different work teams established in the school; 40% agree and 60% fully agree that the school's leadership organizes actions together with all teachers and provides them with enough time to plan such actions; 40% of respondents agree, 40% fully agree that teachers, learning support teachers and specialists organize themselves spontaneously, aiming at performing a task, and meet in order to prepare and plan actions and interventions; 20% of respondents did not opine; 60% agree and 40% fully agree that they can express and expose their opinions freely and confidently, being certain that they will receive all support so they can share their anguishes and doubts when facing a difficult situation. When it comes to taking initiative, when the teachers are requested to express their opinions by the group members, 60% did not opine and 20% fully agree they only show their opinion when the group members insistently ask and encourage them to do so, but the remaining 20% fully disagree with this assertion, that is, they feel free to opine in an autonomous manner. 60 % of teachers agree and 40% strongly agree that upon a request by the school's leadership and/or a situation involving a special needs student, the group acts so to share their knowledge and experiences in order to provide a better solution to the issue in question. However, 80% of teachers agree and 20% fully agree that upon a request by the school's leadership and/or a situation involving a special needs student, the group acts to seek alternatives with the specialized teacher to solve the issue. Finally, the analysis of the results confirms the impact the MAD has on the education of special needs education students, through the collaboration among all members of the Agrupamento.

**Keywords:** inclusion, collaboration, model for addressing diversity Introduction

## **Introduction**

Inclusion, from the perspective of the Inclusive Education and the concept “school for all”, presumes the share of actions among the school's constituents (UNICEF, 1990). Teachers are called, invited and, in certain cases, summoned to share actions with their colleagues (Greer, 2012), due to the demand of special needs students (Creese, Daniels and, Norwich 1998).

In Portugal, the integration in the common teaching begins with the Decree-Law No. 319/91. This legislation outlines the pedagogical model, the concept of special education needs – SEN and the school's commitment to the education of special needs children. Portugal was a signatory to the Salamanca Statement (UNESCO, 1994), undertaking to follow its principles. However, conceptual, socio-economic and legislative changes have been causing vicissitudes and insecurities in the education system. Such changes endanger the “inclusion principle” and “inclusive school”, and generate segregationist and/or exclusion practices in scholar and social fields. The Decree-Law 03/2008, specifically in its article 4, items 1 and 4, seems to deprive the SEN individuals of being assisted by the Special Education professionals, namely those having specific learning disabilities (SLD) (Correia, 2008).

Namely, this paper analyzes the concept of collaboration by a group of five teachers, while performing their defined and differentiated roles, in a school in northern Portugal. These teachers were chosen because they experience, in this school, the Model for Addressing Diversity – MAD (Correia, 1997) as an ongoing practice, aiming at including SEN students and, consequently, SLD individuals.

## **Method**

It was a qualitative-descriptive survey, since in accordance with Minayo (2000) it sought to answer a very singular question by analyzing meanings, occasions, ambitions, beliefs, values and attitudes with the purpose of realizing the school's scenario, which have maintained a collaborative work based on the Model for Addressing Diversity (MAD) since the promulgation of the Decree 03/2008.

It was also a descriptive survey since it was based on a thorough investigation and referred to a fact, a question or an event. According to Santos (1999), the descriptive investigation is an enrollment of manifested particularities which are elements of the fact, of the issue or of the event in question. Andrade (1997) says that in this kind of survey, information is analyzed, stored, assessed, qualified and decoded without the surveyor's influence. The descriptive investigation seeks to embrace common and extensive facets of a certain conjuncture. A questionnaire consisting of eighteen questions was used to collect data whose answers were considered based on Likert scale (1932).

## **Results and Discussion**

The results show that 60% of respondents had no opinion about the subject in question; 20% disagree and 20% agree that the school's leadership conducts the works and school's internal teams, by coordinating the different work teams established in the school. With respect to the importance and presence of the school's leadership in the planning and search for professional support, 40% agree and 60% fully agree that the school's leadership organize actions together with all teachers and provides them with enough time to plan such actions.

In regard to voluntary action and share of purposes, 40% of respondents agree; 40% fully agree that teachers, learning support teachers and specialists organize themselves spontaneously, aiming at performing a task, and meet in order to prepare and plan

actions and interventions to be collectively and systematically performed and/or whenever a situation requires so, they establish common goals for the actions and interventions to be adopted to solve an issue; and 20% of respondents did not opine.

In relation to the feeling of belonging and reciprocity, 60% agree and 40% fully agree that they can express and expose their opinions freely and confidently, being certain that they will receive all support so they can share their anguishes and doubts when facing a difficult situation, and get some help from the other group members, and also have the opportunity to change their opinion upon plausible arguments provided by the other group members. However, when it comes to taking initiative, when they are requested to express their opinions by the group members, 60% of teachers did not opine and 20% fully agree they only show their opinion when the group members insistently ask and encourage them to do so, but the remaining 20% fully disagree with this assertion, that is, they feel free to opine in an autonomous manner.

With respect to the partnership, share of resources, resolutions and collective assumption of result consequences, 60% of teachers agree and 40% fully agree that upon a request by the school's leadership and/or a situation involving a special needs student, the group acts so to share their knowledge and experience with the purpose of better solving the issue by forwarding the student, if necessary, to external specialists, and collectively decides on issue solutions and/or assistance to be provided to the student. They also agree that the group assumes the consequences of the results arising out of the decision made. Nevertheless, 80% of teachers agree and 20% fully agree that upon a request by the school's leadership and/or a situation involving a special needs student, the group acts so to seek alternatives with the specialized teachers to solve the issue.

### **Conclusions**

We conclude that this group still presents lower levels of collaboration in the following aspects: the school's leadership's conduction of works and the school's internal teams, since the leadership's attitude does not move the group towards the production of a positive or unfavorable assessment before such way of acting; in the capacity of showing appreciations according to the group's demands, such as autonomous individuals; and, even the members of the group organize themselves and share their opinions, knowledge and experience, the specialized teacher is still the one who has the final word in a situation involving a SNE student.

However, despite the adversities the Portuguese education system has been facing since the promulgation of the Decree 03/2008, which prevents SLD students from being assisted by Special Education teachers, this same group presents high levels of collaboration, exceeding in percentage the opinions listed above and outline the following points: importance and presence of the leadership in the planning and search for professional support; voluntary Attitude and share of purposes; feeling of belonging and reciprocity; partnership; share of resources, resolutions and collective assumption of result consequences in situations involving SNE students.

Therefore, the collaborative practices of this group of teachers, which are organized and processed through the MAD, certainly contribute to the learning process of SNE and SLD students, since the data shows these teachers see themselves as an important part of the process, as most of them can help each other and share their work. Thus, we can conclude that a collaborative group solves its issues in a collective manner and all members feel they are part of the resolutions and success, being also able to commit themselves and assume the consequences of unsuccessful situations.

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## **Factors influence the choice of special education major**

Ghaleb Hamad Alnahdi  
Salman bin Abdulaziz University College of Education  
[g.alnahdi@sau.edu.sa](mailto:g.alnahdi@sau.edu.sa)

### **Abstract**

This study examined factors influence pre-service special education teachers (PSET), in Saudi Arabia, to choose this major. A descriptive and inferential quantitative research design were utilized. This study also examined differences in these factors (components) as regard other variables such as whether this major was the first choice when applying for admission, and gender. Three hundred and ninety four PSET participated, including 253 males and 141 females. T-test and descriptive statistics were used to answer the research questions. The findings indicated that participants hold positive attitudes toward teaching (one of the factors) and high interest in special education were also demonstrated (another factor). However, 34% of participants disagree with the idea that teaching is what they want to do for the rest of their life, and 16% reported that they choose this major despite that they fully convinced it is not their preferred type of work. This study presents the major potential implications in terms of admitting applicants to special education programs, preparing students in high schools to examine their major options, offering flexibility for majors adjustment in universities.

**Keywords:** Special education, Saudi Arabia, college's major, teaching attitude, personal interest

### **Introduction**

"There is, perhaps, no college decision that is more thought-provoking, gut wrenching and rest- of-your life oriented - or disoriented – than the choice of a major." (St. John, 2000, p.22). In Saudi Arabia, special education major is one of the most popular disciplines by high school graduates. That's led to the significant increase in the number of special education departments (Alnahdi, 2014a). to satisfy these desires on one hand and to meet the needs of the Ministry of Education of specialists in the other hand. However, in the last Teacher Competency Test (TCT) that examined candidate teachers qualification in their major in order to get a teaching license. Surprisingly, only 52 % were able to pass this test and get the license (Alnahdi, 2014b). This high percentage of failing to pass this test might due to the incorrect major choice from the beginning. Students need to choose what is matching their abilities and interest at the same time.

This study examined factors influence pre-service special education teachers (PSET), in Saudi Arabia, to choose this major using a descriptive and inferential quantitative research design. This study also examined differences in these factors (components) as regarding other variables such as whether this major is the first choice when applying for admission, and gender. The significance of this study is derived from the importance of teachers' roles in providing special education services, which made them the focus of this study. This study will explore four vital features: first, factors that influence pre-services special education teachers to be in special education major. This includes their interest in special education and attitudes towards teaching. It was concluded by number of studies that a positive attitude toward the importance of work is a factor in determining the success in doing this work (Miller 1994; Mowbray, Bybee, Harris, &



McCrohan, 1995; Winn & Hay, 2009).

### Method

The sample for this study were students of the Department of Special Education at the College of Education in Salman bin Abdulaziz University. Courses that have a large number of students (25 to 45 students) were selected. Two mediators distributed the surveys; a male mediator for the male section of the college, and female mediator for the female section.

Students were given around 20 minutes to fill the survey on a voluntary basis. Three hundred and ninety four PSET responded to the study survey including 253 males and 141 females.

The research developed a survey on the factors that cited often in the literature. Mainly from – Beggs, Bantham, and Taylor (2008) in which the authors conclude that six factors influence students and making. However, four components were in the final survey; four factors were combine to two. The four component (subscale) are personal interest, attitudes towards teaching, special education teachers benefits, and work environment for teachers (locally). A total of 17 items (cover 4 components) and three overall items were added (1, 11, and 20).

For the reliability, an overall Cronbach's alpha coefficient was computed (.746). In addition, Cronbach's alpha coefficient was utilized to determine item consistency across the four subscales (see table 1). A confirmatory factor analysis were utilized to examine the construct validity of the scale. The result showed a good fit for the proposed model (goodness of fit index GFI= .933, adjusted goodness of fit index AGFI= .90).

**Table 1 Overall and Subscale's Reliability**

Table 1 Overall and Subscale's Reliability

Component (Factor)	Item #	Alphas
Overall	17 items	.746
Personal Interest	3-4-15-17	.788
Attitudes towards teaching	16-18-19	.726
Special education teaching benefits ( extra payment _ school day time )	6-12-13-14	.727
Local work environment for teachers	2-5-7-8-9-10	.606

### Results and Discussion

The findings indicated that participants hold positive attitudes toward teaching (M= 4.09) which played a main role in choosing teaching major. In addition, participants reported high interest in special education (M= 4.08), that might also a key element while participants choosing this major. However, 34% of participants disagree with the idea that teaching is what they want to do for the rest of their life, and 16% reported that

they have chosen this major despite that they fully convinced it is not their preferred type of work.

**Table 2 Participants' Responses**

Item #	Reasons behind choosing special education major	SA	A	N		SD
1	I chose to deal with children with disabilities as this has a great reward from Allah (God)	297	89	3	1	3
		76%	23%	1%	0%	1%
2	Social status of teachers in society	119	190	60	21	4
		30%	48%	15%	5%	1.00%
3	My personal interest in people with disabilities	157	148	73	16	
		40%	38%	19%	4.00%	0%
4	One of the best disciplines appropriate to me	165	157	53	12	6
		42%	40%	13%	3%	2%
5	Flexibility in the teacher's job	75	142	132	31	13
		19%	36%	34%	8%	3%
6	Extra payment for Special Education teacher is an adequate reason to choose this specialization	43	105	145	76	24
		11%	27%	37%	19%	6%
7	Security in government's jobs	152	141	71	22	6
		39%	36%	18%	6%	2%
8	Because of the increasing interest in the field of special education	82	167	85	38	16
		21%	43%	22%	10%	4%
9	Because of the ease of study in the College of Education	42	109	115	90	36
		11%	28%	29%	23%	9%
10	Recommendation of a relative or friend		72139468746			
		18%	36%	12%	22%	12%
11	I was put in this specialization I was not interested in it	15	34	26	85	227
		4%	9%	7%	22%	59%
12	Time in teaching was always an important reason in choosing this major	50	118	100	78	46
		13%	30%	26%	20%	12%
13	Teachers get nearly 3-months annual vacation	91	138	84	54	26
		23%	35%	21%	14%	7%
14	Extra payment for special education is the only reason for choosing this major (30% increase when teaching)	57	88	99	73	66
		15%	23%	26%	19%	17%
15	I have a constant interest in knowing things relating to persons with disabilities	140	161	72	14	4
		36%	41%	18%	4%	1%
16	Because teaching is one of the finest humanitarian professions	218	135	28	7	2
		56%	35%	7%	2%	1%

17	Special Education is one of my personal interests	113	140	79	23	2
		32%	39%	22%	6%	1%
18	I have a passion (interest significantly) with teaching as profession	95	138	76	36	10
		27%	39%	21%	10%	3%
19	Teaching is the job that I want to continue in for the rest of my life	131	102	82	24	14
		37%	29%	23%	7%	4%
20	I chose this major and I am fully convinced that it is not suitable for me	32	23	42	65	188
		9%	7%	12%	19%	54%

This study found statistically significant differences in teachers' attitudes towards teaching and personal interest in the major based on whether special education major was the first option (every applicant need to list number of majors ) when applying for admission or not. In addition, it was found that teachers' attitudes towards teaching and personal interest in the major are at the highest level in first semester.

One of the interesting results, on one hand, 98% of participants whether SA (strongly agree) or A (agree) that they choose to work with students with disabilities because it is highly rewarded, a good manner, work by Allah (god). On the other hand, 38% of participants SA or A that extra payment that special education teachers get, comparing with other teachers, is an adequate reason for choosing this major. Moreover, 38% reported that the extra payment is their only reason for choosing this major. A possible explanation is that there is a social tendency (what acceptable within the society) to agree with the notion of item 1, and this item also came first in the survey, but when participants answer the other item, which provide more realistic option, they agreed with that at the same time. Thereby, result from the second item (item 14) might represent participants perspectives more accurately.

Personal interest in special education by gender. There was a statistically significant mean difference on participants' personal interest in special education ( $t = -2.473$ ,  $p < .05$ ) between male and female pre-services special education teachers.

Special education as the first choice when applying for admission was a statistically significant mean difference on participants' personal interest in special education ( $t = 5.810$ ,  $p < .05$ ) and on their teaching attitudes ( $t = 3.396$ ,  $p < .05$ ) between pre- services special education teachers who have a special education as the first choice when applying for admission and those who do not have a special education as the first choice.

## Conclusions

This study found that positive attitudes toward teaching and personal interest in special education were the two important factors in choosing this major in college. However, findings from many items that analyzed individually showed that the financial benefits of special education teaching were very important. This study presents the major potential implications in terms of admitting applicants to special education programs by taking in consideration their interest in the field. In addition, Findings from this study confirm the need for systematic transition programs to prepare students in high schools to examine their major options and interests during high school. It is often discussed the issue of transition services for students with disabilities in special education field (Alnahdi, 2013). Here, it is necessary that transition programs be offered in high schools for all students. These transition programs could help high school students to choose their major and what suitable for them. The absence of such programs lead to get

similar results, friends and family members are the “only” source for choosing a major. Finally, universities in Saudi Arabia should be flexible to some extent to make a room for students to correct their major decision

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## **Cartography of Educational Experiences with a deaf child**

Graziele Gonçalves Fülber  
HCPA/UFRGS-Brazil  
[grazielefulber@gmail.com](mailto:grazielefulber@gmail.com)

### **Abstract**

The present communication is part of a research that analyzes the childhood and educational experiences of a deaf child. The articulation of theoretical and methodological references of Cultural Studies in Education and Deaf Studies was used in the production of a cartography of her practices in family and school environments. Such experiences are presented through photographs captured by her and narratives produced from those images during conversations in Brazilian Sign Language (Libras). Those conversations were videotaped in meetings with the child in both the bilingual deaf school and hearing preschool she attends in Porto Alegre (Brazil). This study focuses on the educational experiences of a deaf child in school environments. It is possible to infer from the analysis that she is equally able to produce and live her deaf and child identities through several dimensions addressed by educational experiences. In both schools, elements of identity are made (im) possible and not enhanced; the child seems to “learn” that deafness and childhood are dissociated dimensions. However, such photographs and narratives, when worked by the child, enable the possibilities of both the child and school learning deaf childhood in a different way: potentially integrated.

**Keywords:** deaf childhood; educational experiences; cartography

### **Introduction**

This is an excerpt of a research analyzing the childhood and educational experiences of a deaf child. The study is placed in the field of Cultural Studies in Education and Deaf Studies through the cartography of the child’s practices in family and school environments.

This study focuses on the experiences lived by the child in school environments. Educational experiences are presented through photographs captured by the deaf child, and the narratives she produced from them. The conversations in Brazilian Sign Language (Libras) were videotaped in meetings with the child in both the bilingual deaf school and hearing preschool she attends in Porto Alegre (Brazil).

### **Method**

On methodology: cartography

Cartography was the chosen method of research-intervention. It has a number of peculiarities, as it is a practical, not an applied method, which means there is no set of abstract steps a priori. In this sense, as research progresses, it is created according to arising demands, and movements of a study plan. This investigative practice aims to follow a process instead of aiming for results.

Cartography has the primacy of confluence, of making “[...] speak that which was not in the sphere of the already known, to access each individual’s experience, make connections, discover reading, playing, links, and all that lives in the crossroads and outskirts of these existential territories” (BARROS and KASTRUP, 2010, p. 61).

## **Results and discussion**

### Production of photographs/images by the child

It is my belief that, as the child takes pictures with a digital camera, she is able to materialize a photograph/image that verbalizes her wishes, and this image is the materialization of her thoughts. Therefore, the possible meanings of photographs/images captured by the child's eye were the main interest of the analysis, not the child herself.

With the understanding that, speaking about childhood, one is speaking about several possibilities of being a child, about the importance of listening to the one we want to involve in our pedagogical practices, and that it is not reduced to letting them speak with "our voice," but that it is also important to pay attention to what they are saying. As childhood has already been extensively explained by other researchers, the western educational philosophical thinking is our start point; according to Kohan (2004, p. 52), childhood "is understood in first place as a potential." To think along with deaf childhood is to come close to the philosophy of thinking.

Based on philosophy, childhood can be understood, as a motivator for thinking about childhood itself, and as the possibility to open itself up to, other places not thought of. For Kohan (2003, p.118), reasoning about childhood is not to think through the truth of produced knowledge, "but through the value of experience by thought propelled."

The notion of thought as an experience has a broad sense, a reasoning that defends knowing, doing and feeling, reasoning as an individual's activity and experience. Reasoning creates a relationship of the individual towards the world and him or herself, and develops critical and creative attitudes. In that sense, there is no ready, finished concept on thought. What does thinking with deaf childhood mean then?

The greatest challenge to this investigation was, from a deaf child's point of view, to show her experiences and thoughts to make us perhaps consider deaf childhood education and ourselves from another standpoint. Having a deaf child as the subject of research is still a challenge, because one thing is to research what is being said about her, and another is wishing to know what she says about her own childhood and educational experiences.

### Getting to know the school environments: preschool and bilingual deaf school

The preschool works with assistance and education to zero to 5-year-old children that live in Ilha Grande dos Marinheiros, Porto Alegre/Brazil. In that school, children receive food, hygiene, and are taught and cared for by teachers with degrees in Early Childhood Education Pedagogy along with class assistants accordingly qualified. The school provides a bus that rides everyday through the only avenue in the island to take the children to class. On rainy days, pedestrian flow is impeded through the island streets because of the recurring floods of Lake Guaíba.

The bilingual deaf school is the only one of its kind in Porto Alegre's Education Network, providing 1-hour individual sessions to zero to 5-year-old deaf children. The teachers realize that such a time is not enough for an effective education in sign language. However, school facilities would not allow group sessions to be held due to the small size of the classrooms.

### Images produced by deaf child in preschool

"Play" "Body expression of the girl with a doll"



How can children escape a limited model, in which not everything is allowed, in which order and discipline rule over what is most dear to them: playing, friendship, an unruly classroom? Dolls are as babies that need attention, cry, must receive their baby bottle and food. Generally, there was an indication through playing that there was an order within the apparent mess, which made playing itself possible. While they played, the children showed their rules and the possibility of self- organization. Order and disorder, the one does not exist without the other, and through them, the place of play may gain new meaning beyond the allowed one, as a creative gesture of the child.

The above image, “Body expression of the girl with a doll,” indicates that children enjoy spending time among their peers. There are also situations in which children – in their relationship with and in the environment – point out the classroom as a place for playing, using make-believe, imagination, creating, innovating, exploring objects and surroundings in different ways, giving new meanings to what is made available to them in the shelves they can reach. Thinking from what children point out is a revolution, turning us inside out, moving us, challenging us to go through the memories of the child we once were, through the marks and smells that inhabit our bodies, summoning and convincing us that life is now. Through that motion, children organize places, create and shape other perspectives to see and place themselves in the world.

A deaf child gives meaning to things through vision; through sight, they take over spaces and give them new meanings. That appropriation implies that they express their way of being, changing, interfering, breaking with uniform logic, enabling heterogeneous experiences, moving away from a massive perspective according to which they must all do the same thing at the same time. It is interesting to face the possibility of creating a becoming child, i.e., an environment for the production of desire, where being a child gets in touch with the multiplicity inhabiting her/him, letting the child think her/his own thoughts.

Images produced by deaf child in bilingual deaf school

The child registered several images of dolls, put them side by side, in line, alone, some wearing clothes, others not; in nearly all images the child directs her gaze to the “face” of the dolls.

“Dolls”



The child looked often at the dolls. At first, we thought it was just because she liked them, but after the video recording, we noticed that the images show her expressions. The child explains, passing her finger over her lips, indicating the shape, the eyes, imitating the dolls' facial traits. Whilst she handled the images and looked them over, making choices and explaining what each of them meant to her, we were able to observe many things that helped us in our analysis.

Possible crossroads with deaf childhood: the other as a deaf individual and the other as a child

In preschool: the deaf child lives surrounded by toys, friends and expressive attitudes. This is where she meets with other children to play. In bilingual school: this is where the child meets with her deaf peers, uses Brazilian Sign Language, where her world is made of expression.

The deaf child in this research has an identity trait – deafness – that makes her different from the rest of children in preschool. However, in preschool she has the means to create a positive identity, a difference that makes her neither better nor worse. In bilingual school, she meets with her deaf peers, and uses hand signs to communicate with her teacher and some older children that attend elementary school. These meetings, however, have a strict timetable. A time to learn sign language, to learn how to play, to learn how to be with another deaf person. In bilingual school, the deaf child plays alone with dolls, preparing them food, and with a ball. The child does not learn sign language in a natural way with other children, with her peers. A service called Early Education is provided for her, which enables some interventions by the teacher as means of enhancing her learning process.

Education in deaf childhood might be thought by our own selves from another standpoint, (re)inventing ourselves, listening to what is not heard, reasoning about what is not thought, experiencing what is not lived. Striving for an education based on reasoning and knowledge, in which there is potential to be a child and potential of living the deaf identity; because what we are is not only a product of what we do, but also of what we undergo and what we experience. Cartography not only follows a phenomenon, it simultaneously outlines and generates that phenomenon as well. We are all in process, all the time, and working in the production of new ways of existence.

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## **Special Education Services and the model for addressing diversity**

Andréa Tonini,  
University of Minho, CIEd  
[andreatonini@hotmail.com](mailto:andreatonini@hotmail.com)

Luis de Miranda Correia  
University of Minho, CIEd  
[lmiranda@ie.uminho.pt](mailto:lmiranda@ie.uminho.pt)

Ana Paula Loução Martins  
University of Minho, CIEd  
[apmartins@ie.uminho.pt](mailto:apmartins@ie.uminho.pt)

### **Abstract**

This presentation will focus on the results of a study made in a group of schools located in the northern region of Portugal with the aim of understanding the effects that would be observed when using the Model for Addressing Diversity (MAD) (Correia, 1997) as a tool to answer to the needs of students with dyslexia or other types of special needs. The MAD is a tier Model, sharing the principles of collaboration and cooperation that aspires to get appropriate support to students with special needs based on evidenced based research. While the talk concentrates on the experience of using the MAD, along with the need of using special education services, the attention will be paid on the preliminary results of a doctorate investigation with a qualitative case study methodological approach. Participants were the coordinator of the special education services, a support education teacher, and a psychologist. Data was collected during the school years of 2011 and 2012 with questions, semi-structured interviews, which allowed participants to share their experiences and voice their opinions about the education of students with special needs, particularly students with dyslexia, within the context of the MAD. The analysis allows us to understand and assess the participation of experts regarding the structure of support given to students with dyslexia, in the context of the MAD, as well as the challenges and benefits of its implementation regarding students, teachers and parents. The results show us that the use of the MAD promotes the creation of a supportive relationship, based on collaboration and information sharing, among all agents involved in the educational process of students, representing a model that prevents school failure of students with special needs, particularly those with dyslexia.

**Keywords:** Model for Addressing Diversity; Special Education Services; Dyslexia.

### **Introduction**

This presentation will focus on the results of a study that aims to understand the effects observed when using the Model for Addressing Diversity (MAD) (Belt, 1997) as a tool to respond to the educational needs of students with dyslexia or other special educational needs (NEE). Therefore, the analysis focuses on the experience of implementing the MAD along with the need of using special education services in a group of schools located in northern Portugal, where the model has been implemented since 2004.

The special education services considered in this investigation "refer to a set of specialized resources whose supports are designed to meet the special needs of the student based on his or her characteristics and in order to maximize his or her potential" (Correa, 2010, p 38). The fields that are part of the specialized support resources are: educational, psychological, therapeutic, social and clinical. Thus, the special education services involve not only the direct care given by the special education teacher to students with NEE, but also other specialized supports (Correia, 2008, 2012). Special education in the perspective of Correia (2010, 2012) takes another function in school systems, changing from a place that contains a service with a set of special resources to a general education service, being no longer a parallel system of regular education which provided special education primarily. Thus "special education is not, contrary to what is customary read in the Portuguese legislation and heard in the academic media and in schools, a parallel education added to the regular education" (Correia, 2012, p 23).

In this communication, in the context of special education services, educational supports that are coordinated by a special education teacher are included and, therefore, attention will be given to specialized educational services, to educational support and to psychological services. It is important not to confuse educational support with specialized educational services because it may puzzle the role of the support education teacher and the role of the special education teacher (Correia, 2008, 2010).

About specialized education services, the special education teacher is the one responsible, the one that "should provide a support that is much more indirect (consulting teachers and parents, cooperation in education ...) than direct when it comes to answering efficiently to the needs of students with NEE" (Correia, 2010, p 38). In the area of educational support, the teacher should be licensed in, for example, the Portuguese language and they should provide a direct educational support to the student, which is defined by Correia (2010, p.37) as the "set of interventions prescribed by planning that has the intention of equipping the students with SEN with a list of competences that can contribute for their future role in society , making these students independent and responsible".

As a responsibility of the psychologist, psychological services may include actions with the child, with parents, with teachers or other education professionals. This type of service usually starts during the child's evaluation and may include counseling and monitoring according to the identified problems; counseling and help to the family in order to perceive and understand the NEE and the impact they may have on the life of the child and his/her family; advice to teachers or other education professionals in order to set interventions (Correia, 2008).

The MAD has the objective of interfering when a student with potential NEE starts to experience learning problems , making sure that he or she may receive, as early as possible, the appropriate support strategies based on research and supported by the principles of "collaboration and cooperation" (Correia, 2010; 2012). The MAD, thus, provides a support system among students, teachers and other education professionals and parents. In this sense, the analysis of this research allows us to understand and evaluate the participation of experts when it comes to the support structure provided to students with dyslexia in the context of the MAD, as well as the challenges and benefits of its implementation for students, teachers and parents.

## **Method**

This qualitative study uses the methodology of Case Study. According to Borg and Gall (1983) a case study is a "detailed examination that an investigator executes on an

individual, a group or a phenomenon" (p. 488). The analysis of this presentation is focused on Special Education Services and Educational Supports and the participants are: the coordinator of that service, the support teacher and the external psychologist.

Data collection occurred during the school year of 2011 and 2012 and was qualitative, through semi-structured interviews that were audio recorded and later transcribed by the first author of this report. Confidentiality was considered since the beginning of the research (Stake, 2009). For reduction and analysis of data, we used categories that correspond to the support structure in the context of the MAD, to students with dyslexia, as well as to the challenges and benefits of the model implementation regarding students, teachers and parents. Next, we presented the preliminary results of the perceptions of experts relating to the announced categories of analysis.

### **Results and discussion**

In order to begin the presentation of results and discussion, we move to the category of analysis of the challenges and benefits of implementing the MAD regarding students, specifically students with dyslexia, teachers and parents. We have realized that most of the participants in the investigated group (Coordinator, Psychologist and Support Education Teacher) considered similar situations, which allowed us to identify the existence of cohesion in the work performed by them. According to all members of the investigated group, the attitude and practice of collaboration between those involved in the educational process of all children, not just in those with SEN, is considered a challenge, and also a benefit.

In the sense of collaboration, the Coordinator believes that the challenge in relation to parents is practicing "collaboration and not demanding". For the investigated group, an attitude of demanding became an attitude of collaboration, which allowed the achievement of this relationship level. The process took, as the Coordinator stated, "eight years of change in attitude, awareness and attitude change" (p.3). In the opinion of the Psychologist and of the Support Education Teacher, even if there is a change in attitude among parents, there are still parents who collaborate and others who do not. Therefore, the challenge remains into having a permanent collaboration of the families because, in the opinion of the Psychologist, when parents collaborate, the gains are both effective and very fast unlikely what happens when rules, which are not always followed at home, are set. The Support Education Teacher mentions that parents are part of the team. As a result "they are always part of the planning and intervention. Supposedly, they intervene at home ... So only by collaborating, only by working as a team, only by having full awareness and knowing everything, can they help the child too"(p.8). To Correia (2010), "parental involvement should be encouraged by schools and services that deal with them and support their children" (p. 35).

Regarding the benefits of implementing the MAD to parents, the Coordinator states that they can "have an actual knowledge of their children" (p. 38) because "they really like to know that their child's problem will have a name ... And this model requires knowing what it is"(p.38). Regarding parents of students with dyslexia, the Psychologist says that after a review and a confirmation of the diagnosis "we essentially have to deal with parents who realize, many times, that their child presents a learning deficit and that it is not because of the willingness of the child that he or she does not learn" (p.9). The Support Education Teacher also mentions that there are parents who suspect the child has learning disabilities and immediately seek help from the classroom teacher in an attempt of solving these problems, while other parents only begin to collaborate after there is the confirmation of a diagnosis. On this issue, Belt and Serrano (2008) consider that "the school should always involve the family in the most important decisions concerning the child, whether they are a case of SEN or not" (p. 155).

Concerning the challenges of implementing the MAD for teachers, the Coordinator considers the challenge of having ongoing collaboration among teachers, the challenge of "collaborating with each other" (p.7). In her conception, if a collaboration between everyone did not exist or if it does not continue to exist, the implementation of the MAD in the Grouping is compromised. For her, the "model requires collaboration, because collaboration is not always possible. It is very difficult"(p.38). That is, the Coordinator realizes that for the success of the implementation of the MAD there must be collaboration and it generates not only a benefit but also a constant challenge. The Support Education Teacher believes that for the teachers, "the benefits are present in the planning, the sharing of materials, the information ... in everything" (p.6) The Psychologist indicates the willingness and openness to work as a team, the factors that characterize the work at school, and that "if there is this openness to receive and to give, I am not the only one giving strategies because the school also gives me strategies to work and it gives me information that will be very useful too "(p.12). Team work is cited by authors as a necessary factor of change required in school spaces and that considers the principles of cooperation and collaboration as key, so the responsibility does not lie in the work of the classroom teacher or of the special education teacher (Nielsen, 1999 Correia, 2012).

Regarding the benefits of implementing the MAD for students, the Coordinator considers that the "practices greatly improved all students" (p.41). However, the first major benefit is "to avoid the referral of students to special education services (p.38).

Moreover, for students with dyslexia "what has really improved were referrals and diagnostics. It is to know who we are working with, what kind of students we are working with, what strategies to define, what way to follow"(p.41). The Support Education Teacher also says that it is "indispensable for someone to tell us: in fact, is it a dyslexia or is it not, and therefore to give us some clues to work with, strategies that have better results or that are more suitable"(p.6). In the opinion of the Psychologist, for cases of dyslexia, among other SEN, "we note that there is an attempt of giving the children the ideal conditions, a number of hours for support, of specific work, of implementing models for every child" (p. 2). However, the biggest challenge, according to the Support Education Teacher, is the lack of teachers specialized in this type of care, in the support and special education level, that is, "there are few special education teachers for the quantity of students with SEN. And so, there's an attempt of monetizing more than can be done (p.8). It is important to note that the Educational Support in this Grouping is under the coordination of Special Education Services, and for the Coordinator "it is also there where the MAD makes a difference."

## **Conclusions**

The MAD is anchored in a consulting model and, when necessary, in direct action, based on collaboration and providing a support system among all individuals involved in the learning process of students with SEN, such as parents, teachers and specialists (Correia, 2010, 2012). The results show us that the operationalization of the MAD, as perceived by the participants promotes, in general, the creation of a supportive relationship based on collaboration and information shared between all the members involved in the educational process of students with SEN, establishing itself as an appropriate framework model for promoting the academic success of students with dyslexia. We have considered this model to be appropriate for several reasons identified during the analysis, which include: changes in the attitudes of parents, collaborative work among teachers and specialized professionals; identification of problematic student and referral for appropriate clinical diagnosis and intervention when

needed, avoiding referrals to special education services. Therefore, the study presented here allows us to understand and evaluate the existing structure of support for students with dyslexia in the context of the MAD, as well as the challenges and benefits of its implementation regarding students, teachers and parents.

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## **Special Education Teachers Identities – the importance of connecting pedagogical competencies and resilience**

Isabel Pizarro Madureira

Escola Superior de Educação do Instituto Politécnico de Lisboa

[isabelmo@eselx.ipl.pt](mailto:isabelmo@eselx.ipl.pt)

### **Abstract**

Being a special education teacher involves change processes in terms of career, as it is only after the first stage of starting the job that it becomes possible to opt for this area of intervention. Such option implies a socialization process in the “new” profession in which, besides the experience, it is important to consider the contribution of the specialized training. In this scenario, the intention was to identify the underlying reasons of that option, to know the perception that the teachers have about changes in the concepts and in the practices deriving from the training and experience and identify the relevant dimensions of the socialization process. With a qualitative and exploratory nature, the study involved the realization of four biographical interviews with teachers of the 1st Cycle of Primary Education and the 2nd and 3rd Cycles of Secondary Education, having used the Atlas. Ti programme for the content analysis.

Results show i) several motivations of an extrinsic nature behind the option for Special Education, ii) the influence of the professional experience and, although with less relevance, of specialized training professional in the changes of pedagogic concepts and, iii) the determinant socialization factors. The analysis of the career paths enabled the identification of three types of identity: the resilient pedagogic identity, the vulnerable plural identity and the vulnerable ambiguous identity.

**Keywords:** socialization; special education teacher; change; identity

### **Introduction**

How a teacher does become special education teacher? This question was the basis for the study done, trying to understand the teachers’ change of paths who opt for special education as a career and you will find some results in this communication.

At present the intervention of a special education teacher in schools requires different and multiple skills (Brownell, et al., 2005) showing the complex nature of their role and configuring, in accordance with some authors (Gersten et al., 2001), an ambiguous and undefined professional profile. Thus, the option for special education implies change processes in terms of role played, teacher’s functions and career and in that sense, involves beliefs, personal theories and professional behaviours, depends of past experience (history of life and career), of predispositions, of capacities, of social conditions and institutional support (Day, 1999), of specialized training received (Young, 2007) constituting, therefore, a process of idiosyncratic nature.

### **Method**

The study objectives were: i) to identify the underlying reasons for the choice of special education; ii) to know the perception that the teachers have about the changes in conceptions and in the pedagogic practices deriving from professional training and experience and, iii) to identify the factors which have shown to be vital in the

professional socialization process and of the identity reconfiguration.

It is a study of qualitative, interpretative nature and of phenomenological inspiration (Denzin & Lincoln, 2006) which involved two stages: the first implied the realization, by ten teachers, of written reports on the passage from regular education teacher to special education teacher. The second stage, with a more in depth perspective, four of those teachers offered to continue participating in the study, which involved the realization of four biographical interviews and the collection of secondary documents. The programme Atlas Ti was used for the analysis of this data as it has as base assumptions the “grounded theory” (Corbin & Strauss, 2008).

## **Results and Discussion**

### The lack of initial intrinsic motivation

They are mostly reasons of pragmatic, family and circumstantial nature that justify leaving the regular education scheme and start to work in special education: to be able to get an assignment near home and the family, to be invited to integrate an educational support team and to like the so called “different” students were some of the reasons given by the four teachers, being perceptible, in general terms, a lack of initial intrinsic motivation.

However, the analysis of the professional paths allows understanding the influence of the experience, of the context, of the organisational culture and of the personal and professional characteristics, in the possibility of transforming the lack of motivation and the initial extrinsic motivation into a posterior intrinsic motivation. In fact, the data analysis suggests that the experience in special education may trigger professional reconversion processes, which indicate the teacher’s adhesion to new principles and values.

### Changes deriving from training and experience

In what concerns the perception of the changes deriving from specialised training, the analysis of the narratives show that they are mostly focused at the level of attitudes and of conceptions, with significant less importance at the level of the practices. In fact, training has provided changes in the ways of dealing with problem situations which they face every day and which allowed the reasoning process and the adoption of principles related to special education and with inclusion, being quite evident in these teachers’ narratives the influence of the informal curriculum of training.

In relation to the changes deriving from experience, it is quite clear the influence of this issue in the socialization process. The data analysis suggests that one learns to become a special education teacher mainly due to the experience developed with the students and the schools and it is that experience that enables the emergence of a set of specific professional competences, namely:

- a) A new conception about the school function and about the role of the teacher, in which education is seen as a right for everybody, which implies to respect, value and respond in an effective way to the school population’s heterogeneity;
- b) Another attitude in relation to the teaching and learning process characterized by understanding, tolerance and valorisation of the student’s paths and progress as an individual;
- c) And a set of intervention competences which implies working in a team with the most diverse intervening parties (peers, parents, health technicians, etc.), characterize and assess in order to identify the students’ requirements and implement adapted curricula and lastly, to face, overcome and solve unforeseeable and difficult situations.

The narratives analysis also shows the variability and complexity of some pedagogic situations that special education teachers face allowing us to understand the feeling they



narrate, characterized by diversity, polarity and intensity.

Significant dimensions of socialization

Bearing in mind the higher density categories in the teachers' narratives, the dimensions that showed to be significant in the professional socialization were: the organisational culture of the schools, the characteristics of the teacher's intervention, the sources of professional fulfillment, the educational policy and the feelings experienced as special education teacher.

The organisational culture of the school where the special education teacher works plays the main role in the socialization process of this group of teachers, constituting, therefore, the link among the different narratives.

In the teachers who manifest the intention of keeping to work in special education, the pedagogic knowledge acquired, evident when they report about the intervention characteristics, associated to the resilience they manifest when facing difficult situations, were essential factors of socialization, of their identification with the job, on short of the reconfiguration through non-conflictual integration of the identities (past and current).

But the vulnerability that some teachers experience due to the current legislation requirements, which is evident in the disagreement and discouragement they talk about and in the lack of resilience before the difficulties felt in the intervention done with students with more serious problems, appears associated to the intention to abandon this intervention area.

In short, the socialization in special education involved a significant change processing terms of conceptions, of attitudes and practices, that evolves in accordance with a diversified set of personal, professional and contextual influences and which allowed identity reconfigurations that in some cases, consubstantiate the accession to one "other" teaching culture. And, considering the way the professional experience in special education was lived, the type of pedagogic relation that they developed with the students with SEN (special educational needs) and the perception that they currently have about the job, it is possible to distinguish three types of identities in this group of teachers: the resilient pedagogic identity, the vulnerable plural identity and the vulnerable ambiguous identity.

## **Conclusions**

The reasons that initially justified the option for special education because they were essentially marked by personal, family and professional related interests, confirm the absence of philanthropic and humanitarian nature reasons found in the study done by Hausstätter (2007). However, contrary to what happens in several research works, the initial motivation (or its lack) was not, for these teachers, the most directly vital factor in their career path.

In fact, considering the analysed data it becomes evident that the adhesion to special education is done for the professional experience and in that sense, the organisational culture of the schools where the teachers work constitutes a factor of paramount importance in the acquisition and development of new pedagogic competences, thus contributing for the construction of a motivation that, in the beginning, did not exist. This dynamic and changeable nature of motivation regarding teaching in special education brings added responsibilities not only for specialised and lifelong training of these professionals, but also to the way how these schools organize themselves as learning and change communities for teachers.

Taking into account that the specialised training enabled the acquisition of new ways of dealing with problems, as well as the reasoning process and the adoption of principles

related to special education and with inclusion, we may conclude, that it constitutes an important contribution for the appropriation of the set of educational principles and values inherent to practice, which, according to the perspective of Young (2007), can mean a “complete socialization” in relation to the envisaged attitudes and values.

But if we put into perspective the training as an organised and intentional phenomenon, to which corresponds an ongoing and multifaceted socialization process (Lesne & Mynvielle, 1990, quoted by Canário & Correia, 1999), coincident with the career paths, it seems evident the non-execution of such purposes, due to the scarce influence of specialised training in the practices change process.

In turn, the three types of identities that it was possible to distinguish, besides highlighting the influence of the legislative changes in the socialization processes, allow understanding that pedagogic competences constitute essential elements of the shared professional knowledge, assuming, as Lingard (2009) underlines, a central role in the construction of the teachers’ identities.

### **Acknowledgements**

The career path analysis of the four teachers in its different scopes, (difficulties, sources of fulfillment, feelings experienced along the path, changes deriving from experience and training...) suggests the need and the urgency of implementing lifelong training processes that ensure the support during the performance of their duties in this area.

This need for support and lifelong training is particularly relevant due to the diversity and complexity of the situations that the special education teacher faces in his/her professional daily routine and it is not easy to set up a specialised training capable of comprising such diversity and complexity. Therefore, the great challenge is to create specialised and lifelong training devices that facilitate not only the acquisition and the development of pedagogic competences, but also the development of personal, emotional and ethical competences emerging from the work contexts. In that sense, as Brownell et al. (2005) suggest, it will be vital to implement training strategies that allow the analysis of the teachers’ individual beliefs, the integration of the knowledge acquired during training with the previous know-how, the acquisition of specific knowledge about the students and, lastly, the reflection on the impact of their intervention as special education teachers.

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## **Evidences of Therapeutic Horseback Riding in Autism Spectrum Disorder**

Jéssica Jaíne Marques Oliveira-  
UFSM  
[jessica.jaine@yahoo.com.br](mailto:jessica.jaine@yahoo.com.br)

Fernando Copetti-  
UFSM  
[copettif@gmail.com](mailto:copettif@gmail.com)

Carlo Schmidt –  
UFSM  
[carlopsico@gmail.com](mailto:carlopsico@gmail.com)

Mylena Alcantara Medeiros-  
UFSM  
[mylena@equoterapia.org](mailto:mylena@equoterapia.org)

### **Abstract**

Besides psychoeducational and psychopharmacological approaches to treating the symptoms of Autism Spectrum Disorder (ASD), there are some less traditional treatment modalities. Therapeutic Horseback Riding (THR) is a large method used around the world for several physical and psychological diseases. The goal of THR is to promote physical, emotional, cognitive and social growth of the riders. In the ASD riders, the evidences rely on the belief that being around, grooming, working with the horse, as well as riding the horse can promote these benefits. Rigorous scientific evidence of any form of treatment is necessary for verification and reliability of its benefits. This poster presents an overview of the major evidences of the THR in ASD. The purpose is to show to families, educators and public politicians that THR can be an important and reliable practice to be incorporated in the routine of the person with ASD. A systematic review was conducted in eight databases. Thirty four eligible papers were found, and nine peers reviewed selected to analysis according inclusion and exclusion criterions. The main results observed were in social communication (Ward et al. 2013), sensory processing (Ward et al. 2013; Kern et al. 2011), ASD's severity of symptoms (Ward et al. 2013), Kern et al. 2011), quality of life (Kern et al. 2011), quality of parent-child interaction (Kern et al. 2011), self-regulation behaviors (Gabriels et al. 2012), adaptive living skills (Gabriels et al. 2012), motor skills (Gabriels et al. 2012), social attitudes (Tabares et al. 2012), psychosocial function (Memishevijkj and Hodzhykj, 2010), verbal and non-verbal communication skills (Keino et al. 2009), developmental areas and degrees of behavioral abnormality (Leitão 2004), volition (Taylor et al. 2009) and social function (Bass 2009). This systematic review provides the first comprehensive overview of empirical research on ASD and THR. Reported outcomes provided evidence that for some individuals with ASD Therapeutic Horseback Riding increased motor skills, social interaction, and communication. In addition, it helped to reduce behavioral problems and severity of autistic symptoms. THR can be a good opportunity to be inserted on the routine of ASD persons. However, more rigorous

research is necessary.

**Keywords:** Autism, Horseback Riding Therapy, Hippotherapy

### **Introduction**

The term Pervasive Developmental Disorders emerged in the early 1980s, in the DSM-III (APA, 1980). In the latest update, the DSM-5 defined this nosological entity as Autism Spectrum Disorders (ASD), recognizing that people may have different levels of impairment within the spectrum. The DSM-5 adopts a dimensional perspective of the disorder which overlaps the old categorical approach, based on the notion that a single condition would better reflect the different levels of severity of symptoms. The essential characteristics of Autism Spectrum Disorder consist of a markedly abnormal or impaired development in socio-communicative areas and the presence of restricted and stereotyped repertoire of behaviors, activities and interests (APA, 2013).

Early intervention programs that focus on the development of the individual with ASD rely on different theoretical perspectives, such as the behavioral (e.g. ABA - Applied Behavior Analysis), psychoeducational (e.g. TEACCH - Treatment and Education of Autistic and Communication Handicapped Children) or developmental ones (e.g. Play Project). Studies show that these programs tend to have positive results, helping to lower the frequency and/or quality of undesirable behaviors, causing improvements in communication, as well as providing autonomy and independence to the child (Simpson, 2005).

A therapy that has been gaining ground as a treatment for people with ASD is Hippotherapy. It is characterized by the use of the horse within an interdisciplinary approach (ANDE Brasil, 2013). Although the more consolidated evidences of this practice are related to physical-motor aspects, studies on the social and behavioral variables have also substantially grown in the recent years. In particular, the studies on ASD patients receiving hippotherapy showed improvements in several areas of development such as interaction, communication, and affection, among others (Gabriels et al, 2012).

By identifying the importance of the benefits produced by hippotherapy in people with ASD, it is possible to see the need to examine in the literature the evidences already found on this topic. Thus, the aim of this study was to review the evidences of the benefits of hippotherapy for the individual with Autism Spectrum Disorder.

### **Method**

A systematic search was conducted in the HOMEINDEX databases, Portal Periódico Capes (CAPES Scientific Journals Gateway), COCHRANE, PEDro, LILACS, SCOPUS, WEB of SCIENCE PUBMED and SCIELO. The keywords used were: "developmental riding therapy", "equine-movement therapy", "therapeutic horseback riding", "riding for disabled", "therapeutic horse riding", "equoterapia", "equine-therapy", "horseback riding therapy", "riding therapy", "hippotherapy", "equitherapy", "animal-assisted therapy". All searches were associated with the word "autism"/"autismo", using the logical operators "AND" and "OR". Articles published in peer-reviewed journals in English or Portuguese, and the ones published up to December 2013 were included.

#### **Discussion and Results**

Fifty-eight articles were found and 20 of them were excluded because they were duplicates. The remaining 38 articles were analyzed and 29 were excluded because the therapy used other animals or the subjects presented other syndromes or diseases other

than ASD. Nine articles were analyzed. A summary of the studies is presented in table 1 below.

**Table 1- Study characteristics and main outcomes**

Study	Sample Size	Intervention	Assessments/Measures	Main results
<b>BASS et al. 2009</b>	N=34 EG 19 CG 15	12 Weeks 1 X Week	Sensory Profile (SP)  Social Responsiveness Scale (SRS)	Improvements in: - The overall sensory profile; - Distraction/lack of attention; Sensitivity; - Sedentary behavior Social motivation.
<b>GABRIELS et al. (2012)</b>	N=42 EG 26 CG 16	10 Weeks 1 X Week	Aberrant Behavior checklist-Community (ABC-C) Vineland Adaptive Behavior Scale- II (VABS II) Bruininks-Oseretsky  tes of motor proficiency (BOT II) Sensory Integration and Praxis test (SIPT)	Improvements in adaptative language expressive skills, motor skills, and praxis/motor verbal planning skills.
<b>KERN et. al (2011)</b>	N=48 EG 24 CG 24	06 Months 1x Week	- Parent- rated measures - Clinician-rated measures - Childhood Autism rating scale (CARS) - Timberlawn parent-child interaction scale - Sensory profile	- General reduction in scores of CARS (Rating Scale for Childhood Autism). - Reduction of negative considerations and mood improvement - Significant improvements in the subject's quality of life.
<b>LEITÃO(2004)</b>	N=5 GP 5	16 Weeks 73 Sessions	- Psychoeducational Profile revised (PEP-R) - Autism treatment Evaluation Checklist (ATEC) - Observation grid (individual)	- Improvements in behavioral, cognitive and social-emotional areas. - Progress in levels of self-sufficiency in tasks that require manual coordination.

<b>M EMISHEVI KJ and HODZHIKJ (2010)</b>	<b>GP 2</b>	10 Weeks 1x Week	Autism Treatment Evaluation Checklist (ATEC)	-T wo subjects had improvements in the areas of language, socialization, cognitive/sensory and health/behavior awareness. -T wo subjects showed no changes.
<b>TABARES et al. (2012)</b>	<b>GP 8</b>	04 Weeks 1x Week	E lectro-chemo-luminescence (ELISA)	I mprovements in
<b>TAYLOR et al. (2009)</b>	<b>GP 3</b>	16 Weeks 1x Week	Pediatric Volitional Questionnaire (PVQ)	I mprovements in
<b>WARD et al. (2013)</b>	<b>GP 21</b>	30 Weeks 1x Week	G illian Autism rating Scale 2 (GARS 2) Sensory Profile school C ompanion (SPSC)	- Decrease in the severity of symptoms associated with Autism; - Increased social interaction and sensory processing.
<b>K EINO et al. (2009)</b>	<b>GP-4</b>	<b>UN</b>	Humans- Equips- Interaction on mental activity (HEIM scale)	I ncreased eye

Among the studies found which use intervention and insertion of a hippotherapy program with individuals with autism spectrum disorder, all report that through the practice of hippotherapy with activities planned for the subjects with autism, there are gains in these subjects' behavioral and developmental areas, as well as several other aspects that are directly and indirectly modified (Gabriels et al 2012, Keino et al 2009, Memishevikj., & Hodzhikj 2010, Kern et al 2011, Tabares et al 2012, Taylor et al 2009, Ward et al 2013, Bass et al 2009, Leitão 2004.)

The studies also identify the gains of self-regulation (irritability, lethargy, stereotyped behavior and hyperactivity), adaptative language expressive ability, motor skills and praxis and motor verbal planning skills (Gabriels et al 2012), increased eye contact (Keino et al 2009), socialization, cognitive and sensory awareness (Memishevikj., & Hodzhikj , 2010), quality of life, parents /children interaction (Kern et al, 2011) and significant improvements in social attitudes (Tabares et al, 2012).

The analysis of these studies showed that hippotherapy causes a positive impact on the lives of individuals with ASD. The most cited benefits are not directly received through the movement of the horse, but rather indirectly received through the proposed activities that promote interaction between the practitioner with ASD, the horse and the environment. All this provides a greater bond and participation, aiding the achievement of psychosocial and neuromotor benefits to be acquired during the hippotherapy sessions. However, the researches related to ASD and hippotherapy are few, based on the disabilities treated by the therapy and which have a large body of research. It is

suggested that studies of larger samples should be performed so that the results can be more reliable.

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## **Friends with Autism: Building Social Skills**

Kathleen Puckett  
Arizona State University  
[kathleen.puckett@asu.edu](mailto:kathleen.puckett@asu.edu)

Sarup Mathur  
Arizona State University

Roxanne Zamora  
Arizona State University

### **Abstract**

A comprehensive intervention consisting of peer mentoring, interactive social stories and video modeling improved the classroom behaviors of two fourth grade students, one with Autism Spectrum Condition and a peer with behavioral concerns. Students supported each other by reacting to social story prompts and reviewing a video capture (via IPAD) of their behaviors in the general education classroom. Results indicate increased levels of engagement and improvements in social skills and provide insight into motivation for behavioral choices and emerging friendships.

**Keywords:** Autism, social stories, peer mentoring, video modeling, IPAD app

### **Introduction**

Accommodating students with Autism Spectrum Condition (ASC) in inclusion classrooms is a challenge that many teachers face without adequate resources or guidance. Characteristics of children with Autism exacerbate the problem. This disorder of neural development is characterized by impaired social interaction and communication and by restricted and repetitive behavior, often resulting in frequent tantrums, self-injury or interfering with the safety of others. Even though many students with autism are included in general education environments, there remains a lack of awareness on the part of teachers regarding the characteristics of this disability, and a lack of training on effective best practices when behavioral issues emerge. Moreover, traditional classroom level support may not fully address strategies catering to social growth.

This was particularly true in the context where this action research study took place. Teachers were operating with behavior plans and reward systems that inadequately addressed the behavioral and social support that students with autism needed in inclusionary classrooms. The challenge was how to better meet the needs of students with ASC so they could transfer social and development skills in their general education classroom. These conditions prompted a need for change in support.

The research literature suggests a number of interventions that support behavioral and social development in children with ASC. Social stories are short, child specific situation presented in formats that show appropriate skills and social responses to people, events, and concepts (Gray & Garand, 1993). They have been used to help

students understand the feelings and behaviors of others and to provide them with social cues to recognize and deal with situations independently and appropriately (Bledsoe, Myles & Simpson, 2003). Other studies addressed the benefits of peer mentoring to model effective behavior skills for students with disabilities (Carter, Cushing, Clark & Kennedy, 2005; Bellini & Akullian, 2007; McEvoy, Shores, Wehby, Johnson & Fox, 1990; Thiemann & Goldstein, 2004). Video modeling interventions have been shown to be effective in addressing the behavioral disconnect and social confusion experienced by children with ASC (Ganz, Earles-Vollrath & Cook, 2011). While social stories, peer mentoring and video modeling all demonstrated positive results, each was implemented as a single intervention. This study incorporated these strategies into one comprehensive approach and concentrated on the social factors affecting the emergence of peer support and friendship.

### **Method**

Three skills, (1) attention to task, (2) appropriate hand raising, and (3) initiating academic responses were targeted in a multiple baseline across single subject design. The intervention included a facilitated discussion of these targeted skills using an interactive social story (ISS) and video modeling within the context of a three-student social group that provided peer mentoring opportunities. Students in this social group were the study participants. They included two target students and one model general education peer. The target students were one student with autism and one peer identified as being “at-risk” for behavioral difficulties. The fourth grade student identified as “at risk” consistently did not earn the designated number of “make your day points.” The “model peer,” was a student who consistently earned the designated number of points per day. His role was as a supportive peer. All three participants were male and in the fourth grade. Research questions addressed the following, (1) the impact of this comprehensive approach on the three targeted skills in a general education classroom, and (2) student perceptions of the behavioral effects of the intervention.

This intervention was conducted in a school that has been implementing a school-wide citizenship and behavior program, the Make Your Day Program. This commercial program is centered on the idea that no child has the right to interfere with the safety, well-being or learning of others. Students who choose to interfere with these areas are asked to allocate a certain amount of points. The points they choose to earn throughout the day are then added up to determine whether they have reached a certain amount so that they can say they “made their day.” The student does not receive any type of reward or incentive, rather, if they do not make the designated number of points, a “make your day slip” is sent home that stated the interfering behavior and the slip was signed by a parent. For the fourth grade, students are required to attain 40 points within the course of a class period. Anything below a 37 in two consecutive sessions was cause for the student to become aware they may not “make their day,” that is, receive enough points to avoid getting a slip that must be signed by their parent. While this program was adequate and appropriate for 95% of the school population, it was not enough support for the student participant with ASD or for several students who were identified as “at risk” for behavioral concerns.

The study was conducted over 11 weeks in the special education classroom immediately before the students had the opportunity to demonstrate the behaviors in their general education class. The intervention included the following components.

Interactive social story (ISS). The ISS was a video application representing classroom challenges from the point of view of a student-actor that illustrates the situation, place, participants, options and consequences for behaviors in the situation. The ISS was

created based on previous observations of the student with ASC where the specific challenges elicited various inappropriate responses. The social story script described consequences that a certain choice in a situation may lead to for a student. The ISS was developed prior to the intervention. A production crew filmed the teacher acting out sequences depicted in a script along with a group of student-actors. A videographer then edited the film and created the application, complete with scene transitions and graphics illustrating choices and positive reinforcements for correct responses. This application was then reviewed by the researcher and developed into an iPad application for implementation with the students.

The setting depicted students and a teacher during a class session very similar to one the participants have had in the past. In the ISS, expectations were given at the beginning of the class, just like they were given in their own classrooms. The expectations in the ISS however were interactive and required an “acted out” response from the student actors to further help them and the audience to remember the specific expectations. As the lesson proceeds, the student actor is presented with an apparent problem based on the expectations given and certain opportunities for on-task choices and off-task choices that arise. These ISS applications were presented to the students via an iPad during sessions scheduled to showcase the application for illustration of a specific skill.

The three study participants had an opportunity to discuss and choose among of four options, one of which was the socially appropriate response. If the participants choose a less desired answer, the consequences were highlighted so the participants could make the connection between good choices that lead to positive reinforcements and the less-desirable choices that may not lead to positive reinforcements. One behavioral choice was specifically focused on and discussed during the designated ISS sessions until all four choices were chosen and discussion about each had occurred.

**Video Self-Modeling.** Video-self modeling was the video-taping of a classroom environment for the use of facilitating discussion on the appropriateness of the actions taking place. The target students and their model peer were video-taped in their classrooms and the videos were used to demonstrate the skills we were discussing, attention to task, appropriate raising of hands and initiating academic questions and responding, respectively. A short ten minute segment was chosen and edited to be presented to the students and it was meant to show some or all of the participants demonstrating the target behavior or pose opportunities for reflection on where the behavior could have been demonstrated and why. The participants discussed and identified the behaviors of the participants who were demonstrating the target skill with the guidance and prompting of the researcher, whether it was the students with autism, the at-risk peer or the model peer. Since the video modeling came directly after the ISS phase, students used knowledge and insight gained from the ISS lessons to help them dissect and apply knowledge on appropriate or non-appropriate choices that actually occurred in their general education classroom. Specific questioning on the part of the researcher helped them to hone in on the important aspects of their positive behaviors and the positive behaviors of others evident in the video and they spoke on the specific consequences that transpired as a result of those positive behaviors. The consequences identified in the earlier discussion of the behaviors and the consequences from the ISS behaviors were compared and contrasted with the actual occurrences and behaviors shown in the videotapes. Students discussed how what they discussed previously was relevant to their own behavior in the videos. If students did not demonstrate the target skill in the first video, they still had the opportunity to show the correct on-task behaviors in subsequent video-taping and coinciding consequences were again discussed as it related to the previous discussions.

Peer mentoring. The ISS lessons and video modeling provided opportunities for discussion within the peer group. Each participant agreed to be a member of the group and to act as discussants during group sessions. None of the participants received any other “peer mentoring” training.

### **Results and discussion**

Results indicated the two target students’ increased ability to demonstrate the three targeted classroom behaviors, an overall increase in levels of engagement, and the emergence of strong friendships within the peer mentoring group. Moreover, the student with ASC became more aware of his behavior and the behavior of others. Both students were able to articulate how it felt when they made good behavioral choices and cited a heightened sense of meaning and increased sense of pride over their improvements. These results suggest that a comprehensive approach is effective in reducing unwanted social behaviors and promoting positive social skills and gives further insight into the target students’ motivation.

### **Conclusions**

Through the use of engaging interventions that also foster friendships, special education teachers and general education teachers can tailor efforts to meet the social needs of their students and effect desired behaviors in an inclusion classroom. Because this intervention used resources that are generally available in most schools, practitioners could consider elements from this study to develop similar strategies. This study has relevance to educators and families interested in addressing classroom behaviors for students with autism. The study took place in a low-income school with a multi-cultural population. Teachers, administration and families worked together to gain insight into student perceptions of their behavior, deepen student self-awareness and create a culture of achievement through encouragement of friendship and support.

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## **Stories of life, school and inclusion: with the word, the students**

Katiuscia C. Vargas Antunes  
Universidade Federal de Juiz de Fora – UFJF/Brazil  
[Katiuscia.vargas@hotmail.com](mailto:Katiuscia.vargas@hotmail.com)

### **Abstract**

The objective of this study is to demonstrate the importance of the Life Story methodology utilization in the research on the field of Special Education, showing how such methodological approach can help people with disabilities, historically silenced and marginalized, to conquer their space of speech and reaffirm their condition of protagonists of their own stories. In order to do that we will present the final results of a research, entitled “Life Story of students with intellectual disabilities: school career and constitution of the subject”, that focused in comprehending the process of inclusion and schooling of five young students with intellectual disabilities inserted in regular schools. Through their life stories it was possible to understand the school careers of each one of them, focusing the following categories: 1) School Career; 2) relation with the teachers and disciplines; 3) relation with the classmates; 4) perspectives of future and transition to adulthood. The results of the study demonstrated the complexity and contradictions of the process of inclusion of students with intellectual disabilities in regular schools. The research showed that the use of life story as a methodology of study in the field of Special Education is a coherent theoretical option with the principals of Inclusion, ensuring a space of speech and self- management for the people with intellectual disabilities, explaining their ways of living in the world.

**Keywords:** Life Story; intellectual disabilities; Special Education; Inclusive Education.

### **Introduction**

This research tried to understand the process of school inclusion of students with intellectual deficiencies through their life stories and their perception about the school, considering the relationship among the deficiency, school and knowledge construction. It was a qualitative research guided by the method of Life Story. In the educational area the related researches that have as a focus the disabled student himself are few. Directors, teachers and the family are the ones who discuss his inclusion. From our empiric experience and based on a scholar inclusion of disabled students research in different public teaching nets (GLAT & PLETSCHE, 2011; GLAT, PLETSCHE & FONTES, 2009; FONTES, 2007; ANTUNES, 2007), we began to ask ourselves: the students themselves wouldn't have something to say about their inclusion process and schooling? Their life stories wouldn't highlight with a bigger clarity the ills that are hidden behind the professionals that assist them “politically correct” speeches? These questions boosted us to investigate the life stories of students with intellectual deficiency included in regular schools.

### **Method**

The research was oriented by the Life Story methodology. This methodology structures an investigation model implicated in the spontaneous listening of the individual, in his

narrations respect and in the free dialog flow, but keeping a rigorous procedure of data collecting and treatment. The beauty of this approach is that it “removes the researcher from his pedestal of knowledge owner” (GLAT, 2009, p. 30), as his aim is to learn the meanings that each individual or group assign to his life’s events (AUGRAS, 2009; GLAT, 2009; GLAT, SANTOS, PLETSCHE, NOGUEIRA & DUQUE, 2004; GLAT & PLETSCHE, 2009).

Took part in the study 05 students with intellectual deficiency that were enrolled in the Elementary School second segment and in the High School.

These youngsters’ reports made possible to rescue their trajectory and relationship with the school space. The data analysis made emerge theme categories that help understand the inclusion and schooling process of intellectual disabled students in a regular school, in particular, as this situation comes unfolding in the final levels of Elementary School and in the High School. They are: 1) school trajectory, 2) relationship with the teachers and subjects; 3) relationship with colleagues; 4) future perspectives and transition to adult life. 3) Life Stories, School stories, inclusion stories...

### 3.1. School trajectory

(...) Then she asked IF mother needed help then mother Said that she was because I had difficulty, I wasn’t learning to read, to write then she took me to a Niterói Pestalozzi. (...) I stayed there a long time, then there I learned to write when I was 11, I did a test, stayed in a room that was like a kindergarten, after this I went to the first level, second, I stayed there for 4 years. Then when I went to the second level, it was almost ending the year, they said that it wasn’t going to have anymore, because like this, it would continue until the fourth level, then they said it wasn’t going to have anymore because they weren’t being able to do. (Luci)

I was going to give up (...) but I couldn’t stop while I didn’t reach the age of majority, I wasn’t 18 (...) I thought I wouldn’t get here. People Said that I wouldn’t [a big stop in the speech] (...) Many people told me to stop studying in the fourth level. My father said, but I didn’ want; I wanted to reach the end. (Beto).

In both speeches we see a school trajectory marked by difficult moments, in particular, by the aspect of the expectations created in relation to the process of schooling of the disabled students. Beto’s speech as well as the other colleagues’, illustrates unequivocally the low expectations in relation to his learning process, intellectual deficiency stigma’s marks (GLAT, 2009).

Luci, in turn, has had enrollment in school late, anyway in a specialized institution where she learned to read when she was 11. It calls attention that she began in a class “that was like a Kindergarten”, there were children smaller than her and they developed playful activities. This kind of scenery is common in some special schools that agglutinate the students in terms of “development level” without taking into consideration their chronologic age. This kind of curricular organization, that reflects the infantilization of the individual with intellectual deficiency (PADILHA, 2007 e 2004; BUENO, MENDES & SANTOS, 2008; OLIVEIRA, 2007; KASSAR, 1995 e 2000) has serious prejudice to her development, to the extent that, frequently years passes repeating the same contents, or the same levels, without investing in pedagogic procedures that permit them reach more complex learning levels, what ends discouraging the students, taking them to an accommodation (the student’s and the family’s, that also doesn’t have big expectations) and even school abandon.

The repetition marked the school history of 04 participants from the research, as it can be observed in the distortion of age-level presented by them. In fact, the school failure is common in people with intellectual disabilities’ school trajectory, being sometimes one of the diagnosis signals (GLAT, 2009). It is worth mentioning that this situation contradicts the assumptions of Inclusive Education that advocates that all students, even the ones who present conditions that directly affects the relationship teaching – learning

must be included in the regular teaching system, with the least possible of distortion age – level. This proposal involves in the recognition of diversity as an educational principle and the adoption of measures in the framework of the management and of the classroom that look for alternatives that make possible the learning of students with disabilities (GLAT & PLETSCH, 2011; PLETSCH, 2010; FONTES, 2009; ANTUNES, 2007). When the school system doesn't try to overcome the failure condition that many students with disabilities find themselves through the different pedagogical practices to meet their needs, the result is the proliferation of repetition stories, of non-adaptation, even in students that don't have an actual disability. This situation is so striking that, although they continue attending school, the students live daily with the feeling that they can fail at any moment.

### 3.2. The relationship with teachers and the subjects.

- I sometimes spent the break time in the classroom, because I couldn't finish. (...) Now in the end I heard even scolding from the teachers because by spending the break time in the classroom.

(...) Now in the end, in the third and fourth semester were scolding to go to the break time.

– And during the classes?

– It was good, only that sometimes the teacher made me do the task alone, without help (...) when the teacher didn't want to help me do, finish what was to do. Then I was sad. (...) It was because there were 38 students in the classroom and he had to give attention to everybody. (Beto)

Beto brings us to a reflection about the transition that the students suffer when they go from the first to the second segment of the Elementary School. It is a significant change in the organization of the scholar space time. In the first segment of the elementary School, the student has contact with only one teacher and develops with him a nearer relationship. The teacher and the students know each other better and, throughout the school year, the former can look for strategies that improve students that present difficulties' learning, as the ones who have intellectual disability. Except for a few exceptions, this teaching segment's organization provides greater flexibility of the curriculum and the space time of the learning. In the Elementary School's second segment and in the High School, in a range of 50 and 50 minutes the students are faced with a new teacher in the classroom, teaching different subjects and with various work methodologies.

This is a reality that the majority of students take some time to adapt. In case of students with intellectual disability that need more attention and, sometimes, individualized, the situation is even more complex. These ones, frequently, are lost and marginalized within an overcrowded classroom and not always organized.

It urges that the school system and the role of the school in the formation and in the lives of students with intellectual disabilities will be reviewed. If these students are advancing to the final series of Basic Education, modifications are necessary both in the educational system structure and in the organization of the teacher's pedagogical work.

A very important aspect to be highlighted concerns the relationship with the teacher. The participants tell their difficulties in understanding the subjects and fix the contents. The student doesn't learn through the simple transmission of knowledge. In the logic of freiriana's pedagogy education is done with the student and not to the student. Despite speeches in favor of a dialogical education and contextualized education with the students' reality, the school's pedagogic education and the teaching practice still perpetuate the traditional teaching and the simple transmission of content. Some researchers have turned to the study of pedagogical practices that are developed in the context of the common class with students with disabilities. The collaborative teaching, pedagogical and mediation work peer tutoring are some alternatives for the difficulties of students with disabilities in relation to the contents and to the methodologies employed by the teachers in their practice are overcome.

### 3.4. The relationship with colleagues

– (...) Why don't they like to do group work with me. (...) they, they also don't walk with me (...) The only person that likes to do with me is o N., sometimes he does (...) They say that I don't know to do anything, that I am a donkey. (...) I it is ... I get sad (...) When I am in the line of snack they go away from me, and go to the end of the line. (Davi)

It is possible to realize that interpersonal relationships at school bring to the reflection the category of prejudice and the inferiority of persons with disabilities. To be in school doesn't mean necessarily attend the school fully. The conception of inclusion in which we believe goes through the three basic assumptions: the mental deficiency student presence in regular school, his participation in the curricular activities and the effective knowledge construction on the part of those individuals (GLAT & BLANCO, 2007). By testimonies collected, we see that these last two aspects constitute, maybe, one of the biggest challenges in school and all educators who deal with students with intellectual disabilities.

### 3.5. Prospects for the future and the transition to adulthood

An important category of analysis that this research has raised concerns the expectations of future and the transition of students with intellectual disabilities from school to the adulthood. This is a subject still little discussed in the field of research in Special Education and that deserves be more exploited by the people that dedicate to understand the intellectual disability and its different developments. It inserts in this category sub-themes as the relationship of the study opportunities of insertion in the world of work and expectations of entry to Higher Education. The perspectives of future presented by the youths with intellectual disabilities show a contradiction between what they want and what people believe they can do. It is common to listen from teachers affirmations like: "that guy reached his limit" or "this kid won't be able to complete his studies". These sentences materialize what Padilha (2007), called "failure culture", very common when discussing the learning possibilities for people with disabilities.

About the possibilities of entering higher education, Beto's account is quite significant:

– When I was 23 I finished everything. Only the third grade that I won't do. For me it is good enough. The third grade is only for those who can afford it. For me it is good enough.

- And now will finish the third year of high school. What you're feeling to finish?

- I'm very happy. Thank God I finished, and the is another year to do the technical course.(...)(Beto)

Discuss the school inclusion of young people with intellectual disabilities doesn't mean thinking only the basic education. As the students advance in their schooling, more they create expectations for giving continuation to their studies. It is relevant to discuss how the inclusion of people with disabilities in higher education has taken place.

With the expansion of Higher Education in Brazil, the flexibility of selection processes and affirmative policies (quotas and reservation of vacancies in universities), both in private as in public universities, the clientele is increasingly diversified. These initiatives have meaning, in some cases, the entry of students without such actions will certainly not come to universities. The concern of public policy of democratizing Higher Education shows that this segment of education stopped being directed to elite and became an aspiration for young people from the most popular layers.

It is important to note that the path of Higher Education is not the only possibility of professionalization of persons with disabilities. We can't be frivolous and say that all the students with intellectual disabilities, for example, will have access to the university. Many of these individuals, by their cognitive conditions, won't attend higher Education, but that doesn't mean they will not be able to professionalize. To this end, we believe that the path of vocational technical teaching can be a possible path for the professionalization of students with intellectual disabilities.



## **Conclusions**

For a long time people with disabilities could not share the same school space with the ones considered normal. From the 90's, with the dissemination of the inclusive education principles, we began to observe an opening of school to accommodate the students with disabilities. We recognize that the story of inclusion is an early, and explains the difficulties of the education system in dealing with these students even today.

Inclusive policies, although quite advanced in terms of their theoretical conceptions, in reality they do not translate in overcoming practices in mixtures of teaching and organization of school space time. The array of pedagogical school has been shown to be insufficient to students who do not have disabilities. Imagine, then, to promote the inclusion of people with disabilities in the same array that demonstrates their inefficiency by its high rates of repetition, of dropouts and of school failure? Correction policies of this evil, as acceleration programs, for example, don't turn to the revision of the organization of the educational system; by contrast, aim to replace the student in the same educational model, without questioning the need of school real change. Students who participated in the research are at a level of schooling in which part of the teachers went through undergraduate courses without even discussing the theme of inclusion. The teachers do not have adequate training or participate in a continuing education policy to give them subsidies for working with those guys. So, it is a mistake on our part to believe that the fact of having students with disabilities in school means the effectiveness of the inclusion proposal.

The individuals' reports tell a lot about their lives, the school and their relation with knowledge formally taught in the prescribed curricula. It is more, they suggest ways for performance of school and teachers that would make possible a better cognitive, cultural and social development of students. We know that this is a challenge to the schools, but, on the other hand, we can't continue neglecting the fact that pedagogical practices in relation to people with intellectual disabilities are not reconsidered and re-signified, we will continue promoting denial of these students as individuals of education and protagonists of their own stories.

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## **ICT in the development of math reasoning of students with autism**

Maria Isabel Santos  
University of Aveiro  
[aisabelgomes@ua.pt](mailto:aisabelgomes@ua.pt)

Ana Breda  
University of Aveiro  
[bambreda@ua.pt](mailto:bambreda@ua.pt)

Ana Margarida Almeida  
University of Aveiro  
[cmarga@ua.pt](mailto:cmarga@ua.pt)

### **Abstract**

For students with Autism Spectrum Disorders (ASD), the development of mathematic reasoning is crucial, considering the importance of those skills on successful independent living. This study aims at the creation and validation of a model of a digital environment specifically targeted to promote the development of mathematic reasoning for students with ASD. In this paper, we describe the methodological approach and preliminary results that we have already obtained and we propose a preliminary approach to the conceptual model specification.

**Keywords:** Autism Spectrum Disorders (ASD), Information Communication and Technologies (ICT); Mathematic Reasoning; Inclusion; Access.

### **Introduction**

The ASD is defined as a behavioral syndrome (Ruiz Calzada, Pistrang, & Mandy, 2012) and, according to the fifth edition of Diagnostic and Statistical Manual of Mental Disorders, is characterized by a deficit in two main areas: social communication and fixed or repetitive behaviors, being communications and social deficits frequently overlapped.

Several studies (Bougie, 2001; Chen, 2012; da Silva, Gonçalves, Guerreiro, & Silva, 2012; Rose & Waite, 2012; Smith, Spooner, & Wood, 2013; Wainer & Ingersoll, 2011) have shown that the use of technologies brings benefits to the education and development of functional skills in students with ASD, enabling them to develop abilities in a highly standardized, predictable and controlled environment, working at their own pace and skill level and promoting creative and constructive environments for the development of differentiated and meaningful activities (Burton, Anderson, Prater, & Dyches, 2013).

Ponte et al (2007) mention that mathematic reasoning (inductive and deductive) involves operations and step justifications in solving tasks that gradually progresses to formalization, conjectures, test and statements. For students with ASD, the development of mathematic reasoning becomes crucial, considering the importance of these skills for successful independent living (O'Malley, Lewis, & Donehower, 2013). These evidences reveal the strong innovative contribution that this project may give in this area. In this

context, the research project aims at the creation and validation of a model that allows the specification and prototyping of a digital environment with dynamic adaptation features that can offer customized activities that promote the development of mathematic reasoning.

The main objective of this paper is to present the methodological options adopted and the results obtained in the first phase of the research work, where a detailed study of the characteristics and needs of the target population was carried out giving clues to the specification of the conceptual model.

### **Method**

Considering the heterogeneity of ASD, the prototyping of the environment will focus on the study of strategies of dynamic adaptation and on the development of activities adjusted to the user's profile. Besides the theoretical study underlying this research project, and in order to better understand the specificities and needs of individuals with ASD, we have conducted interviews with health professionals, special education teachers who support students with this disorder and, also, with a youth with ASD.

We have developed a two-step preliminary study: the first step included a survey of cases of children with ASD attending a reference school for students with ASD in the Aveiro district (Portugal) and the second one included a set of exploratory sessions with children with ASD. In these exploratory sessions the activities were designed in accordance with the Individual Educational Programs (IEP) of each student. Within these proposals several methodological tools were created: the scripts of the exploratory interviews; the questionnaires to assess math and ICT skills of children with ASD; and the observation grids of the exploratory sessions. After the data collection, we used WebQDA software (Web Qualitative Data Analysis) to store, search, and codify the collected data, which was analyzed having in mind the following goals: to characterize the target audience, to diagnostic their math and ICT skills and to assess the participants deductive reasoning skills.

### **Results and Discussion**

In order to characterize the target audience, we have conducted structured interviews with health technicians (2 psychologists, 1 speech therapist, 1 biomedical), 2 special education teachers and specialists in the ASD and 1 young with ASD.

Respondents reported that the most obvious characteristics of children/youth with ASD are related to difficulties in social interaction (n=5), communication (n=3), understanding (n=3) and attention/concentration (n=2); predisposition to social isolation was also reported. In relation to math difficulties of these population, respondents claim that these children have gaps relative to abstract thinking (n=3), notions of time and space (n=1), calculations (n=1) and deductive reasoning (n=1).

Regarding the use of ICT in the development of math skills in students with ASD, most respondents mentioned that ICT is an added value for the learning process, acting as a factor of motivation (n=4) and interest in learning (n=2), promoting autonomy and facilitating communication. It is worth mention that one teacher stated that she only uses ICT as a positive reinforcement, considering that ICT may increase the social deficit of these children.

Looking at the characteristics the prototype must have, suggestions were made regarding the visual organization of the interface: it should be well organized and structured with little visual information, containing good instructions and appealing icons. Interviewees also mentioned that the user profile should be of easy customization and that the prototype should be dynamic, allowing the record of users' performance.

The young with ASD suggested the incorporation of an area for free testing and tasks/activities exploitation, where all mistakes could be made without any consequence.

The survey on children with ASD cases that attend 1st and 2nd cycles of basic education, was conducted in October 2013, through contact with an ASD reference school, aiming at the characterization of the seven children diagnosed with ASD, all male, aged between 8 and 12 years.

We found that the target audience of our study reveals difficulties in social relationships (n=4), in communication (n=4), in directing attention, presenting short periods of concentration during the performance of activities (n = 6). In the area of math, we found that participants have difficulties in solving problems, performing tasks involving abstraction and in spatial perception. Globally, we have verified a lack of references to the development of math reasoning, which leads us to conclude that these skills are not being properly explored with these students.

Besides this IEP content analysis, and in order to make a diagnosis of math skills, a questionnaire addressed to the math teachers of these students was applied. The results show that the level of the strategies used to promote skills of "problem solving" and "math reasoning" stresses the importance of: developing tasks that explore daily routine situations; explore problem solving activities involving a single step or, in more complex problems, separate tasks and allowing students to justify. Regarding the performance of the students in mathematics, the analysis of the data collected is described in Graph 1. This analysis shows that the geometry and measurement domain that the performance levels are lower.

Concerning participant's digital skills, an online digital questionnaire was applied to special education teachers of these students. Data show that the participants use desktop computers (n=4) and laptops (n=5), as well as mobile phones, but the frequency of its use is variable. The context of use of these technologies is only at home, which reflects that the educational context does not promote the use of technology in the learning processes of these students. Regarding the purpose of use of these technologies, data show that children use them: to play (n=5), for the acquisition of academic skills (Math or/and Portuguese) (n=6) and A1 also uses technologies for learning functional and social skills.

In order to conduct a first contact experience with children with ASD, exploratory sessions were held with proposed activities using GeoGebra (a Dynamic Mathematics Software). The sessions took place in February 2014 with an average duration of 60 minutes. These exploratory sessions were held through observation, streamlined by teacher of special education for each student. Data was recorded using an observation grid that allowed the registration of behaviors and attitudes observed in the different tasks and the performance of each student. For each task the respective worked skills were identified (Table 2).

#### Activity 1 **Worked skills**

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\*\*\* 1.1 Memorization (designations of planar geometric figures); (2D) visualization.

\*\*\* 1.2 Understanding the concept of area; mathematical reasoning (inductive and deductive); mathematics communication.

\*\*\* 1.3 Spatial perception (2D-3D-2D); deductive reasoning and mathematics communication.

\*\* 1.4 (2D) visualization; understanding the international system of units; problem solving (correct data interpretation and consistency with the assumed data); mathematics communication, mental calculation.

\*\* 1.5 Spatial perception (2D-3D-2D); deductive reasoning; mathematics communication. Activity 2 \* **Worked skills**

a) Visual discrimination; hand-eye coordination; understanding the concept of straight line;

- b) Visual discrimination; hand-eye coordination.
- c) Visual discrimination, hand-eye coordination; understanding the concept of reflection; mathematics communication.
- d) Visual thinking; inductive and / or deductive reasoning.
- e) Memorization (of the procedure); (2D) visualization; deductive reasoning; understanding the reflection properties (the reflection axis became the a symmetry axis); mathematics communication.

Activity 2 \*\***Worked skills**

- a) Visual discrimination; hand-eye coordination.
  - b) Visual discrimination; (2D) visualization; hand-eye coordination; understanding the concept of translation; mathematics communication.
  - c) Inductive and / or deductive reasoning; understanding the concept of replication and the translation properties; mathematics communication.
  - d) Memorization (of the procedure); visual discrimination; hand-eye coordination; (2D) visualization.
  - e) Deductive reasoning; understanding translation properties; mathematics communication.
  - f) Memorization (of the procedure); visual discrimination; (2D) visualization; deductive reasoning; mathematics communication.
- 2.1 Oculo-manual coordination; (2D) visualization instead of (3D) visualization; understanding the reflection when its axis is not necessarily "vertical" or "horizontal".
- 2.2 Understanding translation properties; inductive and / or deductive reasoning; mathematics communication.

**Table 2:** Description of the worked skills

The analysis of the collected data in the exploratory sessions allowed us to analyze the participant's transversal skills at the level of mathematic reasoning, problem solving, concept understanding, memorization, visualization (2D) and spatial perception (2D-3D-2D).

Considering the skills involved in task 1.1 (2D visualization), only 2 students (A3 and A4) show to master them, identifying all geometric figures presented; the remaining students have only identified a part of them. In Task 1.2, students A1 and A7 show evidences that they did not understand the concept of area and 3 students (A1, A4 and A7) were unable to perform inductive reasoning. Students A1, A5 and A6 have exposed a poorly structured deductive reasoning, while A2, A3, A4 and A7 have not used it by any means. Concerning task 1.3, only 3 students (A2, A5 and A6) made up the entire spatial perception of the folding action and only A6 was able to perform a structured deductive reasoning.

Tasks 1.4 and 1.5 were proposed only to 2 students attending the 2nd Cycle. With reference to task 1.4, student A5 revealed to have a general 2D visualization of the presented image as he made the correct interpretation of the data, although presenting an inaccuracy in the resolution. Student A6 also revealed to have a good visualization, but made an incorrect interpretation of the data. Both students showed to have a good ability of mental calculation. Concerning task 1.5, student A6 failed to solve it, revealing a partial spatial perception and an unstructured deductive reasoning; in turn, student A5 managed to solve the task, holding a good spatial perception, but revealing a poorly structured deductive reasoning.

With regard to activities 2\* and 2\*\* we will only highlight the tasks involving mathematics reasoning. The activity 2\* d), was not solved by any student. Visual thinking skills were only partially observed on students A1, A2 and A3, being absent in students A4 and A7. The majority of the students was able to induce a response, but unable to justify it. In task e) no student was able to give a correct answer.

In activity 2\*\*, task c), none of the students was able to solve it. On task e) A5 and A6

students failed to solve the task.. Relative to the task f), both participants made visual discrimination evidencing a poorly structured deductive reasoning. Finally, in task 2.2, student A5 started by giving a wrong answer but, after seeing, on the screen, the translation movement, he induced that the number of copies was increasing by a factor of 2, using an unstructured mathematics discourse. The student A6 gave immediately the right answer, using mental calculation and expressing words which seem to disclose the reasoning that he was making.

In summary, and triangulating all collected data, it is possible to verify that, for these children, the math difficulties reported both in IEP and in the questionnaires (difficulties in deductive reasoning, problem solving, performing tasks involving greater capacity for abstraction and spatial perception) are the same as those observed in our exploratory sessions.

### **Conclusions**

This two-step preliminary study, which embodies the first phase of our research work, allowed us to conclude that participants showed little or no structured mathematical reasoning as well as low level of spatial perception (2D-3D-2D). We also found that solving problems skills, involving high abstraction and justification processes (deductive reasoning) need to be worked out with these students, especially in the domain of Geometry and Measurement. These results reinforce our purpose of developing a digital environment for students with ASD, specifically targeted to promote the development of these skills, allowed us to identify the main features of the prototype and to draw a first Model of the main Use Cases (shown in Scheme 1). The main features that we intent to prototype can be organized according to the users' profiles: educators and students.

Educators' main features are: customization of students' profile; domain, sub domain and descriptors selection and configuration (related to the area of mathematics, in order to generate activities adapted to each student); creation of new activities; and assignment of activities to specific students according to their skills and previous performance. Students' main features are: visualization of activities, launched by the educator; and domain or sub domain selection.

Generically, the prototype should be able to adjust activities' difficulty level, according to the user's performance, creating a dynamic personalization of the user's profile; whenever necessary, it should also allow the partition of activities into tasks/subtasks. Automatic feedback of the performing activities should also be given to the use.

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## **The labour integration of citizens with intellectual disabilities**

Paula C. Vicente  
School of Montemor-o-Velho  
[paulacrvice@gmail.com](mailto:paulacrvice@gmail.com)

Paula C. Neves  
Polytechnic Institute of Coimbra - Higher School of Education

### **Abstract**

According to the first article of the Universal Declaration of Human Rights, people with disabilities ensure the same rights of other citizens. This study sought out to identify factors that, from the perspective of entrepreneurs, positively influence the assessment of workers with disabilities and contribute to their integration into the labor market. Results indicate that entrepreneurs have a generally positive image of these employees and that low productivity is not a fact, in itself, influential in their hiring. Moreover, we found that interpersonal, communication and social skills are the ones most valued by employers. Our findings point to the significance of these skills development, making it essential that all actors along the educational/training path of young people with Intellectual Disabilities take this into account.

**Keywords:** Intellectual Disabilities; Transition to Adulthood; Social Inclusion; Labor Inclusion; Entrepreneurs.

### **Introduction**

The presence of young people with Intellectual Disabilities (ID) in the contemporary school is a challenge for all, parents, teachers and responsible for the education in general and in terms of academic qualifications required by the society, either as quiet as you want to pass through the complex process transition to adulthood.

At a time when the unemployment crisis deepens, identify factors that, from the perspective of entrepreneurs, are enhancers of a better labor integration is an added value for professionals with responsibility for training young people with ID.

The education / training do not guarantee, alone, immediate placement in the labor market. At school, prime location of training, as a promoter of knowledge and skills development, have been attributed, recursively, responsibilities, failure to adapt to the desired and necessary quickly to the changing demands of today's world. It is expected, therefore, that the results of this study contribute to helping professionals, responsible for education / training, preparing young people with ID for adult life, working the factors that are valued by employers.

### **Method**

In order to identify the factors that, from the perspective of entrepreneurs, contributes to the employability of individuals with ID and checks how they evaluate the performance of their employees with ID. To collect data, we used a questionnaire of satisfaction of entrepreneurs (Neves, 1995) and a record of characterization business / employment relationship.

The data collected were organized and worked using descriptive statistics.

The sample consists of 30 entrepreneurs of micro, small and medium-sized companies

that develop their activities mainly in the tertiary sector (social support and services) in 4 councils of Coimbra district and another in the district of Leiria. The sample was selected based on two criteria: geographical proximity (investigators, companies, workers and institutions) and the existence of workers with proven intellectual disabilities.

### Results and discussion

The workers evaluated had a mean age of 27.59 years (SD = 6.54), with the youngest 19 years old and the oldest 45 years.

Most female workers performs tasks related to social support as a home assistant, taking care of hygiene, meal and direct care for the elderly, or as a kitchen/ cafeteria assistant, cleaning and maintenance. The male workers conduct their activities mainly in the industrial sector as laborers and helpers in particular carpentry workshops.

Regarding the working time of each employee, this varies between a minimum of 1 year and maximum of 16 years, the average working time of 6.00 years (SD = 4.32). The male workers work for an average of 6.31 years (SD = 4.57) and females there are 5.76 years (SD = 4.25).

The responses of entrepreneurs to the satisfaction questionnaire are generally positive. All issues addressed in the questionnaire are evaluated positively reflecting a broad satisfaction of employers in respect of their workers with intellectual disability (Table 1).

**Table 1 - Mean (M) and standard deviation (SD) of the responses to the satisfaction questionnaire entrepreneurs.**

Question	M	SD
1. Existence of more workers like this in the company.	3.601	.25
2. Recommendation to others to hire a worker with ID.	4.030	.89
3. Confidence in the worker relating to productivity.	3.900	.88
4. Confidence in the worker relating to assiduity.	4.470	.73
5. Confidence in the worker relating to responsibility in execution of tasks.	4.030	.81
6. Guidance of the worker to another section or company.	3.471	.04
7. Relationship between workers and bosses.	4.430	.73
8. Relationship of the employee with colleagues.	4.400	.77
9. Overall assessment of the worker.	4.200	.66

The aspects evaluated more positively are attendance and punctuality of workers and their attitudes in the employment context, namely the enforcement of rules of work and interpersonal relationships. The productivity factor is evaluated less positively by entrepreneurs. However, low productivity, by itself, does not seem to have a decisive weight in the overall satisfaction of the employer in relation to their work. In other words, for employers seems more important a positive attitude at work (attendance, punctuality, good interpersonal skills) than high levels of productivity. These data are in line with Vidazinha (2011) when he refers to be more important than the positive attitude and high productivity, but not accompanied by this attitude.

There was no difference in satisfaction levels of entrepreneurs by gender of their workers of their duties, or length of service.

Of the 30 workers referenced, 25 attended vocational training courses. The high percentage of workers who attended these courses emphasizes its importance in promoting their employability, or in obtaining and keeping a job. However, the fact that some workers currently are performing different functions successfully learned in training courses contradicts the supposed limited flexibility of these young people while highlighting the importance of learning skills in interpersonal relationships that seem essential for labor integration successful.

The contractual relationship between the employer and the respective worker, we found that the majority (17) is within the supported employment and the remaining 13 were normal job. This finding also highlights the importance of this measure of support for the entrepreneur and therefore for the worker. Under this measure, entrepreneurs are benefiting from financial support for sharing the costs with the compensation and contributions to social security.

When asked to point out positive and negative aspects of their workers, the entrepreneurs essentially identified these positive aspects related attitudes at work as motivation, organization, punctuality, relationship, responsibility, efficiency, loyalty and interest.

The only negative aspects reported by some of the respondents were low productivity, stubbornness, speech difficulties, difficulty of execution, poor presentation, relationship difficulties, little autonomy and tolerance.

The results also show that a worker is not considered bad to have low productivity, since the entrepreneurs value other aspects. Entrepreneurs recognize the positive impact of vocational training provided by the institutions, but consider that the model used needs an update, given the inadequacy of training generalization.

The professional skills and aspects of relational nature seem to contribute to the entrepreneur faced with difficulties because the worker must do to acquire communication and relational skills in the working environment and in their workplace. These skills must be developed throughout the school and / or training path. The European Commission report of July 10, 2012 has also called attention to the need to revise the contents learned in the training to improve employment prospects across Member States.

The adaptability and autonomy are aspects in which workers demonstrate obvious difficulties, in the perspective of entrepreneurs. This means that the worker's ability to perform properly the different work tasks within the company, currently an essential factor in maintaining the job, is compromised and must not be ignored.

Professional skills and social skills training are totally interdependent and should be the target of successful programmatic approach to start the regular education system. Also Tavares (2012) had already suggested a programmatic approach based on the experience of the activities of daily living, personal, social and professional skills.

## **Conclusions**

The results suggest that entrepreneurs have an overall positive image of their employees with ID. Unable to establish a relationship between the outcome of the evaluation of worker and sex, age or working time. The positive overall assessment by entrepreneurs seems to be more related to aspects such as the interpersonal relationship of the worker (with peers and superiors), punctuality, ability to accept rules established by the company, meeting schedules, attendance and acceptance of safety standards . In other words, the factors that most contribute to the positive assessment of the entrepreneurs

are not the productivity and quality of work, but those that refer to a positive attitude of the employee in relation to work and the workplace.

The professional success of employees trained in the area they are working does not exceed the success of those who attended courses in different areas or simply not attend. Unable to establish a relationship between the sector and industry in which the company is located and the degree of satisfaction of entrepreneurs. However, there seems to be a preference of entrepreneurs of the tertiary sector to include intellectually disabled workers.

This study did not find a relationship between company size and the satisfaction of the entrepreneur. Most entrepreneurs (27) signed with its workers permanent contracts, demonstrating that the specific labor legislation provides the conclusion of these contracts. We conclude that the State may be having a leading role in this area, through the encouragement given to contractors who enter into a contract of indefinite duration. It is not enough to show that the worker is able to learn a work task, it must be independent in the performance of it, adapting to their workplace environment, ever changing. Thereby, the training of adaptability to the workplace while they learn different ways of job keeping shall be included in a general training of, always essential and desirable, autonomy in the work place.

Seems to be necessary a innovation in the curriculum proposal that should include training in the work place, since this provides a strong springboard for professional integration, but without forgetting the need for coordination between regular school, vocational training and local business.

The preparation process for obtaining employment must take into account the aspects valued by entrepreneurs, that is the positive attitude towards work (punctuality, attendance, engagement in tasks), interpersonal relations and training, since only working these are able to promote labor insertion of intellectual disabled.

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## **Translation and cultural adaptation of Student Listening Inventory For Education – Revised questionnaire to European Portuguese**

Sílvia G. Quadros

Department of Speech and Language Therapy of Universidade de Aveiro.  
[silvia.quadros@ua.pt](mailto:silvia.quadros@ua.pt)

Susana Capitão

Department of Speech and Language Therapy of Universidade de Aveiro.

Jorge H. Martins

Centro Hospitalar e Universitário de Coimbra

Marisa C. Alves

Centro Hospitalar e Universitário de Coimbra

### **Abstract**

In the area of hearing impairment there are few assessment tools available in European Portuguese, especially for the evaluation of the auditory environment in the classroom of children with hearing loss. The present study main purpose was the translation and cultural adaptation of the Student Listening Inventory For Education – Revised questionnaire (Student LIFE-R). To achieve this goal, a methodology with standardized steps was defined, which included the collaboration of the original version's author and a committee of experts that analyzed different versions of the instrument before the final version. As part of the methodology, the European Portuguese version of Student L.I.F.E.-R's questionnaire was applied to eight children with at least eight years of chronological age. The content validity of the European Portuguese version was verified as well as the linguistic equivalence in relation to the original version. Further studies should investigate other types of validity and reliability in a larger sample.

**Keywords:** Students, Hearing Loss, Translation (process), Cultural Adaptation, European Portuguese, Student Listening Inventory For Education

### **Introduction**

The assessment of a child with hearing loss cannot focus only on the auditory skills. A health condition, such as a hearing impairment, has consequences not only on body functions and structures but also on a person's activity and participation. In the same context, environmental and personal factors play an important role (World Health Organization, 2003). Regarding limitations in activity, since the beginning of the assessment of academic performance of students with hearing loss, it was found that they can have a significant deficit in academic performance compared to students with normal hearing (Monfort & Sánchez, 2002). On environmental factors, including physical spaces, Crandell and Smaldino (2000) mentions that the acoustical characteristics of the classroom can often affect the speech perception of children with hearing impairment.

Taking into account these limitations of activity of children with hearing loss and

environmental factors, on classroom, the Student Listening Inventory for Education – Revised questionnaire (Student L.I.F.E.-R.) is a tool that provides the identification of situations in the classroom which pose an auditory challenge for that particular child. In addition to the questionnaire itself, this assessment tool has a set of multiple choice questions that aim to describe the auditory context of the child's classroom and assess his/her functionality in the same physical space. The questionnaire can be completed by students with at least 8 years of chronological age, but the multiple choice questions may be applied to younger students (Anderson, Smaldino, & Spangler, 2011). In European Portuguese to our knowledge, there are no assessment tools that focus on the problems described before, so to overcome this challenge this study had as main objective the translation and cultural adaptation of the questionnaire L.I.F.E.-R.

## **Method**

The process of translation and cultural adaptation involved the following nine steps (Beaton, Bombardier, Guillemin, & Ferraz, 2000; Wild et al., 2005).

### **Preparation:**

In this step, a contact with the lead author of the original version, Karen Anderson, was done, asking permission to conduct this study. The author and coauthors authorized this study. Furthermore, the review committee was selected, by convenience, and was formed by three Speech and Language Therapists and three Audiologists.

### **Translation:**

The translation process was done, independently, by two individuals with a good knowledge of English and European Portuguese (mother tongue), which did not previously know the assessment tool.

### **Reconciliation:**

The review committee examined the two translations through a questionnaire in order to compare and combine more than a reliable opinion about the translation process. It was previously established as the consensus criteria the value 5, that is, the final translation of a particular utterance would have to be selected by 5/6 committee members. The main result of this step was the Portuguese version I.A.P.E.-R. Alunos (Inventário Auditivo para a Educação – Revisto).

### **Back Translation:**

The questionnaire I.A.P.E.-R. Alunos was translated back to the original language by two individuals with a good knowledge of English (mother tongue) and European Portuguese. The individuals did not have access to the original version and had no academic training on the concepts of the back-translated material.

### **Harmonization:**

Through a questionnaire elaborated for this effect, the review committee examined the two back translations obtained in the previous step. Given the previously consensus criteria established, the final version of the back-translation was obtained and was compared with the original version by the lead author Karen Anderson. The author suggested some modifications which allowed the linguistic equivalence to be achieved.

### **Pre-testing and Result's analysis:**

The questionnaire I.A.P.E.-R. Alunos was applied to a sample, selected by convenience,

taking into account the following inclusion criteria: students with hearing loss, unilateral cochlear implant users with at least 8 years of chronological age, monolingual and European Portuguese as mother tongue. After the signature of an informed consent, the sample was composed of eight elements. The analysis of the results focused on a content analysis that took into account the opinion/understanding of the individuals on the questionnaire items, response options, among others aspects.

#### Final Review:

In this phase, few significant changes were made in the European Portuguese version, which was subjected to a spelling, grammatical and typographical correction.

#### Final Version and Report:

The final version of the questionnaire I.A.P.E.-R. Alunos was obtained, and each step of the translation and cultural adaptation were adequately documented.

### **Results and discussion**

#### Agreement of the Review Committee on Reconciliation and Harmonization

Through two free available tools on the Internet (ReCal3 and Online Kappa Calculator), we obtained the percentage of agreement between each member of the review committee, the percentage of total agreement and the value of the test Fleiss' kappa, in particular the free - marginal kappa. In reconciliation, the percentage obtained between the elements of the committee ranged between 30.87% and 75.84%, with a total percentage of agreement of 51.37%. The coefficient of agreement by Fleiss' kappa test was 0.27. In harmonization, a variation between 68.46% and 86.58% characterized the percentage of agreement between the members of the committee. The total percentage of agreement was 76.29%, and the coefficient of agreement (test Fleiss' kappa) was equal to 0.64. In both phases, the total percentage of agreement was always higher than 50%. Given the values of Fleiss' Kappa test and its interpretation according to Viera and Garrett (2005), there was a slight agreement in reconciliation and a substantial agreement in harmonization.

#### Pre-testing

In the pre-test, due to extrinsic factors to the assessment tool, the understanding of the utterances was affected. The chronological age, the difficulties of hearing comprehension and difficulties of language comprehension were the factors that had stand out. In this way, the questions had to be reformulated several times with the support of visual cues and the utterances were adjusted to the language development of the child.

Although in the application of this instrument are used photographs of listening situations, the classroom represented in these illustrations does not match exactly the classrooms of the children accessed, either physically and/or in the disposition of the material, as would be expected. Therefore, it became necessary to direct the attention of children evaluated for hearing situations that occur in their classroom. Through reformulations and examples, appropriate to the classroom of the children evaluated, comprehension of the questionnaire's questions and terms was obtained.

#### Content Validity

The instrument tool of this study was not subjected to repeated tests of validity in a variety of samples, however it was possible to examine the content validity. For some authors, the content validity covers only the assessment by a review committee, however other authors claim that this type of validity is a judge process that also

includes the development of an assessment tool (Alexandre & Coluci, 2011). The methodology implemented in the current study was characterized by standard steps, which involved the evaluation of a review committee of eight elements.

### **Conclusions**

In this study, a translation and cultural adaptation of the questionnaire Student LIFE-R for the European Portuguese was conducted. Through the selected methodology, it was possible to check the existence of content validity. The assessment tool was evaluated by a review committee, which always showed a total percentage of agreement higher than 50% and light and substantial coefficients of agreement. The fact that the process of translation and back-translation has not been performed by translators with professional qualification is a methodological limitation. Furthermore, the fact that no other types of validity and reliability were analyzed is a limitation of this study.

### **Acknowledgements**

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## **Assistive Technologies to SEN: survey on the Portuguese scenario**

Simone da Fonte Ferreira  
University of Aveiro.  
[simone.ferreira@ua.pt](mailto:simone.ferreira@ua.pt)

Ana Margarida Almeida  
University of Aveiro  
[marga@ua.pt](mailto:marga@ua.pt)

### **Abstract**

In order to characterize the practices of four years of operation of a network of 25 Resource Centers of ICT for Special Education – CRTIC, created by the Ministry of Education, it is important to collect data concerning about the assessment process of students with Special Educational Needs (SEN) toward the use of assistive technology is been conducted. The methodological plan adopted to accomplish this goal was to carry out a survey supported by a multi- methodological approach, supported by quantitative and qualitative data that was subsequently triangulated and discussed. The data collected during this survey show that the assessment process, developed by these centers, already includes some of the aspects highlighted by other studies, such as multidisciplinary teams, collaborative decision making, and observation of environmental factors. Nevertheless our survey data also proves that there are only a few CRTICs that provide systematic and continuous support to the educational participants during the implementation of the assigned products. Based on the observation of this fact, we have developed a model, materialized on an online platform - RedeNEE -, which also aims to improve the process of communication between the participants and the educational teams of CRTIC.

**Key-words:** Centres of ICT Resources for Special Education (CRTIC), Special Educational Needs (SEN), Assistive Technologies, Assessment, Implementation

### **Introduction**

Following the legislative context of other countries (IDEA Act 2007), Portugal has also created a legislative context, within the Special Education field, that established the possibility of using assistive technology as a resource to help students with SEN (Despacho 120/2006, Decreto-lei 3/2008). Under this scenario, the Ministry of Education launched, in 2007, a network of 25 centers designated by ICT Resource Centers for Special Education (CRTIC), which, among other purposes, allow the assessment of SEN in order to implement assistive technology to support educational intervention with these students.

Currently, there is a wide range of products that students with SEN can use in an educational context; however, these centres only advise assistive technology to learning (Cf. Illustration 2). These facilitator devices are designed to improve functionality and reduce disability, enabling the performance of activities and the participation in learning and professional and social life domains.

**Figure 1 – Centers' geographical distribution1**



In this large universe of solutions, there are many definitions and classifications for assistive technology, and some take more restricted perspectives by attending only to the device as the ISO 9999 (2007) and the Portuguese law that rules special education (Decreto-Lei 3/2008), existing others that foresee other types of equipment. Besides these heterogeneities in classifications and equipment, our research highlights the importance of improving the support services to its utilization valuing this dimension of providing continuous support to the educational participants.

In this context, we believe that using assistive technology for educational purposes goes beyond the creation of an assessment team, the gathering of information and the decision-making. Besides these three phases, it is fundamental to provide continuous support to the educational participants during all the process.

The process of assessment and decision-making, for advice assistive technology, is complex and must take into account multidisciplinary knowledge, obtained through the collaborative interaction among the different participants (Bowser, 1995; Chambers, 1997; QIAT, 2008a; Zabala, 1995). Although this phase is very important, the intent of providing these resources for intervention among these students should not only guarantee access to the equipment, but also access to a set of services and strategies, available to teachers, students and their families in order to allow the achievement of effective results in student progress.

The use of an assistive technology requires, in some cases, specific knowledge that some educational professionals and families do not hold. This situation reveals the need to develop an Implementation Plan, which should be built collaboratively by all participants and provide detailed information about what will be done and who will do it (QIAT, 2009). This Implementation Plan should be typified, in order to guide teams to the introduction of assistive technology in intervention for each student, ensuring that, after the equipment reception, the intervener's know how to use it. This is an essential strategy to support the intervener's in their practices, through proper training on their needs, in order to reduce the probability of abandonment and/or underutilization (Phillips & Zhao, 1993).

It is with absolute conviction that "Success is not only dependent on having access to the device, but also on factors involving selection, acquisition, and use of a tool"

(Edyburn et al., 2005, p.242) that we held the study presented here, looking forward that the results achieved, reported in this paper, can be a motor for the reflection of the practices developed by this network of CRTIC in Portugal.

## **Method**

Given the need to gain a broader understanding of the ongoing practices in this recent Portuguese network, we have decided to conduct an exploratory survey, complemented with documental analysis, which allowed the diagnosis of the current scenario in what concerns students' assessment towards the advice to assistive technology use.

The documental analysis included international literature, national legislation, as well as internal official documents provided by the Ministry of Education, including the Reports of the Global Balance of Activities for the school years 2007/2008, 2008/2009, 2009/2010 and 2010/2011 (Brandão, 2008, 2009, 2010, 2011). The self-administered survey, operationalized in an online questionnaire, was applied between July and September of 2012, having been invited to respond all the 25 CRTIC that constitute this network, via an email sent to the institutional email address of each center and we have obtained a response rate of 100% of the population.

## **Results and discussion**

### **Team**

Our results show that the team is constituted of 55 professionals, of whom 53 are teachers; the other 2 are a Speech Therapist and Occupational Therapist. We also found that some of these professionals work on a part-time, under partnerships with other institutions.

### **Assessment**

In what concerns the number of assessments, and throughout these years of existence, we can observe an increase. The reasons that supported the reported assessments are mainly related with the difficulties that students reveal to perform particular tasks and that require professionals (teachers, among others) to search for new educational resources and solutions that can help their students achieve higher levels of activity and participation.

We observed the existence of assessed students from all levels of education and SEN types, but is on the 1<sup>st</sup> CEB and on neuromusculoskeletal problems and on limitations related to the movement, as well as mental-intellectual, that the highest number of assessments occur.

### **Assessment and decision making**

Assessment sessions happen, mainly, in the student school environment, which is a very positive indicator (QIAT, 2008). This situation is consistent with the new paradigm diffused by the International Classification of Functioning, Disability and Health (ICF), which emphasizes the need of considering the environmental context, since this dimension can operate as a facilitator or a barrier to the participation (WHO, 2001).

As regards to the teams involved in these assessments, Centers indicated that they work with the different educational stakeholders that interact with the students (teachers, families, therapists, etc) in order to form multidisciplinary teams.

Our results also revealed that most teams support their decisions observing different sets of information (here presented in a descending order of importance): the activity; the student; the opinions of students, teachers and families; and the environment. These results underline how important it is to consider the environmental factors, as different

authors state (Phillips & Zhao, 1993; Bowser & Reed, 1995; Zabala, 1995; Chambers, 1997; QIAT, 2008).

### Implementation

Although the assessment process is very important, the intention to provide these resources for intervention with these students should not only guarantee access to the equipment, but also by to a set services and strategies, available to teachers, students and their families in order to allow the achievement of effective results in student progress.

Finally, our survey also aimed at collecting data regarding how these centers are monitoring of the recommended products and technologies.

Our results indicate that only 10 Centers assume to prepare an implementation plan and that the email, phone and face-to-face contacts are the privileged means to monitor how the products and technologies are being used by SEN students. The frequency of this monitoring seems to be episodic, dependent on the requests of the involved agents and is often provided to help and support usage processes.

### Conclusions

With our study we have verified that the assessment process developed by these centres is already considering some of the aspects highlighted in the literature, such as: multidisciplinary teams; collaboration in decision-making; and observation of the environmental factors. However, there is still a very small number of Centers that undertake the preparation of implementation plans for assigned product support. For most teams, this monitoring phase is circumstantial, although they manifest full availability to help educational stakeholders, whenever required. Taking into account this scenario, it is urgent that this network of centres can implement harmonized and efficient monitoring processes and develop follow-up strategies. From data collected in our survey, which allowed to describe, characterize and diagnose the national scene, we present a proposal of a web platform called "RedeNEE", which intends to offer a contribute to these centers practices regarding students assessment and the respective implementation of the products advised. "RedeNEE" is an online platform that aims to establish a deeper network of contacts and collaborative work between the 25 Centers, integrating current communication tools, which will undoubtedly lead to greater visibility to the work developed in Portugal, once that brings together the efforts of these 25 teams. Furthermore, "RedeNEE" is intended to facilitate the communication between interveners, allowing both the to request of an assessment application and, also, contemplating a set of strategies that facilitate the monitoring of the assistive technology attributed.

This integrated web platform aims, therefore, to support the requests, evaluation and monitoring of the all process. We believe that "RedeNEE" will play an important role, both in overcoming the main problems that our survey has diagnosed (mainly in what concerns the heterogeneous and dispersed current practices) and, also, in providing a greater visibility to the work already done by these centers and in providing community support services.

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## **Do parents know? Can parents be a part of screening?**

Sónia Lopes

Escola Superior de Saúde de Vila Nova de Gaia, Instituto Piaget

[lopes.scg@gmail.com](mailto:lopes.scg@gmail.com)

Patrícia Graça

Instituto Superior de Saúde do Alto Ave – Isave

[topatriciameireles@gmail.com](mailto:topatriciameireles@gmail.com)

Salete Teixeira

Centro Integrado de Saúde, Desenvolvimento, Educação e Cultura – CISDEC

[l\\_salete\\_t@hotmail.com](mailto:l_salete_t@hotmail.com)

Ana Maria Serrano

University of Minho, CIEd

[serrano@ie.uminho.pt](mailto:serrano@ie.uminho.pt)

### **Abstract**

Parents play a crucial role concerning the detection of early signs of developmental disorders. Several authors refer to concerns about the validity of screening mechanisms that use only one source of information for determining the stage of development of a child. One of the suggested strategies to improve the validity and reliability and simultaneously reduce the cost of screening children development is to include information from parents in identifying risk of developmental delay. Screening instruments to be completed by parents substantially decrease the money spent in this task, making them less expensive and efficient. Professionals by talking with parents about their concerns create the opportunity to jointly reflect on the development and behaviour of children, thus promoting an evidence-based and family-centred practice using this procedure. In order to verify whether the observations of parents are congruent with those held by professionals of child development, we carried out a quantitative, observational and cross-comparing study with the results obtained in 266 children using the screening instrument ASQ-PT, answered by parents and educators. Only 5 of the 105 observed correlations were not significant, varying the Pearson's  $r$  values between .50 and .97. These results show a strong agreement between observers, which proves that parents are competent to use screening tools.

**Keywords:** Parents; Screening; ASQ-PT; Inter-observer agreement.

### **Introduction**

Parents aim is to ensure the well-being of their children, making sure they have a good development and good health. Research conducted over the past years has shown a strong link between the concerns of parents and caregivers and child development. Concerned parents, in most cases, correspond to children with developmental problems, which reveal great sensitivity of parents and caregivers to detect developmental changes in their children (American Academy of Pediatrics, 2009; Diamond, 1993; Glascoe, 1997, 1999; Marks, Glascoe, & Macias, 2011; Ozonoff et al., 2009; Shapiro, 2011; Smith, Akai, Klerman, & Keltner, 2010; Williams & Holmes, 2004). Parents have a vital

contribution in the detection of the early and subtle signs of developmental disorders before they become visible to the professionals (Dixon, Badawi, French, & Kurinczuk, 2009; Glascoe, 1997; Smith et al., 2010). Often parents seem overly concerned regarding the development of their children, who apparently seem to be developing well, and later it is confirmed that these parents are extremely sensitive to subtle changes of development (Glascoe, 1997). Screening using instruments to be filled out by parents substantially decrease the monetary expenditure, making them economically more efficient (Committee on Children With Disabilities, 2001; Dobrez et al., 2001; Earls & Hay, 2006; Glascoe, 1999; Pinto-Martin, Dunkle, Earls, Fliedner, & Landes, 2005; Rydz et al., 2006; Rydz, Shevell, Majnemer, & Oskoui, 2005). There are few barriers described for using this type of screening, except the difficulty of parents to read and interpret the various items, which can be easily overcome by asking the parents if they need support to complete the instrument (Committee on Children With Disabilities, 2001; Glascoe & Shapiro, 2004; Rydz et al., 2005). Professionals by talking with parents about their concerns create opportunity to, together, talk about the development and behaviour of their children, thus promoting an evidence-based and family-centred practice and also facilitating the decision-making process, such as when parents need support to promote the development of their child, when to refer for diagnosis, when providing reinforcement, among others (American Academy of Pediatrics, 2009; Glascoe, 1999; Rydz et al., 2005; Schonwald, Horan, & Huntington, 2009; Sices et al., 2008; Williams & Holmes, 2004). Parents as active participants, from the stage of identification, will encourage a more proactive stance on their part, even when observing the development of their children. Consequently, parents who are more observers, compare their children with others which facilitates a deeper understanding of the capabilities of their children (Brassard & Boehm, 2007; Guralnick & Conlon, 2007; Rydz et al., 2006, 2005). Research shows that screening of the various developmental domains, using instruments with the possibility of being administered by parents, presents results as accurate as the results obtained using formal instruments by professionals (Bodnarchuk & Eaton, 2004; Diamond, 1993; Dinnebeil & Rule, 1994a, 1994b; Glascoe, 1999; Ring & Fenson, 2000).

### **Method**

This was a quantitative, observational and cross-comparing study with a sample of 273 children using the Portuguese version of Ages & Stages Questionnaires (ASQ-PT). This instrument is designed to be completed by parents or caregivers and its composed by 21 questionnaires from 2 to 60 months enabling screening of children from 1 to 66 months of age. Each questionnaire has a total of 30 questions divided by five developmental domains: Communication, Gross Motor, Fine Motor, Problem- Solving and Personal-Social. Each domain has six questions that can be answered Yes, Sometimes or Not Yet as the child performs the behaviour, if the skill is emerging and the child is not yet able to perform the behaviour, respectively. Inter-observer reliability was observed by comparing the test results from parents and educators completion of the questionnaires, for the same children.

### **Results and discussion**

The percentage of boys (48,9%) and girls (50,2) was similar, however there is a higher percentage of mothers (82,8%) than fathers (17,2%) who filled in the questionnaires. Regarding the educational level of the mother it was observed that 34.4% attended higher education, 34.8% completed high school and 30,8% of mothers completed nine years of schooling.

Table 1 depicts the correlation values between the questionnaires completed by parents and educators. About 95% of the dimensions present values of Pearson product-moment correlations coefficient indicators of good or very good agreement between the observers. The problem solving is the dimension with the largest number of non-significant correlations indicating that the responses of parents and educators have discrepancies. When comparing the final scores of this dimension we find that the lowest averages are recorded on questionnaires completed by parents, pointing to the possibility that children already present the competence but parents still did not notice. This fact, on a superficial approach, would lead us to question some Early Intervention assumptions, that generally indicate that parents are the ones who know better their children (Glascoe, 1999, 2003; Sameroff & Fiese, 2000). Similarly, literature states that professionals must empower parents and involve them in all aspects relating to the development of their children (Bailey & Powell, 2005; Dunst & Trivette, 2001, 2009; McWilliam, 2005; Sameroff & Fiese, 2000; Sameroff, 2010).

**Table 1 - Correlation between parents and educators**

Questionnaire	Communication	Gross Motor	Fine Motor	Problem Solving	Personal-Social
2 month (n=7)	.96***	.86*	.74	.95***	.87*
4 month (n=8)	.74*	.89**	.95***	.96***	.90**
6 month (n=9)	.77*	.71*	.83*	.93***	.73*
8 month (n=12)	.65*	.77**	.66*	.88**	.86**
9 month (n=9)	.74*	.82**	.85**	.53	.67*
10 month (n=9)	.93***	.67*	.85**	.71*	.73*
12 month (n=14)	.89**	.86**	.96***	.95***	.96***
14 month (n=12)	.87**	.78**	.86**	.87**	.96***
16 month (n=12)	.66*	.95***	.60*	.69*	.60*
18 month (n=13)	.87***	.83***	.67*	.92***	.56*
20 month (n=11)	.92***	.85**	.80***	.85***	.76**
22 month (n=12)	.77**	.57	.80**	.53	.82**
24 month (n=14)	.84***	.61*	.59*	.91***	.80**
27 month (n=13)	.95***	.85*	.88**	.50	.82**
30 month (n=17)	.55*	.69**	.93***	.87***	.81***
33 month (n=12)	.94***	.85***	.96***	.80**	.78**
36 month (n=17)	.88***	.80***	.96***	.87***	.95***
42 month (n=13)	.70**	.72**	.97***	.82**	.94***
48 month (n=19)	.84**	.86**	.92***	.63**	.82**
54 month (n=19)	.61**	.89***	.96***	.93***	.89***
60 month (n=21)	.58**	.92***	.56**	.84***	.88***



## **Conclusions**

Agreement between observers indicated strong concordance among different observers. This agreement between the responses of parents and professionals brings us to the conviction that parents have a thorough knowledge of the skills of their children and that they can and should have an active and central role in the developmental screening and evaluation (Dixon et al., 2009; Glascoe, 1997, 1999).

During the research process parent's opinions about the ASQ-PT were not raised. So, as parents and/or caregivers are key figures in the administration of this instrument it is important, in future research, to perceive their opinion on the time spent, usefulness of the examples or figures and the impact on parents after have answered the questions.

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## **Exploring the impact of teachers' beliefs about inclusion on their classroom practices**

Talat Azad  
Kings College London  
[talatazad@yahoo.com](mailto:talatazad@yahoo.com)

### **Abstract**

The proposed presentation draws from a larger doctoral project involving teacher respondents, pertaining to how the existing policies and practices in Pakistan promote inclusion in two mainstream schools in Karachi and how it relates to teacher beliefs about inclusion. More specifically, the rationale for this presentation is to bring to light the links between teachers' beliefs and their classroom practices. It will extensively explore how teachers beliefs impact on their attitudes, positive as well negative, towards addressing the diverse learning needs of their students. The analysis of the empirical data reveals how teachers' beliefs underpin the practices they choose to employ in their classrooms. The findings indicate evaluation of children's individual needs, differentiated instruction methods using various resources and extra resources for learning as some of the basic ingredients of classroom practice. The general aim is to present the success stories, while identifying the barriers and challenges faced by the teachers and the schools in the implementation process.

**Key words:** inclusion, classroom practices, teachers

### **Introduction**

This paper draws upon a larger doctoral project involving teacher respondents, pertaining to how the existing policies and practices in Pakistan promote inclusion in two mainstream private primary schools in Karachi and how it relates to teacher beliefs about inclusion. My sample had to involve private schools for two key reasons. First, amongst the four parallel systems of education in Pakistan: state, private, non-governmental and madrassahs, state schools, when compared to Western contexts, often provide limited opportunity and poor attainment. That is, in the West such schools cater for the mass of the population, are well equipped and commonly have good performance rates. By law, the state run schools in Pakistan cannot refuse admission to any child, but how effective and welcoming this stance is regarding the enrollment of children with special needs (CWSN) is hugely contested. Secondly, although no recent estimates are available (Rieser, 2008), a good percentage of CWSN are being catered for in private and NGO mainstream schools, parallel to special schools, which are not sufficient in number to meet the needs of the majority of CWSN. Moreover, amidst all the political and natural calamities, government priorities have been focused on battling against these rather than on civil matters, such as education and hence, the state sector given its troubles does not provide a suitable platform for investigation of this subject matter. It should be noted here that inclusion is still very much disability focused in Pakistan.

The national census (GoP, 1998), which last took place in 1998, recorded that the level of disability was 2.5 % in the whole of Pakistan and nearly 0.82 million (24.8%) of these fell within the school going age of five to fourteen years. There are 51 federally

funded government institutions for different disabilities, 200 provincial government institutions and 230 private sector institutions, according to Rieser (2008). That is, private institutions are comparatively more in number than state run ones. No concise state data are available on their attainment and performance with CWSN, but Rieser's 2008 report on Pakistan indicates that the number of such children in mainstream schools was more than 30,000 and some findings (AKU-IED, 2003) suggest that less than 1% are catered for in special schools. However, when looking at the statistics of disability in Pakistan and comparing them with the number of state run and private special education centres catering for CWSN, there is clearly not adequate provision (Rieser, 2008). Hence, I have drawn the conclusion that given the government's current budget constraints, inclusion is the way forward for achieving both the Millennium Development Goals in 2015 as well as meeting the government's policy targets for 2025 of providing all people with disabilities an enabling environment, which allows for full realization of their potential in the public and private sections of the society (GoP 2005, 2010/11).

While the government has been battling with the policies and procedures, the private/NGO sector has been working towards the attainment of the goals for promoting inclusion in spite of a lack of government planning, guidelines or support towards implementation of inclusive education in mainstream schools. The policy and implementation sphere is very weak and often it is left to the private institutions to carry out the task of inclusion depending on their goodwill in terms of taking these children based often on human rights and whole school improvement perspectives.

Pajares (1992) explained that beliefs are studied in diverse fields, resulting in a variety of meanings and educational research, hence a standard working definition that applies universally is not available. However complex, writers (Pajares, 1992; Thompson, 1992; Aguirre & Speer, 2000; Standen, 2002; Mansour, 2009) suggest teachers' views and beliefs shape their understanding and thought processes about their teaching and learning. That is, their beliefs and practices are important for understanding and improving educational processes (OECD, 2009). Research studies in the last few years have emphasised the role of teachers' beliefs and attitudes in the process of inclusion, which is seen as pivotal in ensuring success (Norwich, 1994; Villa et al., 1996; Minke et al., 1996; Avramidis, 2000; Avramidis & Norwich, 2002) or conversely, on occasion, contributing to the ineffectiveness of inclusive practices. Thus, the aim of this paper is to provide evidence of the link between teachers' beliefs and their classroom practices.

## **Methods**

This qualitative study was conducted in two private primary schools in Karachi, where a wide range of special needs was being catered for, including: hearing, physical, intellectual and visual impairment, autism, attention deficit hyperactivity disorder as well as other learning disabilities. The schools, with the pseudonyms Millennium School (MS) and Centenary School (CS), provided 30 primary teachers, 15 from each school who completed questionnaires and participated in 60 minute semi structured interviews. In addition, field notes supplemented these data, all of which then analysed using a grounded theory approach.

## **Results**

The kinds of teaching pedagogies teachers followed in their classroom appeared to be based on the beliefs they held towards special needs and inclusion. Before I move onto the practices my respondents employed in their mainstream classrooms it is important to present their beliefs about inclusion and special needs at the start of this paper. The

paper addresses the five areas of:

1. Special or mainstream? Choice of educational institution for CWSN
2. The conditions necessary for effective inclusion
3. Evaluation of children's individual needs
4. Modifications to suit the individual needs of their students
5. Various forms of resourcing

#### 1. Special or mainstream? Choice of educational institution for CWSN

The appropriateness of specialist or mainstream educational institutions for CWSN was a matter of debate. Some respondents were of the view that a mainstream school was the right place for these children, as one respondent stated:

If a child with special needs is not in a special school, if he was able to survive in the environment [Millennium School] that means he has the potential. So why can't we take some time to create that kind of an environment for him where he can relax? (Hameeda interview at MS\_071010)

It was this teacher's opinion that CWSN can cope with the mainstream environment providing they are provided with adequate support through the provision of extra or individual attention. Her underlying conviction was that including CWSN is not always an insurmountable challenge, as teachers allocating more time and attention might be sufficient for them to access learning in the mainstream classroom.

It is noteworthy that the teachers who supported inclusion in these two mainstream schools all had nearly 10 years teaching experience. Likewise, the teachers in a study by Villa et al. (1996) also had considerable experience in their dealing with CWSN which, these authors point out, may have impacted favourably on the teachers' attitude towards inclusion. That is, it can be suggested that having had to work through pragmatically the everyday problems that they had faced in their classrooms, they felt they had become able to teach CWSN and were favorably disposed towards inclusion.

Contrary to the evidence presented by Villa et al.'s (1996) study, some of my respondents who did have 10 years of service or more, as well as newcomers, did not take to the idea of including CWSN in a mainstream classroom. The reason for this was explained by them being as their inadequacy to deal with special needs in the absence of specialised training and skills to address diversity. Similar to Hameeda, many of my respondents supported inclusion, but they highlighted their need for ongoing and specialized teacher training to address the diverse learning needs in their classrooms.

Another respondent, Sameen, explained that initial challenges were faced in this journey of inclusion and overcoming these paved the way for practitioners to include a more diverse range of children. This was of benefit to the teachers for, as she reported, this gave them the satisfaction that they were able to bring about a change in many children's lives. She talked about when she started settling in as an Urdu language teacher and the challenges that came her way. Facing those challenges and getting positive results bought her praise from the parents of her students, an experience which she thoroughly enjoyed. She gave an example of a child with speech problems:

His parents shared during the parent teacher meeting (PTM) that their child had won first prize in the speech competition and they praised me and said it was all because of my efforts. Really that day I really liked myself. After that day every year I try and work with one or two children closely or let's say adopt (not in the literal way but in the sense work intensely with. (Sameen interview at MS\_111010)

Some teachers believed inclusion should be based on the performance of the CWSN, i.e. it was conditional. One teacher commented that a child 'should continue in mainstream, but if a change is not visible, then it is unfair for those normal children as

the teacher is making so much effort for that child without any result. In this case that child should go to a special school' (Nausheen interview at CS\_160910). It appears that Nausheen believed CWSN placement in mainstream should be conditional on the academic performance of the child. If the child did not make sufficient academic achievement, then, she was of the view that the efforts being put in by the teacher might be going to waste. The teacher, having limited resources was being stretched immensely regarding the time and efforts she was devoting to one child. In fact, in this situation Nausheen expressed the opinion that it was not unreasonable to suggest that the child might be better placed in a special school where the needs adversely impacting on the whole context could be appropriately met.

One of Nausheen's colleagues from Centenary School pointed out that the severity of the disability should be a consideration when a placement decision is being taken as she believed that a special school would be the right choice when the special need was severe, i.e. homogeneousness being a better option than diversity in such a case. She was of the opinion that another benefit of the special school setting was that often the teachers were more adequately trained in particular special needs. In general, lack of adequate training, the severity of the disability and meeting performance criteria, as seen above, were the reasons why these teachers from Millennium and Centenary had mixed views and sometimes these meant they were ambivalent about inclusion as an unconditional universal strategy.

The dilemmas faced by these teachers have been identified by research studies conducted by, for example, Horne & Ricardo (1988), Barton (1992) and Singal (2008). These researchers opined that teacher opposition can be attributed to inclusion being implemented in an unplanned manner without modifications to a school's organizational structure, inadequate consideration being given to the instructional skills of the teacher and no guarantee of support and resources. Similar to the differences in the opinions amongst my respondents about the placement of CWSN, they had conflicting views about the necessary conditions for inclusion to work effectively in classrooms, as discussed next.

## 2. The conditions necessary for effective inclusion

The view that inclusion becomes ineffective when teachers have preconceived ideas that a child will fail to perform and any efforts put into trying to teach them are going to waste was fought against by the leadership at Millennium School. This perspective was summed up by one of their teachers who was very much in favour of inclusion: 'He will not do it no matter how much I work with him', this is what at times the teachers think and believe in. We have heard these phrases from teachers (Umbreen interview at MS\_131010).

The premise that a child can perform well if given the right opportunities was the platform for the in-house and external professional development and advocacy programmes that were offered to the teachers. Through the training the Millennium School leadership aimed to sustain a positive attitude towards inclusion. At Centenary School, however, where there was no such commitment given by the leadership, the situation emerged as being very challenging to the staff. One respondent explained that the requirement that one child receive extra attention meant: '... neglecting the class as I have 20 students. Continuously I keep an eye on the child, but the other children are neglected' (Farzeen interview at CS\_180910).

The dilemma faced by this teacher was also reported by Westby et al. (1994) and Singal (2008), who found that teachers in their studies faced similar challenges when trying to provide full inclusion. Their findings revealed that teachers felt including CWSN in

regular lessons slowed the pace of their instruction. Holding back other pupils was the issue that this respondent was facing. Similarly another respondent shared her story of a child who was unable to reach the required academic level in one class. Consequently, it was decided between the teacher and the school leadership that the child would not be promoted to the next class. The same child repeated the same class for two years but was still unable to get to the base level.

The teacher's impasse has been recognised in Pearman et al.'s (1997) research, which identified teachers' concern about their inability to provide individualized instruction for diverse needs often leading them towards the provision of similar learning objectives for CWSN as their peers. Further, LoVette (1996) indicated that teachers thought that the modifications required might hamper the provision of learning opportunities for their other pupils. The apprehension expressed by teachers in these studies resonates with the kind of anxieties and challenges faced by my respondents, leading them to have reservations about inclusion. Teachers' beliefs towards special needs and inclusion had a trickle-down effect towards their classroom practices some of which are discussed in the next three sections of this paper.

### 3. Evaluation of children's individual needs

Attempting to understand the child's needs was the norm at both the institutions with teachers making informal evaluation as a first step. This was undertaken in several ways beginning with the teachers sharing information at times of transition to ensure a child's individual profile was understood. To this end, at both institutions, as a norm, staff were given time slots before the beginning of the new term where they could appraise themselves of the diverse learning needs of the incoming students. Besides the initial understanding of their diverse learning requirements in first period of a new term staff continue to evaluate needs or as one respondent put it:

During the initial 2-3 weeks I just try and bring them closer to me emotionally, create a rapport with them. I just do not start immediately with teaching, even for teaching I start from the things they have done in class 2, this way both low and high are able to participate. (Sameen interview at MS)

In addition to creating a healthy rapport with the students, a continual process of reassessment of needs was maintained so as to ensure all students were contributing members. In particular, during the first few weeks the focus was on the children's reading, writing and their classroom behaviour, with progress being regularly discussed amongst colleagues and school leaders. Besides these measures, parental collaboration was sought through regular parent teacher meetings to evaluate children's needs as well seek help and guidance from each other to respond to the learning differences effectively. These evaluation processes enabled the teachers to address the individual needs of their students, which I discuss in the next section.

### 4. Modifications to suit the individual needs of their students

Analysis of the data revealed teachers addressed differences in their mainstream classrooms through applying modifications to their teaching curriculum as well as physical adaptations within the classroom setting. That is, respondents at both the institutions used an assortment of teaching alterations to address diversities in their classrooms and beyond. One teacher shared an example of a CWSN who had problems with handwriting:

I used to take him outdoors and he was given a stick to trace out letters and numbers in sand. This was followed by a pencil. He had great difficulty writing the figure 2. I gradually worked with him and towards the end..... He could write his name and



could recognise quite a few letters..... I had made quite a bit of material for him....also made a sand tray for him to work with... (Nausheen interview at CS\_160910)

Nausheen's expectations were based on the individual capabilities of her student, which led her to adapt and individualize the task at hand. She used the outdoors environment and natural materials to initiate her student's learning in a natural free environment, which allowed stimulation for a gradual progress towards achieving the learning targets. Understanding their students' specific learning needs assisted the teachers to address these so they could have the same access to learning as their peers, which they undertook in various ways: modifying the learning task, adapting the tasks and most importantly by giving their students various options to accomplish their learning assignments. That is tasks were adapted for these students, with the achievement targets being realistically set and modifications being put in place so all were included in the classroom learning without exception.

The modifications in the teaching being undertaken by teachers from Millennium and Centenary Schools resonate with the approach of 'differentiation' put forward by Kyriacou (1997), Coutinho and Repp (1999), Westwood and Graham (2000) and Westwood (2001:05). The purpose of 'differentiation', explained Westwood (2001:05), is to address differences through a differentiated designed curriculum and teaching techniques to make learning accessible to reach to the varying levels of abilities when facing the challenge of inclusion. Stanovich (1986), however, criticized the idea of offering less to such pupils as this carries the risk of widening the learning gap between those with and those without learning difficulties, thereby compromising social justice and equity. These reservations were also expressed in various studies undertaken by Burton (1992), Hart (1992), Reynolds and Farrell (1996), Wang (1998) and Brown (1999), who argued that such modifications of curricula may affect the quality of the instruction received by CWSN given the lower achievement expectations. Some modifications, as described by my teacher respondents, illustrated that at times there was reduction of the challenge of tasks for CWSN, which has also been identified as a compromised approach to inclusion in some research studies (Burton, 1992; Hart, 1992; Reynolds & Farrell, 1996; Wang, 1998; Brown, 1999). That is, these authors have provided evidence that modification of the curriculum may, at times, negatively affect the quality of

the instruction received by CWSN, and schools, when offering differentiated provision can sometimes be inclined to have lower expectations from them.

The same concerns were voiced by some of the teachers and leadership of Millennium and Centenary Schools, who believed that reducing the task was beneficial for struggling students as long as it did not affect or take away the essence, challenge and quality of learning for them. The following demonstrates the dilemma of how far teachers should be expected to cater for CWSN as well as the degree to which they can modify learning goals and still provide a worthwhile learning experience:

I used to give him more time, more attention like I would sit with him after school, make him flash cards; I would show him words through a window so he can focus on only that. I would give him more chances for show and tell, appreciate him more. So he would be a part of the class..... If he would do four out of six sums in math I would accept that, also I made a simpler paper for him..... (Umbreen interview at MS\_131010)

The teachers at both focal schools were constantly making physical adjustments to the learning environment, such as making students sit close to the blackboard, having their seats placed near the teacher's desk where they were able to give them individual attention and also to monitor whether they had understood the instructions for various tasks. They also made physical accommodation for CWSN, such as wearing an FM

(personal frequency modulation) system to help a deaf child. The teachers, by making these physical adjustments, were helping students to avoid distraction during the lessons and maintain their focus on the learning task. In relation to evaluation, they used different ways to advise and guide their students to focus on and understand their learning tasks.

My respondents frequently used low key responses such as slightly raising their voice, using positive phrases, providing physical reassurance and alternate seating arrangements, which were all aimed at helping CWSN focus on the task at hand and to refrain from exhibiting disruptive behaviour in the classroom. Their usage of low key response constituted unobtrusive reactions to minor disruptions that did not upset the progress of the lesson by provoking an escalation by the students. Teachers used a variety of resources in their daily routine to make inclusion possible in their classrooms as described in the following section.

#### 5. Various forms of resourcing

The teachers in the two schools used a variety of resources in their daily routines to make inclusion possible in their classrooms. Classroom corners were provided in all sections of class 1 and 2 at Centenary School. My respondent explained they were in the form of a library corner and a home corner, which the children were allowed to use either as a reward after finishing their task or at times when they were bored and their concentration was lacking or minimal on the learning task. They provided children the incentive of free play, through which their cognitive, behaviour and social skills were being developed (in this case, learning to share), new knowledge was being acquired informally and it also proved to be an incentive to finish the lesson task in class. Moreover, these corners helped create a stress-free environment where learning through play was happening for all abilities. Bailey (2007:120) described children's play as a form of self-directed learning, which follows a state of deep connection and engagement. He identified play as a creative learning exchange between mind, body, and circumstance into one integrated and healthy whole, which was reflected in what the students in primary classes at Centenary were engaged in. In particular, these places away from the main body of the classroom proved to be important for students who were struggling with their learning in traditional instructional formats and/or who were CWS, for as Asifa commented, 'even the shy ones who do not want much socialisation are happy reading quietly in the library corner' (Asifa interview at CS\_200910).

Television is usually taken as a very basic and fundamental resource in many classrooms of the West but such was not the case in the two focal schools in my study, even though they came under the bracket of high income private institutions and catered for the middle and upper middle classes. Owing to the high costs of living and inflation, even such schools are faced with financial restraints, in the absence of any state funding. The two schools did not have television sets provided in the classrooms but nonetheless, in one instance, a popular jingle from a television advertisement proved to be a useful source of motivation and productive learning. Through her keen interaction with her pupils she noticed children were attracted to advertisements and she often sang:

There is an ad which says kitna maza aai ray.... (how much fun it would be) so then I rephrase it taking children's names example Areeba's speed is slow, Ali takes long time to write, Fatima shakes the chair and as soon as I enter I start singing "kitna maza aai ray... (Sameen interview at MS\_111010)

The sing-along style of the advertisements were used in an innovative way in her classes, which brought not just fun but active participation from all students, helping them to focus better on their learning tasks with a sense of enjoyment.

It appears from this that some of my respondent teachers were trying to move away from what Strommen and Lincoln (1992:467) have termed the traditional ‘didactic’ and ‘linear’ ways of classroom learning, which are demotivating as well as far removed from children’s interactive home and society environments. The effective use of resources such as recalling the jingle reflected teachers’ creativity in providing an interesting learning environment which allowed their students to bring immediacy to their classroom from their everyday lives. Resourcing is also considered in terms of the input that the teachers received with respect to training. This is important given that one of the concerns raised by staff regarding inclusion was their own capabilities to teach CWSN. Some reported that not having their requirements fully fulfilled was an important reason underpinning their belief that inclusion was not necessarily the right solution for some CWSN.

The respondents from Millennium and Centenary Schools had varying views regarding the availability of professional development opportunities and often noted the lack of them. At the former, teacher attendance was compulsory for the after school or once a week training sessions. Respondents from Millennium shared that although they sometimes felt an aversion to it because of the long and often extra time they had to give after school, they found the sessions hugely beneficial as they were instrumental in providing them a platform to share and reflect on their pedagogical practices. Besides the robust in-house professional development programme, the leadership offered its teachers opportunities to attend various external professional development sessions and ensured that there was a consistent flow of professionals from outside who contributed to the professional in-house training. By contrast, although the leadership at Centenary School also focussed on professional development as a key resource, my investigation revealed that there were several gaps in their programme.

With regards to these, some respondents expressed the opinion that they faced difficulties when providing effective support to the CWSN in their classrooms and felt it was largely due to this lack of training in appropriate skills which led to their inability to cater fully for all learning differences. As Farzeen from Centenary put it, ‘I have had training but I still am not satisfied. You know I feel a teacher should be trained properly otherwise it becomes very difficult to practise inclusion’ (Farzeen interview at CS\_180910).

Furthermore my findings indicate that teachers from both the schools wanted better and specialised teacher training for themselves as well as for the new teachers joining the institutions so that they could practise inclusion more effectively. Regarding this, Marium from Millennium pointed out how even though she and some of her had received specialist training:

New teachers do not even know what terms like dyslexia mean and personally I feel that the teachers should be trained the teacher should be aware of these problems for which training is very necessary and needed. For these we do have PD sessions, but I have a number of times specified that we do need this kind of specialized training in these specific areas.(Marium interview at MS\_131010)

To summarise, Mittler (1992) is in agreement regarding the specialisation aspect identified by respondents. That is, teacher training needs to be designed in such a way to assist in planning and the execution of appropriate teaching as well as addressing lesson planning that caters for the range of learning differences in their mainstream classrooms. In general, a wide body of literature indicates that general and special education teachers often feel inadequately trained to cater for CWSN in mainstream classrooms (Schumm & Vaughn, 1991; Houck & Rogers, 1994; Lieber et al., 2000 & Burstein et al., 2004). Further, teachers need training and support that is context

sensitive and addresses individual needs in order to boost their competence and confidence when undertaking the education of CWSN (Little, 1993; Mittler, 1992; Wenitzky, Stoddart & O'Keefe, 1992).

### **Conclusion**

The aim in this paper has been to present how inclusion is happening in a developing country context and show evidence of the links between teachers' beliefs about inclusion and how these impact on their classroom practices. It should be pointed out that in the absence of any clear guidelines and policy coming from the government, much is left for the leadership in each school in terms of creating their own initiatives towards inclusion. Unlike in the West, where policy is backed by legislation, they were having to develop their own initiatives without any practical support or vision from local, regional or national governments (Ball, 2008).

Many teachers are positive towards including CWSN. My study outcomes demonstrate that they were trying their best in the absence of often fundamental information, basic resources and professional training to carry out practice whilst addressing learning diversities in their mainstream classrooms. For some respondents it was the absence of these basic requirements that prompted them to oppose inclusion or suggest that at a minimum, it should be applied with conditions attached. Favourable beliefs about special needs and inclusion were transformed into everyday practices, but largely it was the challenges and the barriers that were creating limitations to these efforts. This, in some instances, as shown in this paper, resulted in teachers becoming more resourceful and innovative, making commendable use of resources and intelligently improvising for the lack of them.

With teacher training not being a mandatory requirement in private institutions in Pakistan, such as Millennium and Centenary, often teachers are given on the job training and how schools undertake this is down to the school leadership. In the case of my study, it transpired that Millennium provided a more robust professional development programme as compared to Centenary where there was no consistent or systematic training programme for the teachers regardless of whether they were new or accustomed to the system. This scenario often created an impasse for teachers who were supposed to embrace and carry out inclusion without proper or specialised training, which, nonetheless, the teachers at these two schools were seeking to achieve effectively in their mainstream classrooms. In conclusion, perhaps inclusion could be seen in the focal contexts as being in an evolutionary phase. That is, it could be seen as work in progress, being done in an experimental way without any clear guidelines or structure coming from outside the institutions. In particular, these schools were working in isolation without any legislation or backing from the state and probably could not be considered as representative examples of the nation as a whole. Nevertheless, in spite of all the obstacles to inclusion the majority of teachers in these two schools believed in a wide acceptance of CSWN and were working to accommodate them in their mainstream classrooms.

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## **Inclusive view of school teaching with special needs**

Marco Antônio Cavalcanti da Rocha Júnior

UERN

[mrochaj@yahoo.com.br](mailto:mrochaj@yahoo.com.br)

Tatiana Rachel Andrade de Paiva

UFRN

[tatianarachel@hotmail.com](mailto:tatianarachel@hotmail.com)

### **Abstract**

This case study, performed in a public school in Natal (Brazil), describes the work activities of a professional teacher physically disabled (wheelchair) and perceptions regarding the inclusion, accessibility and assistive technology, and how the Political Pedagogical Project contemplates her work at the school. The proposal seeks to include school students with special needs and assist them in their educational needs. However, colleagues these students are attending school regularly, is likely to entail in an increase increasing number of graduates at Higher Education Institutions ( HEI ) and vocational technical training courses, and consequently to the formal labor market. In the specific case of the education sector, is the school also prepared to enter school to the inclusion process, teachers or professionals with special needs? It brings the focus of educational policies aimed at including education and legislation regarding the inclusion and support of people with disabilities in the formal labor market. The analysis showed when the inclusion in the labor market is related to teachers with disabilities in school, raises reflections and it still requires a look at the educational system directed to the labor activity of teachers with special needs. Similarly, public policies for inclusive education are not being extended to teachers with special needs leave gaps hinder their inclusion in the school professionals.

**Keywords:** Inclusion, Disabilities, Lecturer.

### **Introduction**

The school inclusion of students with special needs is a topic widely discussed in the news and a reality that although elemental form, is placed in schools in Brazilian public schools. However , the fact that these students were attending regular school, probably entail, in a growing number of graduates to Higher Education Institutions ( HEI ) and vocational technical training courses, hence the formal labor market .

There is a specific sphere in national legislation which corroborates the inclusion and support of the poor at work, as the legal reserve positions, also known as the Quota Law (Art. 93 of Law No. 8.213/91), which stipulates the percentage of positions for qualified and / or rehabilitated companies should keep their workforce disabled; quotas also features on the Constitution of the Federative Republic of Brazil (art. 37, VIII ) . "The law reserves a percentage of public offices and jobs for people with disabilities and define the criteria for admission." In the specific case of the education sector, educational institutions of regular education are prepared to receive these professionals? The theoretical framework relating to educational inclusion indicates that the basis for the consolidation of an inclusive school are guided by the needs of students. However, when the inclusive theme refers to the inclusion of persons with disabilities in the

formal labor market, also see the absence of a broader theoretical framework, especially regarding the inclusion of teachers with disabilities in the schools.

### **Method**

This is a case study of exploratory and descriptive research and qualitative approach by considering such research quite effective when it comes to analyzing associated with the field of education data. To Ludke and Andre (1986 , p . 3) are few phenomena in education that can be subjected to the type of quantitative research " in education because things happen so inexplicable way that is difficult to isolate the variables involved and further point clearly which are responsible for a given effect. " Done the literature review as a tool for building data was through an open inquiry form to a teacher physically disabled (wheelchair) in a public school elementary schools in Natal, RN, Brazil, the teacher entered the city via public service in 1992, supported by the Quota Law, Law No. 8.213/91. The purpose of this research is to ascertain the perceptions of this teaching in regard to the professional school inclusion, accessibility, assistive technologies and how the Political Pedagogical Project contemplates the work at school.

### **Results and discussion**

To Tunes (2003), "are exclusive societies, as there are various forms of exclusion, whether in relationships, at work, in the distribution of goods, access to education and various segments of social life." Faced with such a conception of exclusion, it is necessary to ask: What is inclusion? "[ ... ] Inclusion means inviting those who somehow are expected to come in and ask them to help design new systems to encourage all people to participate in the fullness of their capacity as partners and members." (Forest & Pearpoint, 1997, p. 137). Thus, the challenge of social inclusion, the whole society requires careful about what come s to interfere in motivation, retention and success of these individuals in the process of inclusion, especially in school and formal labor market positioning.

According to Stainback and Stainback (1999, p.21) "Inclusive education is the practice of inclusion of all regardless of their talent, disability, socioeconomic background or cultural backgrounds in schools and classrooms providers, where all students' needs are satisfied. "In this respect, the teacher in question stands out: " I think the school inclusion, it is still early in the embryonic process is starting to happen now, still need to equip practitioners to receive students ". And referring the issue to their own inclusion in the work emphasizes: "... But I, as a professional, and special needs, I see that our inclusion in the labor market and more specifically in the field of education, still leaves much to be desired, because there is no law stipulating that we, as Chair, we need an auxiliary room. For students with special needs, there is already a Law that is to full professor and Assistant Teacher, but we, if we enter a classroom, we will be alone. "However, do the following requirements:" When I was in class, I had an opportunity, as a concession, not as a Law, you have a helper, being a classroom teacher I counted with an auxiliary, in public in municipal, but worked in an NGO school without help. " Several important issues involve the inclusion of teachers with special needs in schools, especially; accessibility is a necessary factor to enable the inclusion of people with disabilities, and more specifically, those with motor and mobility difficulties. Accessibility can be defined as a condition of access and use certain place, or service safely and autonomously by as many people as possible. This conception was regulated in Brazil with the enactment of the Federal Decree No. 5.296/2004. However, accessibility strikes with sociocultural, physical and information barriers, and these



barriers hinder the empowerment of people with disabilities.

On the issue of accessibility in the school where she works , the teacher reported that : " At school I work , in particular , had in the classroom as I would not get to have access to them , because they are on the second floor , and there is a platform in school , but this platform is out of order . And often the school manager asked the repair at the Secretariat. I exist as a professional, and a wheelchair, but is not being prioritized, because for years, is not repaired, and also the issue of accessibility is far below what it should be. "At this point, it is necessary to highlight the characterization of the structure and physical space of the above-mentioned school, which offers access and floor tactile external ramp, the internal space of the school is distributed on three floors, with the first access gate and guardhouse, a small patio, kitchen and a ramp leading to the second floor. On the second floor is the hall of direction, secretary, staff room , male and female toilets , library , computer room and lifting platform , access to this floor is via a ramp. The third floor is the upper floor, and with the exception of the lifting platform, the access is possible only by stairs, in this floor there are six classrooms, toilets for students and room for ESA, which has the resources and assistive technology services . In addition, the school does not have signaled in Braille and doors and restrooms are not properly adapted.

It is worth mentioning that besides the breakdown of social and architectural barriers , an important ally in the inclusion process is assistive technology , which corresponds to " [ ... ] an area of knowledge , interdisciplinary feature, which encompasses products, resources , methodologies , strategies, practices and services that aim to promote the functionality related to the activity and participation of people with disabilities, disability or reduced mobility, seeking autonomy , independence , quality of life and social inclusion". Ministry of Labor and Employment [MTE] (2007).

The teacher, when asked whether use of assistive technology resources in their everyday work, declares: "No, just the box, but as I had the support of an Assistant Teacher, who used only the box, and I worked with recreational activities, worked in kindergarten several years and have not had access to these resources, which would be of vital importance to our accessibility."And however, on the assistive technology resources available to her and / or would like to be available for her works, she says: " Today, as I 'm psycho and I work in small groups, for me, in particular, I no longer need it because I work with games, and everything that I already have access. But if I was in the classroom, talking about multimedia features, a projector, data show, that I could expose my classes without the use of the board, given that today, might not have the grant of aid, would supreme importance. "

Another important point concerns the difficulties of teaching practice. On this question the teacher says: "The discipline of students for one person said "normal" that moves around with ease, it is something very difficult to cope, and when we have a limited mobility, to deal with these situations becomes very difficult! So my great difficulty was that I suffered a fall, and so out of the classroom, and today I am working with pedagogical mediation in school because my student dropped me in the classroom, knocked my chair , not my helper was and I suffered this fall, the difficulty I faced was just that. "And added:" ... and has difficulties as writing frame. The media for public schools, we still do not have much access, which would be an alternative to the table. " Nevertheless, as a contribution to improving the working conditions of teachers with disabilities in schools, the teacher says: " The schools adequately with accessibility, which had stairs if they put the ramp so we could have access, in the case of my disability in particular, an auxiliary to the wheelchair teacher, and technology, multimedia resources so that we could take a lesson without being using the board, because today, the box is already an outdated resource for any teacher, to imagine that we have this difficulty we are recording the information on the board. " She concludes:

"I suffered a lot in the classroom for reasons that I am talking about these issues, and would still need to mature a lot this idea of the inclusion of "disabled person" as a professional."

Regarding the investigation of the Political Pedagogical Project of the School as the school inclusion, it was found that it includes students with special needs enrolled in the study modes offered by the school, highlighting especially the ESA, which is offered to students with special needs special during the opposite shift in the Room Multifunctional Resource (SRM). However, does not approaches the ongoing education toward inclusion, labor activity of professionals with disabilities, as well as accessibility and assistive technology, specifically.

### **Conclusions**

The process of educational inclusion rather to persons with special needs is becoming an epicenter of issues relating to the social inclusion of these individuals. However, school inclusion be substantiated from the moment that you can see the person with disabilities, attending regular school, being socially included in all social spaces, particularly at work.

It was found in this study that when the inclusion in the labor market is related to teaching with disabilities in school, raises reflections and the educational system still requires to think more directed to the labor activity of teaching with special needs, to ensure the accessibility and use of assistive technology resources to enable them to perform their functions. Similarly, public policies for inclusive education because they are not extended to teachers with special needs, leaving gaps that hinder their inclusion in school and as professionals.

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## **Stress Reduction Strategies for Adolescents**

Wendy Fuchs

Southern Illinois University Edwardsville

[wfuchs@siue.edu](mailto:wfuchs@siue.edu)

### **Abstract**

This study examined the feasibility and social validity of incorporating stress reduction strategies into an existing sixth grade health class. The curriculum and activities teach the students to identify the causes and effects of elevated stress on the mind and body. Each session included one stress reduction strategy including breath awareness, breath control, focus on gratitude, and word/phrase repetition. This study utilized a convenience sample of 30 sixth grade students in a four session program. Results from the quantitative and qualitative surveys support the social validity and rationale for incorporating this type of content into middle school curricula.

**Keyword:** Stress, Mindfulness, strategies.

### **Introduction**

Over the past few decades, an increasing amount of research has identified stress as a risk factor for mental health disorders that affects approximately 20% of today's youth ages 9-17 (U.S. Department of Health and Human Services, 1999). Not only has stress been linked to compromised mental health, it is also clearly linked to physiological changes in the body including increased blood pressure, elevated heart rate, and increased levels of arousal-heightening hormones (i.e. adrenaline, cortisol). More and more, the literature indicates that today's youth report high perceived stress in their daily lives (Schonert-Reichl & Lawlor, 2010). Stress can be defined as a state of unease in response to environmental events, and while moderate amounts of stress support adaptive behaviors, sustained, chronic stress can have a negative effect on one's immune system and overall sense of well-being.

Recently, National Public Radio ran a story on the impact of school-related stress on teens' health. The students interviewed for this segment reported excessive amounts of worry and anxiety about earning good grades, getting into college, and completing homework. In a survey conducted by the American Psychological Association, nearly half of all teens said they experienced stress related to school pressures (American Psychological Association, 2013).

#### **Schools' Role in Stress Management**

School personnel have long experienced the ill effects of stress on children in today's classrooms. Elevated stress not only has detrimental effects on students' minds and bodies, but also on the general school learning environment including increased violent behavior (i.e., physical fights, verbal altercations), office referrals, truancy, absenteeism, and bullying. Punitive measures are not quelling the increase in these types of misbehavior in schools. In addition to antisocial behaviors, stress can affect the cognitive processing skills required for learning. Students who perceive their lives to be stressful report difficulty concentrating, and difficulty remembering information, as well as diminished executive functioning (i.e., planning and organizing information). These effects have a significant impact on children's ability to successfully navigate and complete assignments, tests, and other school-related tasks (Alva & de los Reyes,

1999). Additionally, stressed students can also exhibit decreased self-control, self-awareness, and self-esteem (Flook, Smalley, Kitil, Galla, Kaiser-Greenland, Locke, Ishijima, & Kasari, 2010).

#### Mindfulness as Stress Reduction Strategy

An increasing number of researchers have sought to show a positive relationship between stress management strategies and increased pro-social behaviors in school-aged children. Over the past five years, studies published in journals ranging from applied psychology to pediatrics have unveiled the promising effects of mindfulness practices to increase students' self-awareness and decrease their anxiety (Flook, et al, 2010; Semple, Reid, & Miller, 2005). Mindfulness practices include techniques that emphasize perception of one's own thoughts and feelings in a nonreactive way (Zylowska, Ackerman, Yang, Futrell, Horton, Hale, Pataki, & Smalley, 2008). These practices typically include periods of silence or focused periods of time where an individual purposely attends to and observes his or her own thoughts. More and more, this type of technique is being used with other cognitive-behavioral therapy to treat stress, depression and anxiety disorders (Baer, 2003).

These strategies are not only being used in therapy or clinical settings, but are also gaining popularity in schools. A handful of administrators and teachers are turning to more preventive and pro-social methods for helping students manage stress. For example, the Visitacion Valley Middle School (VVMS) in San Francisco implemented a designated "Quiet time" each morning and afternoon where all students and staff were asked to simply sit quietly for 15 minutes. This particular school, while being situated in an extremely impoverished neighborhood with a high rate of violent crime, has seen a dramatic decrease in fights, 61% decrease in truancy, and 50% decrease in suspensions (Nobori, 2012). By school personnel addressing the real effects of stress on their students, and by providing useful, practical strategies for managing stress, educators are able to refocus their resources and time on teaching and learning rather than spending a great deal of time addressing discipline issues related to unmanaged stress among students.

#### **Method**

Prior to beginning the study, the authors met with a local school superintendent to discuss the appropriateness and feasibility of conducting the study at her junior high school. At a subsequent meeting, the four sessions, evaluation methods/instruments, and permission process were discussed with the superintendent and principal. A letter of support from the district was secured. Based on this letter and the review of all required documents (evaluation tools, consent forms, session descriptions, etc.) the study received approval through the researcher's university Institutional Review Board for Protection of Human Subjects.

#### Participants

The participants in this study were recruited as a convenience sample to determine the feasibility and social validity of implementing stress reduction instruction and strategies into the existing health class at the host school. The participants in this study were 6th graders in a mid-sized suburban school district (enrollment of 200 in grades 6-8) in the Midwest. Consent forms, as well as child assent forms were sent home with students for the parents and students to sign. It was required that all participants return both the parent consent form and the student assent form before participating in the study. There were a total of 38 6th graders in the two target health classes, and 29 returned both forms and participated in the study. At the discretion of the Health teacher, some

students were permitted to join the sessions as the required forms were returned. Of the 30 participants, eighteen students attended all four sessions, seven students attended three sessions, and four attended the last two sessions. For the purposes data collection, the students who joined the study late were able to receive the instruction and practice and take the survey, though their data was not included in the analysis.

#### Evaluation Instruments

Students were given a survey consisting of items compiled from three behavior rating scales (Piers-Harris 2, BASC-2, and Conners 3) that assess self-perceptions of anxiety (e.g. "I worry a lot"), and general self-esteem/self-confidence (e.g. "I am dependable"). A 4-point Likert Scale was used for response options: Never, Sometimes, Often or Always. After the author read the directions and explained the Likert scale to the students, they completed the survey on the first day of the study (prior to any instruction and practice) and again on the last day of the study (after that day's instruction and practice). Scores on this survey could range from 0-78, with higher scores indicating the perception of higher stress, anxiety. Cronbach's alpha was used to determine reliability of the survey (pretest:  $\alpha=.912$ , posttest:  $\alpha=.876$ ).

In addition to the self-perception survey, participants were given a social validity questionnaire to determine the feasibility and acceptance of this type of instruction in a Health class. The questionnaire contained seven questions ranging from multiple choice questions about their preference and use of specific strategies to open ended questions about what they liked or did not like about the sessions.

#### Procedures

This study was designed to contribute to the research on reducing student stress by asking students directly about their self-perceptions of the presence of anxiety and stress in their lives and by providing them with simple strategies that can be utilized independently. This study examined students' perceptions of their own well-being because not only do self-reports tend to be more accurate than teacher or parent reports, they allowed students themselves to speak about their perceptions of the usefulness of the strategies for the social validity and feasibility of the study. The authors provided the participants with basic information about the purpose of the study (teaching them strategies for stress reduction). The critical focus was to introduce and practice the specific stress reduction strategies with the participants. Because this study focused primarily on social validity and feasibility, there was no control group. Rather, the researchers chose to provide the same instruction and strategies to both groups who had the same health class (1st and 2nd period of the day). Future replications of this study will utilize a larger sample size, and a controlled experimental design.

After permission was granted by the school district and participants' parents, the research team worked with the school administration to find a time during the regular school day where the least interruption to instruction would occur. A joint decision was made to conduct the study in the Health Class in which two of the four 6th grade classes were enrolled. The content of the study aligned with the instruction already taking place, and the times were feasible for both the research team and host teacher's schedule. A series of four 45-minute sessions were conducted over a two week period (Monday and Wednesday for two weeks). Each session consisted of 30 minutes of instruction and discussion and 10 minutes to introduce and practice the following strategies: breath awareness, breath control, word/phrase repetition, and focus on gratitude. Students were given a laminated card each session with the steps for that day's strategy. At the end of the study, students were also given a CD with the

researcher verbally guiding them through the strategies (with the same steps used in the sessions and on the laminated card). On the final day, students completed the wellness survey and the questionnaire about their preference for and use of the strategies, in addition to feedback regarding the method and content of the instruction and practice.

## **Results**

### **Data Analyses on Self-Perception of Stress**

Preliminary data on participants' ratings of perceived stress (pretest) ranged from 6-54. Posttest scores ranged from 5-50 out of a total of 75. The data signify that there was no statistical difference between pretest and posttest scores,  $F(1,18) = .70$ ,  $p = .41$ . Students reported average to low-average levels of stress, therefore they did not have a great amount of stress to reduce. Additionally, the data also indicate that gender did not significantly affect pretest and posttest ( $F(1,18) = .01$ ,  $p = .94$ ). The males' scores on the pretest ( $M=21.81$ ,  $SD=3.01$ ) did not significantly differ from their posttest scores ( $M=20.38$ ,  $SD=3.48$ ). Females' pretest ( $M=35.00$ ,  $SD=6.02$ ) and posttest ( $M=33.25$ ,  $SD=4.96$ ) did not show a significant difference in the two scores. However, females' overall scores were not extremely high, but were significantly higher than males' scores,  $F(1,18) = 4.93$ ,  $p = .04$ . This finding should be viewed with caution because of the small number of females participants ( $n=4$ ).

### **Data Analysis of Social Validity Questionnaire**

Overall, the students reported overwhelmingly that the strategies and sessions were helpful in reducing stress or helping them feel more relaxed. When asked if they used the strategies outside of class 29 out of 30 participants responded. 15 of the students reported using the strategies outside of class. When asked if they would use the strategies in the future, of the students who responded to that question, 21 responded favorably and 6 responded that they didn't understand the strategies or did not think they would use them. The responses to this question (i.e., "it helps me relax" and "when I get frustrated I can use these strategies"), indicate that these participants value the strategies practiced in class, and see value in using them to manage stress in the future. In addition to questions about the participants' use of the strategies, students were asked to comment on what they liked or did not like about the sessions. All but three participants responded favorably to the session format and content (mainly the music and strategy practice). The negative responses were varied (i.e., "took too long", "they were short", and "we didn't really do very much").

## **Conclusion**

This study supports the feasibility and social validity of incorporating stress reduction strategies into existing classes in a middle school setting. Not only did the structure of the sessions work well for delivering the content and practicing the strategies, the teacher was able to work with the students who did not participate in the study on parallel content in their health curriculum. While the data in this study are not statistically significant in measuring a decrease in self-perceived stress, a larger sample size of students with higher stress levels could address these shortcomings.

Though participants reported that the strategies helped them feel calmer and relaxed, the number of students who actually utilized the strategies outside of the sessions was not overwhelming. Partly, this could be attributed to needing more practice with the strategies, or how the students were not extremely stressed so therefore did not need to utilize the strategies. Because the students were receptive to learning and practicing these strategies, the authors intend to continue the same format for the sessions, but

would like to use a selection process that identifies students from stressful environments who have above average levels of reported stress on the pretest.

Very few school districts are implementing school-wide programs that address the growing problem of stress/anxiety in today's school-aged children. The strategies implemented in this study's program not only enable students to practice simple strategies that can be used anywhere, but also describe practices that can be easily integrated into school curricula. Preventive, ongoing stress management strategies may serve to improve learning environments so that students feel more capable of concentrating, planning, and completing rigorous school work.

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## **Assessing and Improving Inclusive Services for Young Children with Special Needs Internationally**

Belinda J. Hardin

The University of North Carolina at Greensboro  
[bjhardin@uncg.edu](mailto:bjhardin@uncg.edu)

Dionne Busio

The University of North Carolina at Greensboro

Sheri Grace

The University of North Carolina at Greensboro

### **Abstract**

Understanding characteristics of special education services for young children worldwide is critical to identifying effective practices, service gaps, and the reasons behind these trends. The ACEI Global Guidelines Assessment (GGA) was used to examine program quality across nine research sites in seven countries (China, Guatemala, India, Italy, Mexico, Peru, and United States). Results of practitioner evidence in Area 5, Young Children with Special Needs, will be reported and implications for policies and practices, particularly inclusion, discussed.

**Keywords:** Early childhood, program quality, inclusion

### **Introduction**

All children are entitled to basic human rights. An environment that respects individual differences and enables children to develop securely and safely is critical to the fulfillment of that right. Access to quality early childhood care and education (ECCE) on an international level remains elusive for many young children with disabilities. In 2008, the Convention on the Rights of Persons with Disabilities (CRPD) was initiated to further ensure the rights of children and adults with special needs. This convention stipulated that governments should take responsibility to ensure all children, including those with disabilities, receive the same rights and freedoms. However, often the lack of adaptive equipment, teacher training, services in rural areas, and the absence of policies that support inclusion prevent children with disabilities from receiving a quality education (Hardin & Hung, 2011). The Association for Childhood Education International Global Guidelines Assessment (GGA) was developed in response to the growing worldwide need for high quality learning experiences for young children. In the current reliability and validity study of the GGA, observations of administrators, teachers, and outside observers were analyzed for evidence of trends indicating successes and challenges related to meeting the needs of young children with disabilities. The GGA includes 76 indicators across five program areas: 1) Environment and Physical Space; 2) Curriculum Content and Pedagogy; 3) Early Childhood Educators and Caregivers; 4) Partnerships with Families and Communities; and 5) Young Children with Special Needs. Evidence from Area 5 was analyzed for this paper.

### **Methods**



**Programs/Participants.** The study included 533 participants in 270 programs across nine sites and eight countries. China comprised the largest proportion of the sample (26.2%) followed by Peru (21.9%), Guatemala (14.4%), Mexico and the United States (11.1% each), Italy (8.5%), and India (6.6%). Approximately equal numbers of private and public programs participated. Most programs were located in urban areas (66.4%), 25.7% were located in rural areas, and 7.1% categorized themselves as “other,” most likely suburban areas. More than half of the programs enrolled 200 or fewer children (74.5%). Of the 141 programs who answered an enrollment question about children with disabilities, 60.9% indicated they enroll children with disabilities. Only programs that enrolled preschool children participated in the GGA study.

Many also enrolled infants and/or toddlers, and some included older children.

Teams of two people, a director and non-director, each independently completed the GGA for their program. All but 18 of the participants were female. The highest level of education completed for 22.1% of the participants was a secondary diploma. Another 28.6% of the participants had a 2-year certificate or some college training and 25% reported having a bachelor’s degree. The remaining participants had completed some graduate level.

**Measures.** The 2011 edition of the GGA contains 76 items across the five program areas. Area 5, Young Children with Special Needs, includes 14 items that are divided in four subcategories, including: access and equity of services (5 items), common philosophy and common aims (2 items), staff and service providers (4 items), and service delivery (3 items).

Each item was rated on a scale ranging from inadequate to excellent, and included a space to add written examples that support the selected rating. A demographic page in the assessment was used to gather basic demographic information for the individuals completing the assessment (name, gender, position in program, contact information). In addition, program directors were asked to complete a Program Information Form to obtain information such as the type of program (e.g., public/private), service area (rural, urban, and suburban), and ages served, months/days/hours of operation, and total program enrollment. All written materials were provided in the participants’ home language. It should be noted that GGA translations were completed for ACEI prior to the study using the consensus method (see Geisinger, 1994).

**Procedures.** Research Site Coordinators were recruited by the Principal Investigator to implement the study in each country. Training was provided for each Research Site Coordinator via SKYPE on confidentiality requirements, procedures for selecting programs, data collection procedures, and the GGA itself. Follow-up conference calls and emails were held as needed with the project director. Once trained, Research Site Coordinators recruited local program participants and supervised the data collection. Each Research Site Coordinator met with child care program directors to describe the study and request consent to participate in the study. Two people (typically a director and teacher) were asked to complete the GGA at each program and directors also completed the Program Information Form. Each individual received a certificate from ACEI in appreciation of his or her participation. Individual ratings and their examples were entered into a database. Ratings for each item were assigned a numerical value from 1 (inadequate), 2 (minimum), 3 (adequate), 4 (good), to 5 (excellent) and entered into the database. Once entered, the results for each item were verified against the original protocol and all errors were reconciled and corrected. Item means were calculated for the quantitative analyses.

## Results

Total sample comparison. Total sample comparison. As shown in Table 1, overall item means, standard deviations, and item ranges by subscales for the nine sites clearly indicate that ratings of program quality in Area 5 were lower than the other four subscales, with means ranging from minimum (M = 2.47, SD 1.49) in Guatemala to good (M = 4.58, SD 0.35) in Italy. Table 1. Means, Standard Deviations, and Item Ranges for Subscales by Research Site (N=533)

Area 5—Young children with special needs. Though the distribution of item means by research site varied, some indicators of quality in Area 5 revealed similar high and low patterns as shown in Figure 1. For example, Item 73 (Staff members have opportunities to communicate their recommendations to officials who make decisions and laws about child care/ education services) shows a dip in ratings across all sites. Other ratings did not fit this general pattern, but instead reflected unique features of the special education services in a particular research site. For example, all sites but the US site reported a lower rating for Item 76 (Families of children with special needs are involved in decision-making, planning, delivery, and assessment of services); however, the United States participants did not rate it lower, perhaps because families are an integral component of special education services as required by federal law.

GGA Area	China1 (n=78)			China2 (n=62)			Guatemala (n=78)			India (n=34)			Italy (n=45)			Mexico1 (n=59)			Peru1 (n=64)			Peru2 (n=54)			United States (n=59)		
	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range
ENVPHY	3.6	0.55	2.06-5.00	4.4	0.40	3.41-5.00	3.9	0.6	2.06-5.00	4.1	0.5	3.24-4.82	4.6	0.4	3.35-5.00	4.1	0.5	2.88-4.88	4.3	0.5	3.00-4.88	4.1	0.5	2.94-5.00	4.35	0.42	3.12-4.94
CURPED	3.6	0.50	2.40-4.87	4.2	0.41	3.33-5.00	4	0.7	2.40-5.00	4.2	0.5	3.20-5.00	4.7	0.3	3.87-5.00	4.2	0.6	3.09-5.00	4.2	0.4	2.67-4.93	4.1	0.5	2.93-5.00	4.21	0.46	3.20-5.00
EDUCAR	3.9	0.50	2.55-4.82	4.3	0.45	2.18-5.00	4.2	0.6	2.36-5.00	4.3	0.5	3.00-5.00	4.7	0.4	3.09-5.00	4.4	0.6	3.09-5.00	4.3	0.6	2.64-5.00	4.4	0.5	3.27-5.00	4.43	0.39	3.45-5.00
PARCOM	3.5	0.54	2.21-4.79	4.30	0.44	3.47-5.00	3.5	0.7	1.63-5.00	3.7	0.6	2.32-5.00	4.5	0.4	2.95-5.00	3.7	0.50	2.63-4.79	3.8	0.6	1.89-4.74	3.8	0.60	2.42-5.00	4.17	0.55	2.89-5.00
SPCNED	3.3	0.67	1.79-4.93	3.8	0.65	2.36-5.00	3	0.7	1.07-4.79	3	1.2	1.00-4.93	4.6	0.4	3.71-5.00	3.4	1.1	1.29-5.00	3.5	1	1.79-4.93	3.1	1.00	1.00-4.93	4.03	0.67	2.36-5.00

Figure 1. Item Means for Area 5: Young Children with Special Needs (N=533)

Access and equity of services. Five items (#63-#67) pertaining to access and equity by gender, socioeconomic status, and religious, ethnic, language, and cultural affiliation comprise this subcategory. The first three access and equity items were rated good to excellent by all research sites. Participants from China1, Mexico1, and Peru2 rated Item #64 somewhat lower than the other sites. The examples revealed differences in accessibility by geographic location (e.g., urban, rural), whether the program was private or public, and in the incomes of the families participating in the program. Two programs in Mexico reported they provide scholarship funds to ensure participation of children from low-income families. Another participant from Guatemala remarked, “The special needs child has the same rights as everybody, but here, we do not have support services.” Ratings in items #66 and #67 were lower (mostly the adequate range) with participants often remarking that they did not serve children with disabilities.

Common philosophy and aims. This category includes two items (#68-69). The first item asked the extent to which special services included teams composed of parents, program staff, and specialists. Item means for four sites (Guatemala, India, Mexico1, and Peru2) were in the minimum program quality range. Examples explaining the reasons behind their ratings were a mixture of simply not having children with disabilities enrolled in their programs to comments explaining that specialists met with parents and made adjustments to the curriculum as needed. All of the remaining sites had means in the adequate range, with the exception of Italy whose mean rating was

higher. Comments to support Italy's higher rating indicated that parents and professionals had regular meetings two or more times per year. The second item focused on whether there was an identified person for planning, coordinating, and monitoring the delivery of special education services. Item means in all sites but Italy were in the inadequate to minimum range. Reasons for the low ratings were reported as lack of specialists. For example, a participant from Guatemala stated, "No because we don't have specialized personnel such as a therapists."

Staff and service providers. The next category included four items (#70-#73) pertaining to availability of qualified staff, individualization of curricula or services, professional-family relationships, and opportunities for staff to communicate recommendations to officials. Overall, with the exception of Italy and Item 72 for the US site, these items were rated in the inadequate to minimum range. Items #70 (A staff member and/or specialist in the program has skills to identify special needs of children or a professional with those skills is available) and #72 (Staff members and/or other specialists establish ongoing relationships with parents/guardians and families in meeting the needs of their children) were rated especially low and mostly as inadequate. Many examples to support the ratings for #70 indicated that either teachers were trained and responsible for identifying children with disabilities (India), or that there were no specialists in the programs (Guatemala), or that they take the children to a specialist in another setting (Mexico). For Item #72, participants from India stated they conduct home visits to maintain family relationships while others reported only interacting with families when needed.

Service delivery. This last subcategory includes three items (#74-76), with the first focused on the provision of adaptive equipment and materials, the second one on the degree of inclusion in programs, and the last on family partnerships in terms of joint decision-making about the delivery of services. All of these items received ratings in the inadequate to minimum range across sites except for Italy and the US on Item #75, whose ratings were in the good range, perhaps a reflection of the focus on inclusion in their policies. A common response for the US site was that parents and teachers participated in the development of educational plans for children with special needs. The partnership between therapists and teachers was emphasized also, with many programs reporting that needed therapies were conducted within the classroom.

## **Discussion**

The twenty-first century has ushered in a new age of global connectedness. Early care and education services for young children with disabilities are included in this trend. Though each nation oversees the education of their children and youth, international initiatives have reshaped global thinking about how services are implemented including a greater emphasis on inclusion of children with disabilities in settings with typically developing peers, the call for higher quality services, inclusive services, and the need for meaningful family engagement as decision-making partners (Global Partnerships on Children with Disabilities, 2014). The results of this study demonstrate the need for greater emphasis in these areas. These changes require early care and education professionals and special educators to rethink old practices and develop new solutions that are viable within the beliefs and values of each society and the world at large. Similarly, the shift toward higher quality services and equal access for all young children, including those with disabilities, requires resources and policies that emphasize best practices.

## **Conclusions**

In conclusion, by using the GGA to examine services for young children with disabilities, trends and gaps in services were identified. Since 90% of children with disabilities in developing countries do not attend school (UNESCO, 2010) and many other countries continue to struggle to shift policies and practices from a deficit model to an inclusive model (World Health Organization, 2011), it is imperative that cross-cultural research be implemented to shed light on factors impacting services.

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## **Navigating disability and related services through a multicultural lens: The experiences and perspectives of immigrant families involved with special education services**

Katrina P. Cummings  
University of North Carolina at Greensboro  
[kpcummin@uncg.edu](mailto:kpcummin@uncg.edu)

Belinda J. Hardin  
University of North Carolina at Greensboro  
[bjhardin@uncg.edu](mailto:bjhardin@uncg.edu)

### **Abstract**

Cultural beliefs, values, language differences, and unfamiliar education infrastructures and practices can impact the success of immigrant children with disabilities in their new country. This study presents findings based on interviews with eight immigrant parents of children with disabilities from four countries receiving special education or other specialized services about their experiences and related perceptions. These results can assist professionals in rethinking how to shape policies and practices in their own countries to create effective partnerships with culturally and linguistically diverse families.

**Keywords:** immigrant families, home-school partnerships, culture, special education services

### **Introduction**

In 2013, 3.2% or 232 million of the world's population, up from 154 million in 1990, were immigrants. As globalization enables greater numbers of people to live abroad, it is imperative that professionals understand the experiences of immigrant families of children with disabilities. Little literature tells the stories of these families. Thus, the goal of this study was to gather information from immigrant parents that could assist special education professionals in better understanding intersections between immigrants' home cultural and their new country contexts. Results of interviews with pairs of immigrant or refugee parents of children with disabilities from four countries will be presented: Burma (Myanmar), Vietnam (Montagnard), Mexico, and Peru. All children were currently receiving special services and ranged in age from 21 months to 16 years.

One of the major decisions facing immigrant and refugee families of children with disabilities is the care and education of their children (Bradley, 2011). This task can be daunting for immigrant families whose cultural views of disabilities and related education may differ from mainstream practices in their new country. International initiatives on inclusion are immersing in the education community (UNICEF, 2013; UNESCO, 1994); however, educational services vary greatly among countries (Kauffman & Hallahan, 2011). International reports estimate that between 5% and 12.7% of children ages 14 and younger have a moderate to severe disability, mostly in developing countries (UNICEF, 2013). Approximately 5.2% of the children between the ages of 5 and 17 in the US have identified disabilities (American Community Survey,

2011), which is comparable to the lower end of the worldwide estimates.

North Carolina is one state in the United States (US) with a significant increase in the immigrant population, which precipitated new challenges for disability service providers. Between 2000 and 2010, North Carolina's immigrant population grew by 67%, the sixth highest in the nation (Camarota, 2012). This growth is reflected in the over 260 languages spoken in the homes of students who attend North Carolina public schools (The Center for International Understanding, 2009). The purpose of this study was to understand immigrant parents' beliefs and experiences concerning their children with disabilities, special services in the US, their personal perceptions of disabilities, and their cultural heritage contexts. Parents' experiences and perspectives about special education services will be examined alongside relational and participatory practices within the family-centered approach (Wilson & Dunst, 2005). This information can be used to inform special education parent-professional partnerships. Although, this study explored the experiences and perceptions of immigrant and refugee families in central North Carolina in the United States (US) who have children with disabilities, findings may be applicable to immigrants who settle in other countries. The following questions guided this study: 1) What are the experiences of immigrant and refugee families of children with disabilities related to education and other specialized services? and 2) How does sociocultural context (both the heritage and new country contexts) of immigrant and refugee families of children with disabilities impact their perspectives on education and other specialized services?

## **Methods**

The study included eight individual interviews with parents of children with disabilities from immigrant or refugee communities, including two participants each from Burma, the Montagnard community of Vietnam, Mexico, and Peru.

Participants completed a demographic information form and answered a set of semi-structured interview questions. Interview questions were clustered by topics including information about: the participants' families (e.g., length of time in the United States, number of family members); their children with disabilities (e.g., type of disability, context of when the child was diagnosed); their children's schools and services (e.g., types of services, school characteristics, role of home language and English in school/services); parental perspectives on their experiences with special services in the US (e.g., challenges, successes, advice for other immigrant/refugee families, professional interactions); and information about how disabilities were viewed in their home country or refugee camp (e.g., cultural view of disabilities, local facts related to disabilities, and educational practices for children with disabilities). Interviews were transcribed and then analyzed via a constant comparative process, which included reviewing and reorganizing the data throughout the analysis process until a final set of coding categories was developed...

## **Results**

Child with disabilities and US experiences. The parents described their children as having a wide range of developmental delays and disabilities or medical conditions, which were diagnosed at varying ages. Some children had congenital or medical conditions (e.g., congenital heart failure, polio) that precipitated their disabilities, whereas others had types of disabilities (e.g., autism) that were less obvious to the parents. Generally, children were diagnosed with medical conditions by a physician early on or the parents noticed "something different" about their children that was later queried and diagnosed by a professional. Two exceptions were mothers from Peru, who

were the first to notice something different about their children and raised concerns with professionals.

The characteristics of the schools or other settings where services were provided (e.g., in-home services, Head Start) varied according to the age levels of the children as well as their disabilities and/or delays. The professionals who parents reported as service providers included teachers, interpreters, medical doctors, community agency staff, early interventionists, developmental therapists, speech therapists, and physical therapists. Parents also identified various unpaid supports with whom their families were engaged. For example, some parents identified disability organizations such as the Autism Society and their churches as supports.

Families' native experiences. Prior to moving to the United States, most families reported that they lived in rural areas and were not exposed to people with disabilities. Both families of Burmese heritage had come to the United States from the refugee camps in Thailand. The father from Burma reported that he lived in the refugee camp his whole life prior to coming to the US. Also, one of the families from the Montagnard community lived in a refugee camp in Cambodia prior to moving to the United States. Despite, the paucity of experiences with disability in their native countries, families shared some insights. The Mexican and Peruvian families both indicated that there were a lack of resources and supports in their native country, including few educational services for children with disabilities. The experiences with disabilities that parents who lived in refugee camps shared centered around the lack of informal supports (e.g., assistance from neighbors) rather than the lack of formal services (e.g., medical).

Parents' understandings of disability. In general, after each family learned that their child had a disability, there was a shift from innocence, not noticing or noticing without concern, to seeking understanding about the disability of their child. Hence, parents began to seek information about their child's disability. This was true for families who had children with medical conditions as well, who learned of their children's conditions when they were young. Both Peruvian parents were somewhat unique regarding their understanding of disabilities since they were the ones who first developed concerns about their children's development.

## **Discussion**

Several contextual considerations related to disability and diagnosis emerged that contribute to professionals' knowledge base for working with immigrant and refugee parents of children with disabilities. First, the perspectives of refugee families arriving from camps differ from immigrants arriving from heritage countries. Next, labeling and early identification practices in immigrants' new countries do not always match their heritage practices and beliefs. Finally, acceptance (or not) that a child has a disability differs across cultural contexts.

Several findings emerged that might inform how professionals work with immigrant families who have children with disabilities. Namely, families might yield to professionals, and thus be slow to actively participate; and certified interpreters should assist with all interactions. All families were receiving an array of services. Parents described active participation in their child's development at home and more passive participation as school or medical settings, with the exception of parents from Peru. This may be true because most parents generally regarded professional as experts (Hill & Torres, 2010). However, parents from Peru seemed to regard themselves as partners with professionals, which closely resembled family-centered principles in practice (Turnbull, Turnbull, Erwin, Soodak, & Shogren, 2011). It is proper to note that all parents made concerted efforts to find services for their children. The relational aspect

of interactions between immigrant parents and professionals was largely influenced by language differences, which often is a barrier for immigrants (Ozturk, 2013). In this study, parents' perceptions about services were mostly positive; however, most parents wanted more or better communication with professionals. Parents from Mexico, Burma, and the Montagnard community spoke little or no English. They reported varied communication experiences that included having interpreters only during IEP meetings, receiving written documents in English, and interpreters accompany professionals when services began but not on an ongoing basis.

The sociocultural context of immigrant families shapes their relational and participatory experiences in ways that we do not yet fully understand and attention to professional-family partnerships is often omitted from special services once a child begins services (Hardin & Hung, 2011). The insights gleaned from this study about how immigrant families' participate and relate to professionals have implications for enhancing professionals' capacity to work effectively with immigrant families who have children with disabilities or delays. Additionally, they have implications for informing international policies and practices related to working with immigrant families. The main limitation in this study is the small sample size, which impacts the generalizability of findings. Therefore, replication with larger and more diverse immigrant groups is recommended.

### **Conclusion**

Immigrant families who have children with disabilities and receive related services often have to adapt to multiple circumstances simultaneously, which are informed by multiple contexts. This study adds to the professional literature by providing professionals with insights about immigrant families' experiences and perceptions as they relate to participation and relational qualities that might influence the outcomes of their children with disabilities or delays. Acknowledgement: We would like to thank the Coalition for Diverse Language Communities at the University of North Carolina at Greensboro for its support of this study.

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## **Psychoanalysis, special education and teacher training**

Simone Z. Moschen  
PPGEDU/UFRGS  
[simonemoschen@gmail.com](mailto:simonemoschen@gmail.com)

Carla K. Vasques  
PPGEDU/UFRGS  
[k.recuero@gmail.com](mailto:k.recuero@gmail.com)

Cláudia B. Fröhlich  
PPGEDU/UFRGS  
[claudiafrohlich@hotmail.com](mailto:claudiafrohlich@hotmail.com)

### **Abstract**

On the periphery of the political agenda of the State, in the Brazilian context, special education is traditionally organized as specialized educational care in substitution of usual education in special classes and schools – differentiated spaces and proposals for those who by their social, cultural, genetic, behavioral, etc. qualities differ from the norm. Persistence, growth and deepening of this framework in conjunction with the universalization of basic education and international conferences relating to those who are “outside” it have introduced more inclusive guidelines in the political scenario. With these in mind, Brazil has implemented a series of laws, policies and programs aimed at reducing inequality and favoring school inclusion. With the National Policy for Special Education in the Perspective of Inclusive Education (Brazil, 2008) and subsequent documents, there is a growth of that perspective. It endorses the focus of our thinking and presents a new reality: children and adolescents traditionally separated from the processes of education, gain space in the classrooms, in the old school yard. How to understand the relationships between political policy and its effects on school life? To what extent do their words deconstruct the meanings that relate difference to abnormality and ineducability?

The legal system transforms the school, and one of its first effects is an increase in enrollment. According to the information provided by the Brazilian National Institute of Educational Research and Studies (INEP), through the Basic Education Census over the period 2009-2012, in the Network of Elementary Schools in the State of Rio Grande do Sul, the increase was 191%. In the metropolitan area of Porto Alegre, the percentage is 72% in early childhood education and 30% in elementary school<sup>4</sup>.

While access to education is significant, little is said about permanence. Who are the students with Global Developmental Disorders (GDD)? What are the conditions for teaching and learning take place?

We would like to share the first effects of teaching, research and extension programs, still in progress, which started as a way to address these issues. They began in 2011 through the proposal of an extension course called “Schooling of pupils with Global Developmental Disorders: (re)readings of everyday life”. Our proposal was to work with a fixed group of teachers for three semesters – alternated with semesters of study of the data generated by the course and preparation for the next module. Each module was designed to be 60 hours long, distributed in class meetings and works in a virtual environment, especially of writing, reading, dialogue and narrative production. In this

environment, the teachers are invited to write about: Who are the students with GDD? What are their questions, concerns and desires in regard to the subject with GDD? What happens, what touches, in the (non)encounters of such students with you, the class, and the school? Systematize information on their clinical history (treatments, spaces of clinical care, specialists, medications, etc.) and school history (schools, achievements, failures, specialized educational service, etc.). In addition to clinical diagnosis, it is important to reflect on the position that the student possesses in relation to his/her medical history and school. How does he understand this path? And how does the family explain such situations? And how do you, the teacher, understand this student? What is your relationship with the experts and their knowledge? What can your student have and be? How does this student learn? What are the possibilities for learning and teaching become possible?

Each teacher has a particular reader, who accompanies him in the comings and goings of the text. The encounter between readers occurs primarily at the margins of the page, between the lines and blanks. Each reader “scribbles” – as we named this intervention – the text read, calling the teacher to follow his/her elaboration in writing.

Fourteen teachers from different school districts in the city of Porto Alegre and in the State of Rio Grande do Sul participated in the course. As a prerequisite to participate, they had to work in a classroom or in a specialized service with students identified through pedagogical/educational, medical and/or psychological diagnosis, defined or not, as autism, infantile psychosis and/or Global Developmental Disorder (GDD). The material produced – written in the virtual environment and exchanged in face-to-face environment – constitutes the empirical source of a survey entitled “The construction of the case as a device for school inclusion of students from zero to five years with Global Developmental Disorders”.

The first phase of the work had as its objective, at the interface between the face-to-face encounters and the distance ones through writing, scribbling and dialogue, the development on the part of teachers, of a novel student – not the one seen by the diagnosis that has been given to him. We looked for different ways to systematize and distinguish the experiences of teachers with the intention of, through narrative construction, setting up the student’s place – in tension with the impaired student – and, consequently, the teacher’s place – in tension with the powerless teacher who faces the task of teaching who insists on not learning. Our anticipation is that the writing constitutes an important instrument of invention of a prominent position – in the case of teachers and students’ positions.

The exercise that we have been calling scribbling is established when the teachers-researchers pose as readers of the writings of the teachers-subject-of- research. In the encounters with the writing, the scribble introduces phrases, writes in the margins, questions, accompanies, enhances, and authorizes. Writing and scribbling are some of the different rhythms of dialogue that the construction of the case, from the ethical contributions of psychoanalysis, introduces as a teacher training device.

The notion of building the case reaches us through psychoanalysis – from its practice and its transmission. It is from this field that we import the notion to make it operate in our proposal of work with teachers.

In psychoanalysis “the construction of the case wants to function as a reduction of the narrative to the writing of the case through significant elements that allow us to locate the subject from his speech and his actions following his style” (Figueiredo & Bursztyn, 2012, p. 143). The construction of the case appears as a guiding notion of the work done by mental health teams. It is the production of a unique extraction operation in a field governed by universal diagnosis and prescriptions. The guidance that derives from what

is universal in order to decant from it what is singular has greatly interested us when it came to considering the elaboration of a proposal for continuing training capable of fostering and supporting the pedagogical work of teachers together with the children who, in their encounters with the teacher, have previously been diagnosed.

This extraction operation, where guiding elements emerge from the construction of the case, takes place in the work between the patient and the members of the health care team. It is from this encounter, from its effects on each of the involved subjects and from the dilemmas and generated opportunities that the elements of a narrative about the case emerge. It is not a detailed examination of the patient's history or of his illness, but rather what the encounter adds to the story, especially with regard to the difficulties in conducting the clinical work. It is about the written narrative of those encounters – normally the responsibility of the patient's reference technician –, the scenes that make it up and the puzzles that they encrypt, that the team sets the work of producing a reduction of the minimum elements of a repetition. It is about searching in the narrative for what is repeated as a trait that marks what we can set as the subject's style.

As in the Freudian writing, what guides you through the process of construction of the case is more on the side of what you do not know than what you are aware of. "It is to put the narratives of the protagonists of a social network and find its blind spot; to find what they have not seen, blinded by their knowledge and fear of ignorance. [...] The construction of the case consists, therefore, of a dialectical movement in which the parties are reversed: the social network is placed in the student's position and the patient in the teacher's position. Of course, what the patient should teach does not come consciously and cannot be said in direct speech, but through our listening of his particularities, of the coincidences that have been hidden in his history, the riddle of his flawed acts, relapses and absences, etc." (Viganò, 1999, p.52).

What is done in the field of health for building the case served us perfectly to guide our formative proposal. We would like to think of a method able to involve the teacher in the production – and not in the application – of know-how about his role as a teacher; we would like to sustain with the teacher the question about who the student that comes to him is, suspending the subtext that the diagnosis stigmatizes the child; we also would like to involve the teacher in making the encounter with his student so that he and the child could collect the effects of a singular operation.

Then, we started an implementation operation of this notion and of the method that it supports in the field of continuing education. Based on it, we set out to guide the writings of the teachers via the scores derived from the scribbles, towards the construction of the case. It is important to note that the initial challenge was in the support of the elaboration of a narrative sufficiently rich in details that it was possible to make, in a second moment, the reduction necessary for decanting of signifiers that comprise, in their repetition, the distinguishing marks of the subject in that particular encounter. Not a few times, we came across a very significant desert. When facing a question posed by the subject, the teacher insisted on the myth behind the diagnosis which the child received. We took this insistence as resistance to the non-knowing upgraded by the encounter with the kids. The fact that the teacher very often finds himself with nothing in his hands to follow the pedagogical process with his pupil, known as a carrier of GDD, constitutes an important factor to justify the choice for a construction job.

From psychoanalysis, the way we are read and how we read writes a possible new story. Understanding the personal/social/school history as a reading-text constituted from multiple voices and perspectives allows the thinking, for example, that what was built in relation to the other, can be revisited, rebuilt, allowing other meanings and senses. With

regard to children with autism and infantile psychosis, the school and the teacher may offer other interpretations for their pupil, interrogating their senses that are often crystallized because of diagnoses, classifications, evaluations, etc.

We read in the teachers' material:

*He's a GDD. (sic)*

*He was there, the whole time and I didn't see him ... because he was a GDD, autistic, I imagined he could not understand me (...) I offered so little ... could have offered more ... could have offered a look of recognition ... (sic)*

In making our experience singular, we passed through different moments: the search for meaning, the absence of a one-way sense for what is lived/experienced and the invention of new possibilities for the future. This movement, however, only takes place when it can elucidate the loss of illusion of wholeness and oneness.

*The autistic of politics is not the same autistic that reaches the classroom. We need to discover, create, invent a student, a teacher, a coherent practice. (sic)*

Unlike the perspective in which educational possibilities and learning are based on, solely and exclusively, conditions inherent to the student, one can design subjective school paths as possibilities to be built (or not) in the encounters between subjects and institutions.

In the gesture that takes the voice as a letter to be written and read, the teacher is asked to narrate and subscribe his own experience. In playing the role of author, important movements are perceived in ways of reading, interpreting, and meaning the (im)possibilities of special education students.

At the beginning of the course he wasn't there, but throughout the course I built this new student, since I saw him with a new look. Then I look back and realize that I didn't have a break, didn't use comma, didn't look to that student who has always been there, he was the same. Today I realize that I needed to change my dialogue, my way of explaining things, and with the varied readings I've done during the course, with testimonials from my colleagues and with the experiences and wisdom of different teachers, I realized that those who never been there with this student, I was...(sic).

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## **Online interactions concerning the ICF-CY use in the Portuguese Special Education field**

Carla Silveira Maia

Department of Communication and Art/ University of Aveiro

[carlamaia@ua.pt](mailto:carlamaia@ua.pt)

Ana Margarida Pisco Almeida

Department of Communication and Art/ University of Aveiro

[marga@ua.pt](mailto:marga@ua.pt)

### **Abstract**

Based on the importance of acknowledging perspectives and problems experienced by the stakeholders involved in the assessment and intervention processes to improve procedures in the special education field, this study aims to describe and analyse perceptions and difficulties expressed online under the theme International Classification of Functioning, Disability and Health, Children and Youth Version (ICF-CY). Content analysis of 308 publications registered in Portuguese blogs and forums suggest a predominant negative view of its use, mainly during its introduction period, great concern on eligibility and difficulties regarding specialized training.

**Keywords:** ICT, Online interactions, ICF-CY, SEN.

### **Introduction**

Considering that the interaction allowed and promoted by the Internet, specifically by the Web 2.0, encourages free expression and ideas sharing by and between all (Narayanan et al., 2012; Lévy, 2000), its potential in portraying society views and perspectives on many subjects turns online data an important resource for research in social sciences (Battelle, 2005; Neri de Souza & Almeida, 2009). Despite not covering all social strata (Neri de Sousa, 2010), Internet exponential expansion and its popular and prevalent social use (O'Reilly, 2007) undertake deep relevance, not only as it growingly reflects society's opinion, but also because it equally shapes it (Castells, 2009). In this sense, not underestimating its limitations with regard to representation capability and, of course, to its potential in addressing all the issues of research in social sciences, interactions occurred and available on the Internet, may represent, especially when triangulated with data from other sources, an important contribution to the understanding of current events in our society (Neri de Souza & Almeida, 2009). Accordingly, the analysis of perceptions and difficulties expressed online on International Classification of Functioning, Disability and Health, Children and Youth Version (ICF-CY) use in Portugal, can comprise a relevant complement to the little documentation of these issues, contributing thus to better portray them. Introduced by Decree-Law 3/2008, this classification is highly harmonized with the biopsychosocial model (Florian et al., 2006; Pless, Ibragimova, Adolfsson, Björck- Akesson, & Granlund, 2009; Capucha et al., 2008), although its compulsory use puts in evidence the complexity and demands underlying an holistic approach to assessment/intervention (Sanches-Ferreira, Simeonsson, Maia, Pinheiro, Tavares & Alves, 2010). Within this scope, and considering that practices improvement demands the understanding of ICF-

CY actual implementation and contextual contingencies, acknowledgement of main difficulties and perspectives on its use is essential to overcome adversities still felt and to increase quality of Individual Education Programmes (IEPs) and of Special Education services (Boavida, 2010).

Encompassed in a project which aims at the specification, development and validation of an online platform – EduCIF - to support the elaboration of Functioning Profiles and IEPs framed by ICF-CY, the study presented in this paper analyses data collected from different sources aiming at support the development of complementary instruments to be applied in future moments of the project and to allow the platform requirements specification process. Thus, in order to describe and analyse aspects related to online expression within the above issues, this study was guided by the research question “What are the perceptions, difficulties and strategies expressed in online national blogs and forums on the introduction/implementation of ICF-CY?”

### **Method**

Given the stated objectives, this analysis was based on recorded online interactions under the implementation of Decree-Law no. 3/2008 topic and the underlying use of the ICF-CY as a reference. The corpus was randomly collected from Portuguese blogs and forums devoted to the discussion and information sharing of aspects related to special education, and included publications registered between the mentioned Decree-Law promulgation and collection (January, 2008 - December, 2013).

Given the study nature and objectives, data analysis was done using content analysis techniques. Categories concerning perceptions, experiences and difficulties expressed in publications resulted from a combined inductive and deductive approach and were subjected to peer review.

Along with these, other categories were also considered, such as those related to the publications identification and those that, intending to understand the social influence over opinions expressed, were based on indicators of social presence.

Resulting from these perspectives, publications were subject to a categorization organized into 3 broad dimensions: (i) Identification (Authorship, Job/Profile, Theme, Date); (ii) Nature (Opinion, Experience/Practical case, Resources sharing, etc.), Perceptions (Negative/Positive), Problems/Difficulties and Strategies; (iii) Social Presence (Affection, Cohesion and Interaction).

### **Results and discussion**

Based on the methodological procedures described above, 308 publications were collected and analysed, comprising 68 posts - 60 from blogs and 8 from forums – and 240 comments - 202 from blogs and 38 from forums. Number of publications varied not only between blogs (268/308) and forums (46/308)<sup>1</sup> but also considering comments made, as only 13/60 blog posts and 3/8 forum posts registered comments. Publications coincide mostly with the academic year of the ICF-CY introduction period (120/308) and the following years – 2008/2009 (22/308) and 2009/2010 (86/308), being this prevalence natural attending to the recognized education resistance to change (Estêvão, 1994).

Regarding compulsory/voluntary registration issues, all the forums considered demanded registration (8/8) while half of the blogs allowed non registered participation (30/60) being publications under pseudonym higher in blogs (214/262) than in forums (23/46) and assuming this form of identity non-disclosure great expression on aggressive behaviours identified in 22/308 publications. Publication author’s job/roles identified were mainly Teachers (23/308), Parents (23/308), Special education teachers

(17/308), and Students (7/308). Although in most publications this identification wasn't possible, parents' participation suggests, corroborating previous studies results, that concern with the impact of the new Portuguese special education law is shared by educational professionals and parents (Correia, 2010). On the other hand, little expression of health professionals may indicate a greater concern by educational community.

In terms of general thematic of the blogs and forums from which publications were collected, some themes stand out: Inclusion/Special Needs Educations in general (21/68), Education in general (18/68), Early Intervention (7/68) and Autism (6/68). Regarding themes focused in posts, these were ICF-CY in general (25/68), Eligibility (17/68), Legislation (7/68), Inclusion/Special Education in general (4/68), Specialized training (4/68) and ICF-CY adequacy to education (3/68). Comments emphasize themes such as ICF-CY in general (50/240), Eligibility (35/240), Specialized training (27/240), Inclusion/Special Education Needs in general (20/240), Legislation (19/240), Collaboration (18/240) and Education human resources (15/240). Apart from ICF-CY in general, the pronounced incidence of Eligibility and Specialized training themes (62/240) is consistent with prior findings and may reinforce concerns towards these aspects as determinant in the resistance raised by this legislation change as they were often referred with a negative perspective (38/62) and were majorly located in the first years of implementation (33/62). Regarding the first, previous studies evidenced great concern by educational community on ICF-CY use for eligibility purposes (Correia, 2010), lack of understanding concerning this decision (Sanches, 2010) and an actual decrease in the number of students benefiting from special education services (Candeias, 2009). Regarding the second, insufficiency of specialized training was also previously identified as a key aspect of difficulties felt (Candeias, 2009; Sanches, 2010). Considering ICF-CY adequacy, further questioned in posts than in comments, this theme was likewise addressed in previous studies that underline disagreement caused by this question affects not only field professionals but also the scientific community (Correia, 2010). The great addressing Collaboration and Education Human Resources themes in comments - and once they were little focused by posts - may stress the importance of these issues for participants and, while the first may reinforce prior findings that connect difficulties to non-adoption of ICF-CY for example by the Health field (Candeias, 2009; Sanches, 2010), the second evidences importance of problems apart from the law promulgation and the ICF-CY use on the resistance shown.

Although not focus of analyses in this study, it is important to state that different amount of publications collected from the two distinct online discussion spaces may have partly resulted from access constraints as forums search returned discussions of private groups which were consequently not possible to collect and analyse.

Considering the nature of publications, while posts were mainly dedicated to Resources sharing (33/68) - such as the ICF-CY manual and others -, Information sharing (19/68), Opinion expression (13/68), Divulgarion of media articles (12/68), Divulgarion of professional training/lectures (9/68) and Divulgarion of scientific studies (6/68), comments were mainly comprised by Opinion expression (163/240) and Experience/Practical case sharing (41/240). High expression of the media influence over public opinion is increased if we considered that the most commented post - registering 70/240 comments - consisted on the Divulgarion of a media article. Considering that, along with the fact that indicators of social presence were identified in 231/308 publications, the 2nd most commented post - registering 52/240 comments - consisted of an exclusively social nature content, we may suggest that online interactions analysed were more pursued for social/emotional reasons rather than practical ones.



Corroborating this fact is the little expression of doubts/requests for clarification (6/308). Corroborating previous studies results that show general dissatisfaction felt by educational community on ICF-CY use (Candeias, 2009) and a decrease of negative perceptions from 2008 to 2010 (Sanches, 2010), negative references occurred in 95/308 of publications, mostly in the first year considered for analysis, while only 6/308 expressed positive perceptions.

### **Conclusions**

Supported on qualitative and quantitative data, results from the content analysis of online publications randomly collected from Portuguese blogs and forums under the theme ICF-CY, from its introduction on educational context to present days, suggest greater debate during the academic years immediately following the Decree-law promulgation and a predominant negative view of its use, particularly during this initial period. Aspects such as eligibility changes, lack of professional training and human resources seem influential on these perceptions, although most of them are not specified or sustained on concrete reasons. Online discussion of this topic seems to be more centred on social/emotional issues than in practical ones, being the strategies addressed mostly concerned to resources sharing, expression of doubts/requests for clarification scarce and perceptions and difficulties on the ICF-CY use largely of general nature.

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## **Deaf Children with Cochlear Implants: development and learning**

Celeste Azulay Kelman  
Federal University of Rio de Janeiro  
[celeste@kelman.com.br](mailto:celeste@kelman.com.br)

### **Abstract**

Who, where and how much are the deaf children with cochlear implants (CI) studying in elementary public schools in Rio de Janeiro? How do they communicate, learn and interact in inclusive settings? In order to answer these questions, we conducted two different sets of interviews: one with eight parents and caretakers and the other with fourteen teachers. Data was gathered and interpreted through semi-structured questions aiming to reveal perceptions about communication, sign language, social and academic achievement. Health professionals tend to orient the parents to use only spoken-language with their implanted children. This advice is understandable during the initial stage after the implant, when the child's brain has to make an effort to translate new signs into coherent communication. Any other easy communication path, including sign language, could inhibit the development of the new "channel". However, not all CIs are fully successful. There are children with CI that still have learning difficulties. For those, it would be a mistake to abandon entirely the bilingual approach, mainly at school. Teachers reported that deaf students with CI who signed and spoke learned faster and more than their deaf peers who only signed. Through continuing education courses, parents and teachers must learn more about the meaning and differences among a subtractive language approach in opposition to an additive language perspective. Teachers must acquire knowledge of how to deal with the new challenges created by linguistic diversity in their inclusive classrooms.

**Key words:** deafness; cochlear implants; inclusion; communication; learning process.

### **Introduction**

In developed countries cochlear implantations have been intensively performed in severe and profound deaf children for many years. In Israel, for example, more than 60% of deaf children from birth to age 3 had received CIs (Ben-Itzhak et al 2005). In Australia, because about 45% of deaf children had CIs there was an apparent decline in the Australian Deaf signing population (Moore, 2005). This trend prompted a research conducted by Hyde and Punch (2011) to investigate what were the communication modes used by a group of Australian children with CIs. A survey was conducted with parents and guardians of 247 children who received CI before 18 years old responded and another one with 151 teachers. These teachers worked in different educational settings, as regular teacher of an inclusive class, itinerant teachers who collaborated with classroom teachers or teachers who worked in bilingual programs. Some respondents chose more than one communication approach. Roughly, for 80% of the children, spoken English was the main mode of communication. For the other 20%, half used Australian sign language – Auslan and the other half simultaneous communication.

In Brazil, the widespread use of CIs started recently after the public health service

accepted to pay for the surgery performed in children up to 4 years. This was not a simple move because there was some opposition from the Deaf Community that feared “loss of identity”. In parallel and because of this ideological confrontation, in 2005 a law was enacted determining that instruction should be done with the support of sign language. This resulted on the hiring of interpreters to work in inclusive classes and the adoption of a conceptual model in which deaf children attend a regular class and in the other part of the day attend a resource room, receiving specialized educational service with a special education teacher and a deaf instructor.

Our research was focused on deaf students of the Rio de Janeiro public school system that are enrolled in inclusive settings. Out of eleven thousand students with special needs, roughly one thousand are deaf or hard of hearing. Only 23 of them had CI, for a period varying between 2 and 8 years. Many teachers of regular classes are unable to differentiate hearing aids from cochlear implants (Taveira et al., 2012).

We were particularly interested whether sign language could be of pedagogical value for deaf children with CI. We were also interested on the common features of deaf students, with and without a cochlear implant, and how deaf students with CI compare to hearing children under a linguistic, cognitive and social point of view. We investigated the perception of hearing parents and teachers in inclusive settings about linguistic, cognitive and social development and academic achievement. We wanted to know how these children learn and what their modes of communication are.

## **Method**

We conducted semi structured interviews with parents and teachers of 10 deaf with CI students, out of the universe of 23. One of them had a post lingual hearing loss. All others were congenitally deaf. The research was approved by the municipality ethic committee.

The interviews were conducted with fourteen teachers: eleven working in regular classroom, two in resource rooms and one as an educational interpreter. We asked about their experiences and concerns in relation to students with CI, in particular if they think that these students match in opportunities with their hearing pairs. If not, we asked what would be necessary to achieve this goal.

We were unable to interview all the parents or caretakers but succeeded with eight of them: six mothers, one father and one uncle. Questions were mainly about surgery motivation, linguistic options and the adoption of any extra educational or health service, such as speech therapy.

We conducted a thematic content analysis of qualitative data collected from a sociocultural approach (Kelman & Branco, 2004).

## **Results and Discussion**

In the sequence we highlight the most relevant observations that emerged from the interviews, classified into four themes: modes of communication, academic achievement, family expectancies and attendance to health services.

The following table classifies the ten students into five classes.

**Table 1 – Modes of communication**

Type	Number
Good use of the spoken language	2
Almost good use of the spoken language + use of sign language	3

Insufficient use of the spoken language	3
Insufficient use of spoken language + use of sign language	1
Exclusive use of sign language	1

The table shows that CI is not a passport for a deaf child to become a hearing child. As a matter of fact, only with two out of the ten students became fluent in spoken language. Understandably, the mother of one of these “successful” cases opposed strongly the teaching of sign language to her son. “He is not deaf”, she said, rightly concerned that her child could be tempted to assume the “Deaf Identity” without need for it.

The other eight students were still unable to reach a good level of proficiency in the spoken language. Five of them used sign language and three of them were perhaps in the worst condition, as they didn’t know sign language and were unable to communicate properly in spoken language. The mother of one of those opposed the teaching of sign language to her son. Contrariwise to the other mother, this one seems to be wrong, as her child faced severe difficulties to learn. Indeed, most of the teachers agreed that sign language helped the five students that didn’t reach full proficiency in the spoken language to better understand academic contents. One of them was socially isolated, reacted when touched and behaved in some ways like an autistic person. He communicated using simultaneously spoken language and signs (not the syntax of sign language). The positive change occurred when he started to come to a resource room with specialized teacher and deaf instructor and got better acquainted with sign language. This helped him to understand what was going on in class. In different degrees, using sign language was also beneficial for the other four students.

It is also interesting to mention that the student with post lingual deafness was the one that reacted more positively to the CI. Although a single case does not have statistical significance, this suggests, as expected, that it is easier for the brain to accept a new “input channel” than to develop a dual “input-output channel”.

#### Theme 2 – Academic achievement

Half of the teachers said that the deaf students perform better in Math and that they do not like to learn Portuguese. As expected, teachers’ perception is that deaf students with CI learn easier and faster than deaf children who use hearing aids. Six out of fourteen teachers reported that students with CI have a low achievement because of the noise in class; it disturbs their comprehension and learning. One of them said that she usually asks a hearing peer to sit beside him and help him on academic tasks.

#### Theme 3 – Family expectancies

One mother regretted that her daughter was implanted late. “Now I understand that she would have better results if the surgery was done earlier”, she said. Two mothers complained that the pediatrician discouraged them to take action when they noticed that their children were deaf.

#### Theme 4: Attendance to health services.

Several mothers said that the orientation they received from the physicians and governmental health institutions was to avoid exposure of their children with CI to sign language. The overall thinking is that it would decrease their effort and interest to begin speaking. However, the after surgery support of implanted children is insufficient to optimize the results because public finance is restricted to the implant. Most families cannot afford to pay the speech therapist. This perhaps explains why there are only two

fully successful results out of the ten cases studied.

### **Conclusions**

In general, parents are disappointed when their child is unable to speak shortly after surgery. This builds up an anxiety that often results on repressing the use of sign language. Along the same line, health professionals tend to orient the parents to use only spoken-language with their implanted children. This advice is understandable during the initial stage after the implant, when the child's brain has to make an effort to translate new signs into coherent communication. Any other easy communication path, including sign language, could inhibit the development of the new "channel". However, not all CIs are fully successful for many reasons, including the lack of multidiscipline support of the child after surgery. In these conditions, the language subtractive perspective should be replaced by an orientation towards acquisition of both spoken and sign language for children that, despite the CI, still have learning difficulties.

Teachers reported that students with CI sometimes perform below expectations because of the noise in the classroom. This offers an interesting avenue for technological advance, as the teachers words could reach the CI and be transformed into electrical stimuli not necessary through the sound propagation in an environment already crowded by other sounds.

### **Acknowledgement**

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## **Flipped Classroom Instruction for Inclusive Learning**

Cynthia Lindquist  
Metropolitan State University of Denver  
[clindqu1@msudenver.edu](mailto:clindqu1@msudenver.edu)

Lisa Altemueller  
Metropolitan State University of Denver  
[altemuel@msudenver.edu](mailto:altemuel@msudenver.edu)

### **Abstract**

The flipped classroom inverts traditional teaching methods, delivering lecture instruction outside of the class, and class time is devoted to problem solving with the teacher's role becoming that of a learning coach and facilitator. The flipped classroom provides an avenue for more hands-on and student-driven learning during class time at P-12 levels and extends into university settings. Limited research has been conducted regarding students with disabilities in inclusive settings using a flipped learning model. Differentiation has long played an important role in educating students with disabilities and its value has also been noted in the general education settings. Flipping a classroom allows for direct instruction to be asynchronous and therefore differentiation for each student can be possible. The pace of the class becomes appropriate for each student and the establishment of mastery for a lesson can be achieved when lessons become personalized. Initial research indicates flipping a classroom can be beneficial to students with disabilities in inclusive settings.

**Keywords:** Flipped classroom, differentiated instruction, technology, inclusion

### **Introduction**

The flipped classroom is a teaching methodology that inverts traditional teaching methods, delivering lecture instruction outside of the class while class time is devoted to problem solving with the teacher's role now that of a learning coach and facilitator. The flipped classroom provides an avenue for more hands-on and student-driven learning during class time. The flipped, or as some have termed it, the inverted classroom, has existed in various formats, but credit is most often given to two teachers Jonathan Bergmann and Aaron Sams at Woodland Park High School in Woodland Park, Colorado for starting the trend in 2007 (Bergmann & Sams, 2012). Bergmann and Sams used software to prepare PowerPoint presentations and recorded and posted live lectures online for students who missed class. As the online lectures started to spread Bergmann and Sams were asked to speak to teachers around the country about their methods. Teachers began using online videos and video podcasts to teach students outside of class, reserving time for collaborative work and concept mastery exercises. Bergmann and Sams (2012) describe flipping the classroom as more about a mindset of redirecting attention away from the teacher and putting attention on the learner and the learning. Although the concept started in the general education, high school setting, it has been gaining attention in various venues, including special education. Educators are investigating surprising benefits of this innovative way of teaching, such as its effect on students with special needs. Some of the benefits of a flipped classroom include reaching digital students in a digital age, differentiating instruction, self-pacing lessons

and mastery teaching, increased collaboration and instant feedback for formative assessment.

Our students today have often been defined as digital natives. Flipping a classroom speaks the language of digital natives. Today's students have grown up with Internet access; YouTube; social media sites such as MySpace, Facebook, and Instagram; and a host of other digital resources. The use of videos, podcast, vodcasts and various digital measures is not a difficult transition for our students and they appreciate the value of technology in the learning process.

### **Method**

The paper addresses the question, "Does the flipped classroom model benefit students with disabilities in a general education inclusion setting?"

The methodology is addressed through the secondary data analysis of professional journal articles, examination of blogs and websites, and experiential antidotes.

### **Results and discussion**

A significant benefit of the flipped classroom model for students with disabilities is the increase in interaction, both student-to-teacher and student-to-student. A huge benefit of flipping is that the students who struggle get the most help. Bergmann and Sams (2012) noted that the role of the teacher changes from presenter of information to a learning coach. This allows the teacher to spend additional time working one-on-one or in small groups, which is an effective way to meet the needs of students with disabilities. This modification of the traditional classroom will allow for more differentiation in the classroom.

Differentiating instruction is crucial in meeting the needs of students with disabilities (Tucker, 2012b). Blake-Plock (2011) asserted that by 2020 differentiated instruction will not distinguish a teacher as effective but will merely be a part of everyday, every lesson. Flipping the classroom adds flexibility to the classroom setting, extending learning far beyond the traditional lesson (Tucker, 2012b). Teachers who utilize outside of class video instruction, allow students to quickly watch the video and move to more challenging content and allow students who are struggling to watch the video repeatedly to solidify learning. Additionally, the teacher can intentionally plan class activities that extend the learning of those students ready to move forward and that refine the learning of those who need remediation. Because all the direct instruction is recorded, students with special needs can watch the videos as many times as needed to learn the material. Students are no longer forced to anxiously copy down notes with the hope that they'll understand them later. Instead, students can pause a lesson, rewind, and make sure they actually learn the important concepts (Sams & Bergmann, 2012).

In an interview with Kelsey Hurren (2013) Aaron Sams shared, "What we're finding these days is that a lot of teachers are using the flipped classroom model as just an entry point, but no one really stops there. If kids want to work ahead, they've got all the instructional content they need. And teachers' time can be freed up to help the students who struggle (para. 4)" Sams explains the model is a version of the flipped mastery model based on work by Benjamin Bloom. Bloom believed that most students are able to reach mastery if given enough time. With digital video, content delivery is much less of an issue, and students can review things multiple times if necessary. Students watch and learn in an asynchronous system where they work toward content mastery.

This self-pacing, mastery model also gives choices to students. Bergmann and Waddell (2012) have expressed that flipping enabled them to move from a lecture-based classroom model to a learner-centered, problem-based, inquiry-driven hub of



learning. When they gained the additional class time, they re-evaluated every assignment and its place in the curriculum. And today their videos are optional as well. They give students choices in how they want to learn. Most of the students choose to watch the videos, but others are learning from their textbooks or from online simulations. They have essentially given the responsibility of learning to the students, which is the essence of a flipped classroom.

As principal of a Title I elementary school with 510 students in Elgin, Illinois, Joe Corcoran worked with his building leadership team to implement a flipped-instructional approach, integrating a progressive school-to-home and school-to-community model. He challenged his teachers to reflect on their practice and rethink how to reach their students. Corcoran acknowledged the flipped approach encouraged students to set the pace for truly individualized instruction and as a catalyst for teachers, administrators and students to change the way things had always been done. As struggling students began to take a more active role in their academic success, they acquired improved reading and critical-thinking skills that helped them become independent learners (Corcoran, 2012).

Another benefit to flipped classroom instruction is increased student collaboration. In an interview with Andrea Prupas, head of inov8 Educational Consulting ([www.inov8-ed.com](http://www.inov8-ed.com)), a firm that does consulting in special education and technology, Prupas points out the most effective approach for flipping the classroom for special education students isn't all that different from doing it for general education students.

Her philosophy is instead of doing things differently we really have to do different things (Schaffhauser, 2013). Prupas believes the benefit of the flipped classroom is really for the collaborative and active learning aspects of the classroom. For example, if a student with autism needs to work on social skills specifically, a flipped classroom allows the teacher to focus on social skills by setting up activities that are team-oriented and collaborative. In this example, the instructional videos might show social skills and then, in the classroom, the students would work together on the skills (Schaffhauser, 2013).

Students are helping each other learn instead of relying on the teacher as the exclusive disseminator of knowledge. Yet another valuable aspect of the flipped classroom is the immediate feedback that can be given to students. The dedicated face-to-face time allows teachers to work with students and catch misunderstandings and misconceptions. Informal formative assessments are happening continually. The students no longer have to wait for feedback on their learning.

#### K-12 Setting Example

One example from an elementary classroom is taken from a 4th grade math class. Prior to beginning a unit on fractions, the teacher recorded herself teaching the concept of equal parts of a whole. The video was posted on YouTube. As homework, students were assigned the video to watch. As an accommodation for those few students who were not able to view the video at home, the teacher provided time during lunch for the students to watch while eating. In class, the teacher facilitated activities reinforcing the video presentation. This process was implemented for the six lessons that were included in the fractions unit.

Following completion of the unit, students' reported liking the videos. The students stated it was more fun to watch the video at home than listen to the presentation in class. Parents of struggling students reported the videos as helpful since their children could watch them multiple times. Furthermore, parents found the videos helpful in refreshing their own learning, making it easier for them to talk with their children about the material.

## **Conclusions**

There has been an increase in the variety of methodology used to engage students in the learning process. Tucker (2012) has expressed that it seems almost certain that instructional videos, interactive simulations, and yet-to-be-dreamed-up online tools will continue to multiply. The continued use of technology is changing the face of instruction not only at the K-12 level, but in higher education as well. How these new methods increase student engagement and learning is a question for which the answer is still being formulated. In our initial experience at the higher education end of the spectrum, we see promising opportunities for using the flipped classroom concept in post-secondary education.

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## **Chronic Sorrow and Parental Involvement during the Individualized Educational Process**

Quintella Bounds  
Chicago State University  
[qbounds@csu.edu](mailto:qbounds@csu.edu)

### **Abstract**

The primary purpose of this study is to determine if there is a significant difference in active parental involvement in the Individualized Education Process of family members of students identified with high incidence disabilities who have reached the acceptance stage of the chronic sorrow process than those family members who have not. The Individuals with Disabilities Education Act (1990, 1997, and 2004) mandates active family participation in the development of a free, appropriate, public, education for a student identified with disabilities. The theoretical framework behind this study is based on the philosophy of chronic sorrow and parental involvement during the Individual Educational Process. The quantitative research methodology will employ a descriptive-design using data collected from public schools near Chicago, Illinois. More specifically, beginning December 1, 2013 through March 30, 2014, this study will explore the steps of chronic sorrow parents of students in high school (13 to 18 years old) with high incidence disabilities (learning disabilities, speech or language impairments, mild or moderate intellectual disorders, and emotional behavioral disorders) who are receiving special education services. The results of the study will be used to support faculty and educators in the Chicago State University Special Education program, who work with families of individuals identified with disabilities as they move through the five stages of the chronic sorrow process: shock / denial; anger; bargaining; depression; and acceptance.

**Keywords:** Chronic Sorrow; Parental Involvement; Individual Education Process; High-Incidence Disorders;

### **Introduction**

Having a child with a disability can create undue hardships on parents and families. Some parents and families have trouble with understanding and accepting that their child has a disability. The Individuals with Disability Education Act (IDEA, 2004) provides the legal right for individuals with disabilities to receive free appropriate public education (Mastropieri & Scruggs, 2014). The law goes even further to require active parental participation during the Individual Education Process (IEP) (Yell, 2012). Prior to the passage of Education for All Handicapped Children Act (EAHCA), millions of children with disabilities' educational needs were not being met because the children with disabilities were excluded from public schools; the children who did attend school did not receive an appropriate education or were not identified for services; and states and local school districts lacked adequate resources, which forced families to find services outside the public school system (Yell, 2006). IDEA was created to assist states in meeting the educational needs of students with disabilities. The purpose of IDEA (1997) is to Ensure that all children with disabilities have available to them a free appropriate public education (FAPE) that emphasizes special education and related

services designed to meet children with disabilities unique needs and prepare them for further education, employment, and independent living, to ensure that the rights of children with disabilities and parents of such children are protected, to assist states, localities, educational service agencies, and Federal agencies to provide for the education of all children with disabilities. (20 U.S.C. § 1400[d] [1]).

Individuals identified with a higher incidence disability are those that are most commonly seen in the general education classroom. The high incidence categories of the IDEA include individuals identified with speech or language impairments, mild or moderate intellectual disorders, learning disabilities, and emotional behavioral disorders. This disability area make-up 80% of the total population of students ages 6 – 21 with disabilities served under the IDEA (Learner & Johns, 2012; U.S. Department of Education, 2011).

The term chronic sorrow was initially coined by Simon Olshansky (1962), a sociologist and researcher who studied the lives of families of individuals identified with developmental disabilities. Olshansky defined chronic sorrow as a pervasive and persistent sadness that accompanies the realization of the loss of the longed-for child. He was the first researcher to maintain that parents of children identified with disabilities should not be expected to conform to a time-bound model of grief, but rather indicated that parents would experience re-occurrences of grief throughout the life span of the child. Roos (2002) describes chronic sorrow as a normal reaction to a living or unending loss of self or other due to permanent injury, disability, or illness for which there is no public recognition that legitimizes the grieving process. Roos (2009) predicts that the prevalence of chronic sorrow in parents of individuals identified with disabilities will continue to rise, due primarily to the rapid advances in medical technology and longevity of life in individuals with disabilities.

#### Purpose of the Study

The purpose of this study is to determine if there is a significant difference in active parental involvement in the Individualized Education Process of family members of students identified with high incidence disabilities who have reached the acceptance stage of the chronic sorrow process than those members who have not. High incidences disabilities categories of the IDEA, 2004 include individuals identified with speech or language impairments, mild or moderate intellectual disorders, learning disabilities, and emotional behavioral disorders.

#### Rationale

This study is being conducted for all stakeholders of students identified in the high incidence categories of IDEA, 2004. The results of this study will be useful for both secondary and postsecondary special education programs to understand and create better partnership with parents of individuals with disabilities. In addition, with the rise in the number of student's identified with high incidence categories under IDEA 2004, schools are currently ill-prepared to meet the needs of parents and/or families. Furthermore, most importantly if parents of children with disabilities are experiencing feelings consistent with chronic sorrow, it should be realized that educators and related service personnel will be better prepared for their efforts in establishing meaningful partnerships with families if they are familiar with the phenomenon.

Parental participation in the development of a student's FAPE is absolutely essential. State and federal special education law requires parent involvement (Trumbull, Huerta, & Stowe, 2008). In 1975, Congress passed the EAHCA as a means of recognizing that individuals identified with disabilities depended impart on their parents' abilities to

advocate on their behalf.

As a matter of fact, parental participation is so crucial in developing FAPE that school personnel actions that result in parents not being involved in the development of their special education program are grounds for an impartial due process hearing officer or court to rule that student has been denied FAPE (IDEA Regulations, 34 C.F.R §300.5123[a][2]).

The theoretical framework behind this study is based on the philosophy of chronic sorrow and family involvement during the IEP process at the secondary educational level. Experts in the field interpret the theory of chronic sorrow as a lived experience of individuals who suffer recurrences of the grief cycle because the loss that they sustain is a “living” or “unending” loss.

Parents of children identified with disabilities typical experience similar feelings to those that have lost a love one to a biological death (Fraley, 1990; and Roos, 2002). Emotions that are typically experienced by families are consistent with Kubler-Ross (1969) five stages of grief model that includes shock/denial, anger, bargaining, depression, and acceptance.

Active parental or family involvement led to the inclusion of parents as required members of the IEP team for youth with disabilities (Murdick, Gartin, & Crabtree, 2007; Topping, 1986; Yell, 2012). According to Knight and Wadsworth (1999), “a strong theoretical basis for promoting active family involvement has its roots in three theories: the transactional theory of development; the family systems theory; and the ecological theory of human development” (pp. 22-23). In addition, according to Brolin (1995), “teachers, administrators, related service personnel and the adult service providers will change from year to year” (p. 97). The only consistent participants at every IEP meeting are the parents and the youth with disabilities (Brolin, 1995).

## **Method**

This study will use the quantitative-descriptive research design, also referred to as survey search, determines and describes the way things are (Gay, Mills & Airasian, 2006, p. 159). Self-Report research studies are the most well known and often used is probably survey research, which generally utilizes questionnaires or interviews to collect data (Gay, Mills & Airasian, 2006, p. 161). In education, school surveys are most commonly used for the collection of data by schools or about schools (Gay, Mills & Airasian, 2006 p. 161). School surveys can provide necessary and valuable information to both the schools studied and to other agencies and groups, whose operations are school related (Gay, Mills & Airasian, 2006, p. 161).

This study will integrate a Likert-scale survey that will be comprised of three-parts an informed letter of consent, demographics of the parent and student, the parental involvement during the IEP meeting, and several questions from the Kuder-Ross grief model survey. All research questions have been used in other studies and hold validity and reliability. The study is exempt from human subject research because the research will not use human subjects but a collection of data that will be collected through an online survey from three to four high school districts within a thirty-mile radius south of Chicago, Illinois.

## **Expected Outcomes**

The expected outcome of this study will assist the special education program at Chicago State University (CSU) in the instructional delivery and assessments for student candidates and faculty. If the hypothesis of this study is supported or not supported, this study will generate workshops and seminars for all stakeholders (educators,

administration, clinicians, faculty, students and parents) expanding the collaboration with CSU and the surrounding communities.

### **Acknowledgments**

Thanks to all the stakeholders who participated in this study.

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## **Acquisition and use of gestures in Portuguese toddlers: A pilot study**

Etelvina Lima  
University of Minho, CIEd, Portugal  
[etelvina.lima@ipleiria.pt](mailto:etelvina.lima@ipleiria.pt)

Anabela Cruz-Santos  
University of Minho, CIEd, Portugal  
[anabelacruz@gmail.com](mailto:anabelacruz@gmail.com)

### **Abstract**

The literature review indicates that the use of gestures are predictors of language development in several areas: a) a relationship between the amount of objects that babies points and comprehensive vocabulary that they will develop, b) an indication of which words the child will acquire soon, and c) a prediction of syntactic skills.

When children don't have normal access to linguistic input the use of gestures is considered different as it supports all communication skills in contrast with children that use gestures as a complement to their oral communication. The purpose of his study is to analyse to what extent audition is dependent of the moment auditory skills are acquired, in addition to the characteristics of the gestures used by Portuguese children, taking into account all communicative functions. Participants in this pilot study are 9 children aged 8 to 18 months (m) who attended a day care. Preliminary data indicates increase of gestures from 8-9m to 10-12m but it was not so expressive from 10-12m to 13-18m. Also it was observed that some communicative functions were performed by different types of gestures, but others were only performed by one type of gesture. The informative and instrumental functions were performed by different types of gestures (deictic, conventional and iconic) but regulatory, ritual, and personal functions were performed only by conventional gestures. The analysis and comprehension of the types of gestures that Portuguese children use in their communication will enable all professionals to carry out efficient intervention plans.

**Keywords:** communication, language, gestures, assessment.

### **Introduction**

This study is supported by some studies that point to the relationship between the use of gestures and the development of prelinguistic communication competence prior to the emergence of language. Tomasello, Carpenter and Liskowski (2007) argue that the deictic gesture (point) supports the development of communicative skills since it appears that children, from 12 months use and understand the pointing a cooperative form of communication based on joint attention to share topics and to inform.

It appears that the use of gestures are predictors of language development in several areas: there is a relation of magnitude between the amount of objects that the baby points and understanding of vocabulary that possess in near future; gives indication of which words the child will acquire soon and later predicts acquisition of syntactic skills, such as buildings of two words and sentence type.

The illocutionary stage of development, in which there were the first communicative acts, is very rich in frequency and type of intent (communicative functions) that baby conveys through gestures and vocalizations. But when children use gesture in a complementary way to a vocalization or word, it takes a different significance and functions that when gestures is used as a single communication tool Literature is unanimous reports different patterns in oral language development of deaf children. These patterns are influence by variables such as the time of onset of deafness, type of deafness, and degree of deafness. However, the data concerning the early stages of communication indicates no significant differences in developmental milestones of prelinguistic communication skills.

In the case of children with sensorineural hearing loss who are deprived of access to oral language input, they also develop communication skills supported by the gesture. But in the special case of these children in which gesture encompasses all aspects and functions of communicative acts, they are presented in the same way? The answer to this question determines how the professionals will develop their intervention with hearing-impaired children. In accordance with the Decree -Law no. 281/2009 , the objectives of the National System for Early Childhood Intervention in Portugal - that establish intervention to prevent or reduce the risk of developmental delay - can only be achieved by ensuring the quality and success of services for families. That goal can only be achieved if the decision-making is based on data provided by research conducted in the population that wants to support.

### Method

In order to conduct the study “Acquisition and the use of natural gesture in children from 8 to 18 months, with and without hearing loss” two instruments were developed by the authors, namely the Assessment tool: Gestures and Communicative Functions – 8 to 18 months, and the Prelinguistic Communication Skills Inventory.

This pilot study was conducted to test the validity of these instruments and to enable a preliminary analysis of the data.

### Participants

Participants were nine toddlers with typical development aged between eight and eighteen month participate in the study (Table 1). They were stratified from 8 to 9 months (before the emergence of intentionality), from 10 to 12 months (before the emergence of language) and from 12 to 18 months (in the beginning of language development period). All toddlers were attending the day care center of Juncal in the district of Leiria-Portugal.

**Figure 1: Age and gender of participant**

n= 9 Children with typical development		
Groups	Age	Gender
		M (masculine); F (feminine)
8 - 9 months	8 ms	M
	9 ms	M
10 - 12 months	11 ms	F
	12 ms	F
	12 ms	M
13 - 18 months	13 ms	F
	17 ms	F
	18 ms	F
	18 ms	M



## Instruments

To collect data four instruments were used: (1) a socio-demographic questionnaire; (2) the Schedule of Growing Skills II ; (3) the Assessment tool: Gestures and Communicative Functions – 8 to 18 month, and; (4) the Prelinguistic Communication Skills Inventory (develop by Etelvina Lima and Anabela Santos, 2012).

The Assessment tool: Gestures and Communicative Functions – 8 to 18 month (ATGF) is consisted in eight tasks to be performed by children in interaction with their parent (mother and/or father).

Using the taxonomy of Halliday the task were constructed to elicit six communicative intention: instrumental function used to request; regulatory function used to control the behaviour of other; personal function performed to express emotions; informative function used to inform; ritual function expressed to greeting, and; heuristic function used to ask/question something.

Performing the tasks, we take in account different behaviour that can be use by the child: crying, eye gaze, word production and the use of gestures. Following the lead of Goldin-Meadow, Mylander and Franklin the gestures is classified as deictic, conventional and iconic: a) deictic gestures are use to indicate objects, people, and locations in the immediate context therefore their meanings are context-bound (e.g. pointing); b) conventional gestures whose form and meaning are culturally defined (e.g. nodding) and; c) iconic gestures depicted actions or attributes of concrete or abstract referents.

The Prelinguistic Communication Skills Inventory is based in different routine situations of day living reported by parents (e.g. what the child do when she/he wants to eat) about the behaviours that children exhibits (e.g. cry, eye gaze, vocalization, use of gesture).

The Schedule of Growing Skills II was used to assess typical norms of development in all children.

## Procedures

The Schedule of Growing Skills II was applied at the day care by the child educator.

All children were videotaped during the moment of interaction with their parents performing all tasks of ATGF, using three high-definition cameras placed to record the child, the parent and both of them simultaneously.

The script of activities was presented to parents during whom all the task were explain and the possible gestures that could occur were exemplified.

The Socio-demographic questionnaire and Pre-linguistic Communication Skills Inventory were used to collect data from parents after the interaction moment.

## Coding

To code the gestures we adapted McNeill's proposal, so gestures were analysed considering phases, form and type.

Related to the phases we coded the preparation (the moment that the gestures articulators cease of being in a relaxed position preceding the strike) the strike (the moment that movement takes place expressing the meaning with a certain direction and configuration) and the retraction (moment that the articulators return to the relaxed position).

As to the form it was coded taking in account the hand (right, left or both), the movement (direction to periphery or to the gesturer), the localization (in the quadrant of the head or body), and the configuration (based on the configurations of the Portuguese

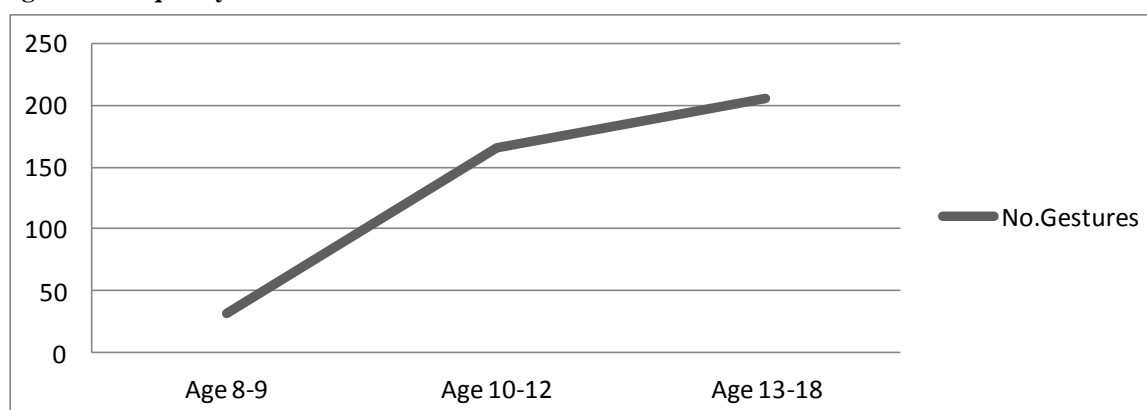
Sign Language).

As previously mentioned the types of gesture were classified as deictic, conventional and iconic gestures.

### Results and discussion

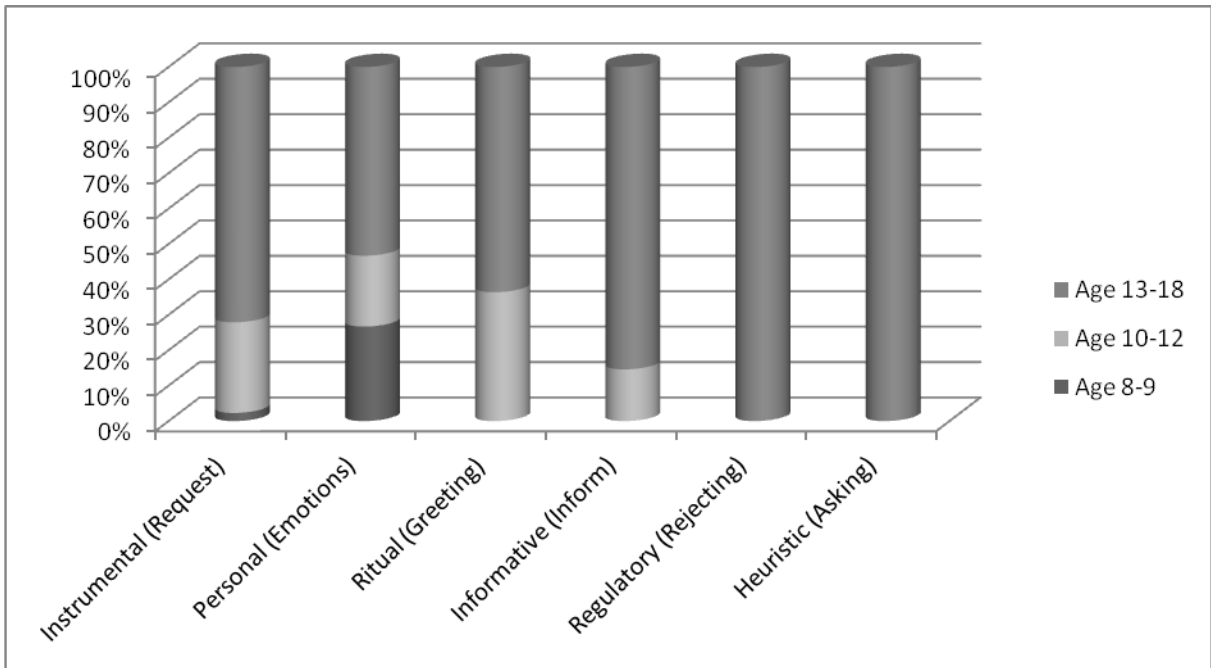
Results of statistical analysis showed a significant increase of gesture production from the range 8-9 months to the range of 10-12 months, but a smaller difference in the range from the range of 10-12 months to the range of 13-18 months (see Figure 2). In these range of ages toddlers do not use gestures in gestures with speech. Therefore, this reduction in rate of increase of gestures can be related to the transition period for the language, in which the communicative acts supported by the word begun. This hypothesis will be tested with a group of deaf children, as we'll see whether the rate of utilization of gestures remains proportional between tracks, in the absence of speech.

Figure 2: Frequency of Gestures



The tasks of the ATGF proved to be able in giving the opportunity for children establish communicative acts which demonstrate all communicative functions through gestures (see Figure 3) since children of the last age range group exhibit all of communicative function. With the data from this pilot study the first communication to emerge in the range of 8-9 months are the functions that serve the function to requesting and expressing emotions. These data corroborate the findings of Halliday (1981) indicate that the instrumental function as one of the first functions to emerge. There is the occurrence of other communicative functions namely ritual and informative in the range of 10-12 months.

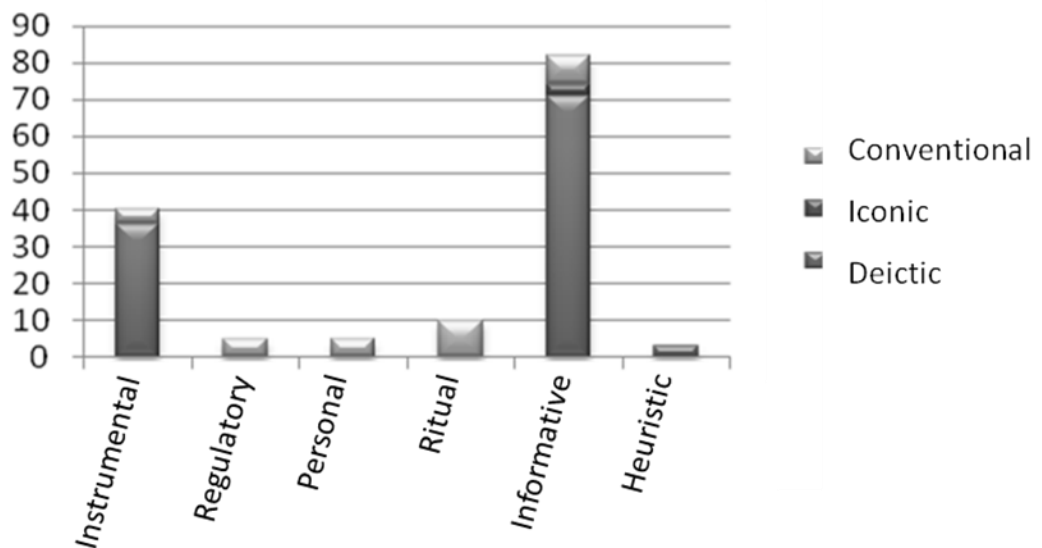
Figure 3: Communicative functions expressed by gestures



Moreover, it was possible to observe distinctions between the types of gestures and the communicative functions used as carriers (see Figure 4).

Although there were communicative functions expressed by different types of gestures, other functions seem to be associated with a single type of gesture. Thus, conventional gestures are associated with regulatory function, and personal ritual. The informational and instrumental functions are not associated with a single type of gesture, verifying a trend towards mainstreaming the types of gestures analyzed in the age groups of the study.

These unique relations reveal their relevance to development processes of preverbal communicative acts that support language development.



**Figure 4: Frequency of communicative functions expressed by different type of gestures**

The frequency of gestures classified as deictic gestures were the most observed to convey the communicative functions (instrumental and interactive) aged 10-12M and

12-18M.

As the interaction dyad was rich in different behaviors and dynamic, coding proved to be a challenge in differentiate the preparation phase of other body movements. Therefore, the pilot study showed the need to refine aspects to this analysis. Data demonstrated a gradual tendency for the frequency of gestures to increase in a structured way.

### **Conclusions**

The pilot study contributed to analyze the relationship between the gestures and the communicative functions they convey during the communicative acts of children between 8 and 18 months old. Still, there is need to adjust some aspects of the instruments and the subsequent coding to enable analysis of data. Preliminary results in relation to acquisition of gesture and communicative functions illustrate the relevance of the frequency of gestures and specific types of intent they convey. It is considered that the data may be relevant in the assessment and intervention of children prelinguistic communication skills, as we expect to analyse in the research study.

### **Acknowledgements**

We express our gratitude to the children, parents and professionals of the Day Care of Juncal that participated in the pilot study.

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## **Promoting inclusion in preschool settings: Embedded Interventions**

Ana Carolina Crispim  
City Hall of Cascais

[a.carolina.crispim@cm-cascais.pt](mailto:a.carolina.crispim@cm-cascais.pt)

João Cadima  
Center of Medicine and Rehabilitation of Alcoitão  
[joao.cadima@scml.pt](mailto:joao.cadima@scml.pt)

Lígia Prior  
City Hall of Cascais  
[ligia.prior@cm-cascais.pt](mailto:ligia.prior@cm-cascais.pt)

Raquel Corval  
[raquelmcorval@gmail.com](mailto:raquelmcorval@gmail.com)

### **Abstract**

In line with the support to the implementation of evidence-based practices in early childhood classrooms that is been given to practitioners, the Cascais Council realized that, although the availability of literature on children with disabilities, those professionals identify difficulties in bridging the gap between evidence based practices described In the literature and their everyday practices.. Our challenge was to ensure that the professionals have access to evidence based practices and promote the essential knowledge and skills they need to be effective. In order to respond to those needs a professional development action was put in practice, focusing on strategies and principles of the Building blocks model.

Our main goal was the empowerment of early childhood practitioners, through active engagement in learning experiences that lead to the acquisition of professional knowledge, skills, and dispositions and the application of this knowledge in practice.

An innovative methodology was chosen - 5-step learning cycle used by the CONNECT modules Project, originally developed by Frank Porter Graham Child Development Institute (North Carolina University, USA). The professional dilemmas related to their practice with children with disabilities were the starting point for the training with the 4 preschool contexts teams, aiming to promote high quality inclusive practices. To evaluate the impact of the training on professional practices, we used the ICP (Inclusive Classroom Profile - Soukakou, 2013), before and after its implementation.

**Keywords:** Inclusion; Evidence-based practices; Building blocks model; Connect – Module 1; preschool contexts; Inclusive Classroom Profile;

### **Introduction**

In Portugal, the decision to include in the regular school system all children with special needs was put into law by 2008 through decreto-lei no3/2008 de 7 de Janeiro. However, 20 years after the Salamanca Declaration, and despite many investigations pointing out the benefits of inclusive education and the inherent adjustments needed, there is still a

long road ahead in the promotion of special needs children's inclusiveness.

With the coming into law of Decreto-lei n.o 281/2009 de 6 de Outubro, the National System of Early Childhood Intervention (SNIPI - Sistema Nacional de Intervenção Precoce na Infância) was developed through the conjoint efforts of the Health, Education and Work and Solidarity ministries. This new system is responsible for all children from 0 to 6 years old, with functional or bodily handicaps or with severe risk of underdevelopment.

Intervening in first years of life is a priority in order to minimize limitations and allow for the participation in a group environment. We therefore made it our priority to intervene in pre-schools, since we consider that the earlier the start of the intervention, the earlier we can enhance the child's development, missing out on less learning opportunities. Also, the key to children's development lies in the relation they establish with key adults amidst their peer group.

In Cascais, the City Hall has a Division of Education Intervention within its Sports and Education Department (DED), which has as its mission to contribute towards the education community through the adequate intervention towards the needs and interests of its population, implementing inclusive intervention in all projects and programs under its responsibility. We look for an intervention that supports the child with special needs, qualifies education professionals and supports the families of these children, promoting an active community participation towards educational success.

Through this work, the technicians that follow public pre-school intervention (2.206 children) observed the difficulties felt by kindergarten educators and by assistants in the implementation of inclusive practices guidelines. Upon the identification of these needs the idea came up to develop a project aimed at qualifying education agents and spread best practices in order to enable the educational success of children with special needs and their inclusion, extending its benefits to the whole school community.

This intervention project focused on qualifying the response to children with special needs from 3 to 6 years old, integrated in public kindergartens (with support from animation activities to support families between 15h30-18h30, after school time).

The DED integrated in this project the Children's Rehabilitation and Development Section (SRPD) from the Alcoitão Medical Center for Rehabilitation (CMRA) that has a partnership agreement with the Technical and Pedagogic Help Section (BATP). This agreement enabled the loan of support items, screening, assessment of children and their follow-up through rehabilitation, as well as continuous training and supervision of education agents. The interdisciplinary team at BATP, including a Psychiatrist, an Occupational Therapist, a Speech Therapist from CMRA and a Psychologist representative from the City Hall supports public schools in the Cascais council area. In the situations where the child's needs so justify, specialized assistance is given at the CMRA. With this project we aim to look carefully at the diversity of people that inhabit our school context and to stimulate the reflection on new ways of looking at children, simultaneously boosting the professionals' practices that result in the full development of children, at their own pace.

## **Method**

The purpose of this project was to ensure that the professionals have access to evidence based practices, essential knowledge and skills to be effective in promoting inclusion in regular settings. In order to respond to those needs the Cascais Council in a partnership with the Medicine and Rehabilitation Center of Alcoitão, implemented a professional development action based on strategies and principles of the Building Blocks Model. Since it was a new approach in this educational community its effectiveness had to be

tested before generalized to more educational settings. Therefore an action-research methodology was designed with the help of PhD Ana Teresa Brito Nascimento to test this empowerment approach with a restrict group of education professionals. Doctor Teresa Nascimento's contribute was determinant to define the course of this project based on her researcher and teacher skills and profound knowledge about inclusion issues and the Building Blocks Model.

Since this project intended to help real people to solve real problems We first made a survey in all kind gardens asking educators if they had any child with special needs with no special educational, therapeutic or early intervention support. Then we asked if they were willing to participate in our project. We then came out with a group of professional of four kind gardens classrooms and their support staff.

Our main goal was to empower early childhood practitioners, through active engagement in learning experiences that lead to the acquisition of professional knowledge, skills, and dispositions to use this knowledge in practice. For that we used the 5-step (Dilemma, Question, Evidence, Decision & Evaluation) learning cycle methodology of the CONNECT modules Project, developed by Frank Porter Graham Child Development Institute (North Carolina University, USA). During 6 months Dr. Raquel Corval, researcher of the Portuguese team responsible for its adaptation for Portugal, assisted by the project promoters explored the Module 1 in-service training following the 5-steps methodology applied to embedded interventions in the classroom, with the 4 preschool contexts teams. The professional dilemmas related to each team practice with children with disabilities were the starting point for the training. The training sessions were intercalated with ongoing support visits to the classroom in order to monitor the strategies implementation.

Routines-based interventions, embedded instruction, and embedded learning opportunities is a strategy define according with the objectives about the specific learning in the context of day-to- day routines and transitions in home, in school, or in the community. They are focus on the activities initiated by the children and guided according their preferences, with the expand, modified and adapted activities, transforming it to be significant for the children. (Bricker, Pretti-Frontczak & McComas, 1998).

To evaluate the effectiveness of this empowerment project and practice changes, the classroom quality was quantitatively accessed using The Inclusive Classroom Profile (ICP) (Soukakou, 2012). This structured observation rating scale, designed to assess specific, classroom inclusive practices (12 domains) that support the developmental needs of children 2 – 5 years of age with disabilities in early childhood settings. Each ICP Item is comprised of a set of quality indicators that are rated on a 7-point rating scale. The 12 ICP Items are: Adaptation of Space and Materials; Adult Involvement in Peer Interactions; Adult Guidance of Children's Play; Conflict Resolution; Membership; Relationships between Adults and Children; Support for Communication; Adaptation of Group Activities; Transitions between Activities; Feedback; Family-Professional Partnerships; Monitoring Children's Learning. The ICP can be used as a research tool, a program evaluation tool, and as a quality improvement tool. As a research tool, the ICP can measure and examine aspects of quality of inclusive practices across programs. As a program evaluation tool, it can be used to evaluate the quality of inclusive practices in an inclusive early childhood program. As a quality improvement tool, the ICP can be used to guide models of professional development" (Soukakou, E., Evangelou, M. & Clarke B., in press).

To analyze the classroom quality we shot the classrooms infrastructures and activity at the beginning and end of the project. The videos were analyzed with the ICP by an



independent research team of Instituto Universitário de Ciências Psicológicas, Sociais e da Vida (ISPA), under the supervision of PhD Júlia Serpa Pimentel.

The project was also analyzed through a qualitative method to understand its impact. To do so we used reflections shared by all professionals during the training sessions, the onset visits and the written works.

### **Results and discussion**

Below are the results from the ICP deployment (Inclusive classroom profile, Soukakou, E., 2012) in the four kindergartens before the deployment of the routine based intervention and after the intervention. We highlight that it was not possible to record images from kindergarten 4 in the second moment due to the absence of the child from the classroom.

The assessment of the room's quality and practices through ICP allowed us to analyze the environment's adaptation, activities and learning support in order to increase the child's access and its active participation in the group, through specific adjustments and modifications according to the child (Soukakou, E., 2012). The results from this intervention, specifically the feeling of group belonging, friendships and positive relationships and the learning and development that enable to reach each one's potential, are aligned with the Division for early Childhood (DEC) and the National Association for the Education of Young Children (NAEYC), concluding that a high quality setting influences the child's development ("M has made tremendous progress. Her people interactions were unfriendly, but now she's become nice and smiles at everyone. The social part was where we saw the biggest improvement" – mother of a child with special needs).

We encountered some limitations on the ICP application: in some filming it was not possible to obtain a full picture of the room; at times there was no information in the films records that supported the complete filling in of the Scale. Also, some of the intervening parties were unavailable, which stopped us from doing the second filming.

We were able to find with the results from this intervention that the teams were able to implement the changes in different settings, including the room, therapeutic and family environments: "It supplied us with a set of organized material resources", "it was added value because it helped us to organize various procedures" (education teams). This methodology enabled the implementation of effective practices to help education professionals reach the child's learning objectives, being able to apply various methods such as curricular modifications or changes in the learning environment, in the child's natural setting, taking advantage of the opportunities available throughout the day, with the child's peer support. These results go towards the stated by Synder, P. Hemmeter, M. L., Sandall, S., & McLean, M. (2007) "The intervention inserted in the routines may be an effective help in the child's learning in various domains, namely in the social-emotional development, communication and school readiness."

This intervention, according to the Building Blocks model from Sandall & Schwartz (2003), resulted in the ability for the whole education team to reconcile the child's individual objectives with suitable pedagogic materials and methods; determine the amount of help that the child needs; provide the necessary help to the child and assess its usefulness; work in teams with various technicians and families; take into account the pre-school's room routines; provide a high quality preschool education setting, in line with what the authors of the model stand for. Beyond the impact in the child with special needs, this work reinforced social-emotional competencies in the other children present in the kindergarten room, verbalized by various educators and parents: "One of the things that struck me the most was L.'s parents sending a birthday party invitation.

They were phenomenal.” (Father of a child with special needs). These statements come in line with César & Santos (2006) who demonstrated that the roll-out of cooperative work in peer groups with children with special needs results in an increase of academic self-esteem, knowledge appropriation, responsibility, autonomy, critical spirit, diversity acceptance, reasoning development and visible language and social interactions in the students without special needs, going towards the predicted outcome on the impact on children without special needs integrated in this project: “ The children started having more respect for the difference, there was a real awareness development that together they can overcome the problems resulting from the inclusion in the classroom , as well as the acceptance of the difference”, “M is a part of the class, she was not segregated from others, she is an element of the class” (parents of a child without special needs), “I believe it is right for M to be in our classroom: we all learn. She has learned to say hello, good morning and always has a smile on her face. It is important that she is with us.” (Child without special needs). Authors Staub and Peck (1995) stress that “normal” children reduce their fear attitudes towards the human differences and develop personal and relationship principles, improve self-concepts and social cognition.

For the team, the systematic technician support provided trust and motivation, bridging the gap between evidence based practices and their everyday practices: “the experimental character and its adequacy to the different schools settings enabled a flexible understanding of the pedagogical deployment strategies for these children”, “the exemplification, sharing and case benchmark were key aspects of this training, they generated movements of reflection, discussion and joint decision” (education teams). This fact reinforces the Center and Ward (1987) investigation’s conclusion that when teams are integrated in research projects, the majority, including those with little experience and concerns regarding inclusion, have revealed more inclusive practices and a greater ability to overcome their concerns and initial attitudes, becoming agents for change (César, 2003; 2009, César & Carvalho, 2001, César & Santos, 2006, Courel, 2007): “This project initiated the complicity within the education team, for it created regular discussion meetings, as well as common intervention design strategies” (education team).

Despite these results, caution is necessary in the conclusions because this project implied a limited number of kindergarten classrooms, insufficient to confirm the impact of the intervention based on routines. On the other hand, the choice of case study has as limitation the generalization of the retrieved information. However, despite being unable to generalize the results, we believe that it was of great contribution to the selected kindergarten teams.

Lastly, the work instruments from the Connect methodology were assessed by the education teams as being too complex and extensive, so they suggested the use of less, simpler and more objective tools.

## **Conclusions**

We found that the Connect methodology may have links to the block building model, for being based on the child’s routines may also be useful in the family routines. The family and education team may share between themselves important information regarding the child’s routines in the different settings and the difficulties felt to jointly plan intervention strategies in the routines that will improve the child’s performance.

All this work was based on a partnership between the education team, the family and the wider community, bringing consistency to the intervention and a more active child participation in the various settings. For the future, it is therefore important to develop research projects that use as methodological option field research or case studies that

allow for a deep analysis of the development from inclusive practices. These research projects are seen as theoretical and empirical elements of support, contributing towards more favorable attitudes of the education agents towards inclusiveness and, consequently, the building of scenarios propense to inclusive practices that promote educational success (César, 2003, 2009; César & Carvalho, 2001; César & Santos, 2006).

Several products came out of the Project. An important one was a leaflet made by the professionals involved compiling reflections, evidence-based decisions and strategies in the professional and families own words. After the last evaluation of the pre-school settings and practices we used the ICP as a quality improvement tool by discussing the ICP results with each team in order to promote self-analyses of inclusive practices.

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## **Juvenile delinquents–Frame analysis is not the point but, social aspects are Approaching Behavioral Literacy**

Carmen Schmitz-Feldhaus  
University of Oldenburg, Germany  
[carmen.feldhaus@uni-oldenburg.de](mailto:carmen.feldhaus@uni-oldenburg.de)

Manfred Wittrock  
University of Oldenburg, Germany  
[manfred.wittrock@uni-oldenburg.de](mailto:manfred.wittrock@uni-oldenburg.de)

### **Abstract**

With regards to the “Reaction Pattern Research” 98 juvenile delinquents, age 15-21, were asked to complete a questionnaire with six critical incidences. The aim was to find out whether they are aware of specific social frames in interactions or not. The results indicate that juvenile delinquents know about social rules. But they rather act by considering social- or friendship relevant risks or profits, than by legal consequences. Further studies are due to come in 2014.

**Keywords:** Juvenile Delinquents, Behavioral Literacy, Frame Analysis, Peers

### **Introduction**

Some students, children and adolescents, with Emotional and Behavioral Disorders (EBD) just don't fit in regarding challenging social situations. They seem to act like, so to say, a bull in a china shop. But why do they behave that way? All of the students have specific resources: disposition, special skills and abilities, mental possibilities, and a physical appearance. The interaction is a social situation with a specific ethically normative frame. Sometimes the student just does not behave appropriately and in doing so, does not fit in to the social situation. The construct of Behavioral Literacy tries to answer the question, as follows.

Our day-to-day life is characterized by a large number of social interactions and social situations. Every day we experience situations, sometimes new, but mostly similar to facts that we have already witnessed. For all of those cases, one aspect is the same: we have to read the social frame we face at that moment and we have to read the behavior of the involved persons. In our opinion this is a special social competence and is defined as Behavioral Literacy. This competence, or skill, is important for everyday life in preschool, school, and beyond, as well as for families. It is crucial for every person, especially professionals such as teachers, therapists, instructors, and trainers, as well as parents.

In the theoretical framework of our concept two theories are central: 1) Everything is seen regarding the Frame Analysis and its four aspects by Goffman. We always consider the general frame of the society, the specific frame of the individual, and the frame of social situation. In doing so, we are able to locate, perceive, involve, and label an unlimited amount of specific incidents because they are defined by means of the frames (Goffman, 1974). 2) The Social Control Theory by Hirschi and the four elements of the bond try to explain why a person becomes delinquent and thus acts against social norms and laws. As the first element Hirschi states “attachment of the individual to others” is

the “essence of internalization of norms, conscience, or superego.” On the contrary, someone without attachment to others is “free from moral restraints” and shows psychopathological behavior. “Commitment” is the second element and could be described as a “rational component in conformity.” It, in this way, includes (1) a decision-making and its consequences, (2) a positioning of oneself because of one’s former behavior and (3) the awareness of the first two aspects as well as the effects of the acting. Because time and energy of a person are limited, Hirschi holds the opinion that “involvement” is another important element of the control theory. Some people are just too busy to act inappropriately because they are involved in conventional activities and with all of their plans, social meetings, and work, can’t even think about being socially inappropriate or delinquent. The last element of the bond regarding the Social Control Theory is “belief” as a “common value system within the society or group”. First of all, the theory assumes that the deviant person believes he is doing wrong. Secondly, belief might be seen as mere words, which in specific circumstances mean nothing and can be ignored. Third, the deviant uses the so-called “technique of neutralization.” He rationalizes the act and is free to realize it. As a keystone of the argument, it can be assumed that there is a “variation in belief in the moral validity of social rules” (Hirschi, 2009, p. 16). In addition to these two theories three others are important to explain the phenomenon of "Behavioral Literacy": a) The Social Information Processing has five phases by Dodge which explain the steps a child must go through before he or she can act with competence to social demands such as (1) “encoding situational cues” and (2) “representation and interpretation of those cues.” Here, hypothetically, the child focuses on specific cues and designs an individual explanation of the situation. Phase (3) is the “mental search for possible responses to the situation,” and phase (4) is he “selection of a response.” During the second two phases, the long-term memory of the child is relevant because the child might analyze his or her former experiences and select the one that best fits the circumstances faced at the moment. The fifth phase is the “acting out of the chosen response and monitoring its affects” regarding the interaction (Crick & Dodge, 1994, p. 74). b) The Emotional Competence with eight skills by Saarni. The first skill is the “awareness of one’s emotional state.” It is possible that a person could experience more than one emotion at a time, and with regards to inattention or unconscious aspects, the person is not consciously aware of his or her feelings. The second skill is the “ability to discern others’ emotion, based on situational and expressive cues that have some degree of cultural consensus as to their emotional meaning.” The next skill that Saarni poses is the “ability to use the vocabulary of emotion and expression terms.” The skills are seen as connected to the particular culture and have to be available and link to social roles. Skill four is the “capacity for empathic and sympathetic involvement in others’ emotional experiences” and five is the “ability to realize that [the] inner emotional state need not correspond to outer expression”. This means that the person I’m interacting with might use some sort of a “front” (see Goffman, 1959) or “mask (see Schmitz-Feldhaus Masking Behavior).” Additionally, my behavior could influence the manner of my opponent, which means that I have to consider what kind of emotion to show. The “capacity for adaptive coping with aversive or distressing emotions by using self-regulatory strategies that ameliorate the intensity or temporal duration of such emotional states” is the sixth skill. Number seven could be described as an awareness of emotional communication within relationships. It includes interpersonal consequences, the consideration of different types of relationships and the fact that emotional communication contains a certain amount of power and authority. The last skill that Saarni postulates is the “capacity for emotional self-efficacy.” This ability is based on

an emotional balance and the person's theory of emotion and moral sense (Saarni, 1999, p. 5). c) The Sense of Coherence and its three dimensions by Antonovsky for the purpose of screening with regards to the behavioral-literacy ability of the person in question. The sense of coherence is the main aspect of the salutogenetic theory and includes the sense of comprehensibility, the sense of manageability and the sense of meaningfulness. It describes a "[...] feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to her/him to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement" (Antonovsky, 1987, p. 19).

After several years of studying the concept, we define Behavioral Literacy as the skill of noticing (observing) the frames of different social interactions or social systems and making sense of the coherent implications. Furthermore, it is the capacity to comprehend emotions and expressions of self and others. And it is a skill to handle these information's regarding one's own belief system.

### **Method**

In the nineteen-eighties started a project called the "Reaction Pattern Research (RPR)" in the Netherlands (Rink, Vos, Van Lokven & Slagveer, 1989). The issue of the project was the attitude of youngsters towards social limits and their reaction and motivation patterns. The first aim was to gather the normative and the deviant behavior. The second aim was to develop a specific diagnostic and treatment assessment for different settings. Several studies in different countries (Canada, Estonia, Belgium, Netherlands, Germany,) were realized (Grietens, 1999; Rink & Ott 1997). In order to collect data regarding juvenile delinquents we asked 98 young men age 15-21, by using the high quality RPR questionnaire short-form the ASL-Scale (Attitude to social limits-scale). We wanted to know, whether they are aware of specific social limits or not. We presented six situations to them, with social limits e.g.:

Situation 1) you find a purse in the cafeteria with 50\$;

Situation 2) your friend is attacked and fights back;

Situation 3) you are in the grocery and want to buy only one item. You come to the counter, but no one is there.

The questions to the situations where:

- Question 1: What could a person do in such a situation?
- Question 2: What would you do in this situation?
- Question 3: Why would you do that?

The RPR identified four reaction types:

- A= adjustment,
- B= overstepping,
- C= negotiation,
- D= withdrawal.

And four motivation types:

- a= I-directed motivation, placing self-interest at the centre,
- b= other-directed motivation, placing other people or society at the centre,
- c= here-and-now-directed motivation, oriented towards immediate gratification,
- d= future directed motivation, oriented towards considering the consequences of one's own behavior (Rink & Ott 1997).

### **Results and discussion**

Several aspects were noticeable: First, the participants' could not think of a lot different

opportunities for action (q. 1). This might be due to the limited time they had for the questionnaires, out of lack of concentration or shortage of ideas. Second, they had increased problems to give a reason for their own approach using the “That’s why” as an explanation. It could be that they had never thought about the reason before. To bring that up in a survey setting might have been difficult for them. Third, some questions do not seem to be easily answered. With regards to situation 1, someone did for example say: “depends on my mood”. This shows that he is aware of his own emotions most of the time (see Saarni 1999). Someone else mentioned two conditions to make his action dependent of: having money and not having money. “If you have money, you bring the purse to the police, if you do not have money you take it.” It can be assumed, that this example shows a self-centered motivation with a here-and-now oriented motivation (types a and c). Regarding the three dimensions of the sense of coherence, this participant focuses on the sense of meaningfulness. If the money would be important for him at that moment he would take it, otherwise he would bring it to the police.

### **Conclusions**

In summary, the 98 juvenile delinquents are aware of social rules and know how to behave properly. But the decision, whether or not to show delinquent attitudes has in most of the situations to do with the social frame of the situation, e.g. when a friend is involved as in situation 2). The reaction that is pointed out most, is limit overstepping (B) and the motivation for this behavior is that, other people are at the centre or rather relevant, in choosing that sort of action (b). To adduce Hirschie’s Social Control Theory (2009) the first element “attachment of the individual to others” seems to be at the core of explanation regarding juvenile delinquents. It shows us, that the well-known aspect of “significant others” might have an impact on becoming delinquent as well. Whether the peers are seen as a role model or participants wanted to impress their buddies has as yet to be studied. As for the young man who put two conditions to this actions, the element of “Commitment” is as the “rational component in conformity” could be drawn to in order to explain this behavior, because it contains a decision-making and its consequence. His answer (the above mentioned was but a segment) indicated, that he is well aware of the outcome if he takes it or brings the purse to the police. Referring to the person who put it up to his mood whether or not to take the money from the purse: He uses his belief system rather flexible, by bringing the so-called “technique of neutralization” into play. He rationalizes the act and is free to realize it. As a keystone of the argument, it can be assumed that there is a “variation in belief in the moral validity of social rules”. So he alters his course of action depending on his disposition towards specific situation. But all of the examples make it clear, that the delinquent youth know about the social situation and the inherent frames as well, as about their own emotions. They have a sense for the consequences. So, we assume that most of the criminal young men from our survey are Behavioral Literate (see definition above).

It is our opinion that, although the results are somewhat surprising, they are nevertheless relevant for parents, educators, social workers and coaches of different divisions/professions. Right now we analyze another study on RPR. Participants are girls and boys age 14 till 21, who got into the focus because of deviant behavior and are taking part in an anti-aggression-training. First results indicate that these youth also orient their behavior on peer related aspects. Further evaluation is due to come.

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## **Expectations, Perspectives and Inclusive educational Practices and transition to working life pupils with intellectual disabilities**

Maria do Rosário Ferreira,  
University of Minho, CIEd  
[mraferreira@netcabo.pt](mailto:mraferreira@netcabo.pt)

Ana Paula Loução Martins,  
University of Minho, CIEd  
[apmartins@ie.uminho.pt](mailto:apmartins@ie.uminho.pt)

Ana Paula da Silva Pereira,  
University of Minho, CIEd  
[appereira@ie.uminho.pt](mailto:appereira@ie.uminho.pt)

### **Abstract**

This communication aims to present a study developed to characterize the implementation of Individual Transition Plans (ITP) with students with intellectual disabilities, who attend secondary education. We appealed qualitative methods to collect, analyze and interpret data. So we used a variety of interpretative techniques that aim to decode and translate certain social phenomena that arise in a natural way. The design, planning and execution of research was based on case studies since it allows a detailed description of the multiple realities that were found on the context of the study, responding to the axioms of paradigm naturalist, and constituting an ideal vehicle to communicate the experience of the participants. It combined a triangulation of participants; three students with intellectual disabilities, attending the ninth grade, carrying on an Individual Transition Plan out of school since the 7th year of schooling and their parents, special education teachers and class directors. Data were collected through interview observation, and documentary analysis of Individual Transition Plan of each student. The analysis of qualitative data was made through inductive and deductive strategies, based on the technique of content analysis.

**Keywords:** Inclusion – Individual Specific Curriculum – Transition to working life – educational practices-Expectations

### **Introduction**

In Portugal, Transition to Working Life for Students with Intellectual Disabilities is an issue that is being object of discussion and analysis on the curricular, formative and normative fields. This discussion arises after the publication of the recent law (Portaria275- A, 2012) which establishes the rules for the teaching process of students with intellectual disabilities who will be doing their Transition to Working Life and also because of the major need to revise the legislative framework for special education (Despacho706-C,2014). Aiming to present a study developed to characterize the implementation of Individual Transition Plans (ITP) for students with intellectual disabilities, we will highlight the importance of teaching practices when preparing these students, the conducting line on their curricular path (Individual Specific Curriculum) and the importance of answering the students' expectations, families' perspectives and

human resources involved in the process.

### **Method**

In this developing study data were collected through interview observation, and documentary analysis of Individual Transition Plan of each student. The analysis of qualitative data was made through inductive and deductive strategies, based on the technique of content analysis. It combined a triangulation of participants; three students with intellectual disabilities, attending the ninth grade, carrying on an Individual Transition Plan out of school since the 7th year of schooling and their parents, special education teachers and class directors. In this paper we show the state of the art about the implementation ITP for students with intellectual disabilities, teaching practices when preparing these students and the importance of answering the students' expectations, families' perspectives and human resources involved in the process.

The importance of teaching practices when preparing these students, the conducting line on their curricular path (Specific Individual Curriculum)

The state of the art regarding this subject allows us to access its importance by acknowledging that the best way to measure the success of any inclusive or exclusive educational system is through the students who are finishing compulsory school, through the knowledge they've acquired and also through the promotion of their emotional and social cognitive development as well as their autonomy and self-determination (César, 2012; Oliveira, 2012; Patton, 1999) (European Agency for the Development of Special Education Needs- EADSE). Transition is a change which is related to the new behaviours required in the new contexts in which the young man/woman is now in. In the particular case of students with intellectual disabilities, "characterized by meaningful limitations in their intellectual functioning and in their adaptive behaviour which is expressed in practical, social and conceptual abilities the inability starts at the age of 18" (Schalock, Borthwick-Duffy, Bradley, Buntinx, & Coulter, 2010).

A more specific planning of the Transition to Working Life with a customized and functional curricular design is crucial and that is the Specific Individual Curriculum (SIC) (Decreto-lei 3/2008). SIC should enable students to acquire, throughout their school path, as maximum autonomy and responsibility as possible, being able to decide as autonomously as possible their future, job included according to their skills, needs, motivation amongst other surrounding factors. (Clark & 2007; Oliveira, 2012; Patton & Dunn, 1998; Pestana, 2011). School, through SIC, must provide students with tools which allow them to believe in themselves and feel entitled to pursue their dreams. Emotional characteristics such as self-acceptance, self-esteem and self-determination are fundamental to develop a feeling of believing in oneself (Field, Hoffman, & Spezia, 1998).

The stimulation of these emotional characteristics and the full participation in school life, on a functional perspective, presents itself as the model of education that students with intellectual disabilities must have as their right (Santos & Morato, 2002). This model includes the attendance of public school in the area of residence (not necessarily full time in the regular class) and the attendance of suitable learning contexts: both in school and in the community, which may promote the specific individual curriculum and peer socialization (Crockett & Hardman, 2010a; Cronin & Patton, 1993; Fontoura, 2010; Ladeira & Amaral, 1999; McDonnell & Hardman, 2010). For those students attending a SIC it becomes necessary to structure this curricular dynamic so that, besides the functional approach of curricula subjects and the development of social cognitive abilities, it may be possible to have a vocational component (Clark & 2007;

Patton & Dunn, 1998; Valério, Matos, & M., 2000). The Individual Educational Program (IEP) is the base document which sets the type of curriculum to be created and it is also designed to define the strategies that should be used to answer the students' accessed needs (strategies, resources, results), with an emphasis on education, personal and social aspects of their after-school future (Oliveira, 2012, EADSE (2006), (Decreto-lei 3/2008). The ITP is included in the IEP (Oliveira, 2012; Patton & Dunn, 1998) (EADSE, 2006; Decreto-lei 3/2008).

## **Results**

The importance of answering the students' expectations, families' perspectives

The ability to make decisions is needed to determine on what an individual can perceive like his strengths, weaknesses needs and preferences (Field et al., 1998). To have a clear understanding of their preferences, students need to be exposed to a variety of options and encouraging them to analyze their dreams is a way of helping them to increase their self-confidence, their self-awareness and also of expanding their options (Crockett & Hardman, 2010a; Field et al., 1998). The ITP should be built based on the students' abilities and interests.

The "Transition to working life" of these students is directly related to the whole cycle of life, with a psych-pedagogic and preventive character (Patton & Dunn, 1998). For this effect it is ruled by law that they must develop an Individual Transition Plan (ITP), in the last three years of compulsory school, and that starts "everytime a student presents special educational needs of permanent nature which prevent them from acquiring the knowledge and skills defined in the curriculum, the school should complement the individual learning program with an Individual Transition Plan meant to promote the transition to the after-school life and, whenever possible, to the exercise of a professional activity with a suitable family and social integration or in an occupational institution (...) it is initiated three years before the limit age for compulsory school in order that the student may be prepared for the transition to after-school life, and it should promote the capacity building and the acquisition of social skills needed for family and community integration (Artigo 14.º, Decreto-lei 3/2008).

Throughout the whole school path the importance of family and multidisciplinary teams engagement can be seen, but it gains higher importance when the ITP is implemented "The Individual Transition Plan must be dated and signed by all the participants in its construction, as well as by the parents or guardians and, whenever possible, by the student himself" (Artigo 14.º, alínea 4, Decreto-lei 3/2008).

This process of Transition to Working Life after leaving school should fulfil as far as possible the students' projects for their lives in collaboration with entities that may facilitate its continuity, anticipating the solution for some problems that might appear in the future (Crockett & Hardman, 2010b; Ferreira, 2008; Oliveira, 2012; Patton, 1999; Patton & Dunn, 1998; Valério, Matos, & Marques, 2007). For students with intellectual disabilities, the aims are: (1) that they may achieve quality of life, living as autonomously and integrated in society as possible, (2) that they may live in a family environment and may attend the school of their area, along with their siblings and neighbours, (3) that they may socialize with people without disabilities and can enjoy the resources available in the community as well as be able to participate in normal activities of leisure time and entertainment and (4) that they may make decisions on their life and as adults may work in community services and get a pay check for that (Costa, 2008).

Human resources involved in the process of Transition to Working Life

The European Agency (2006) made a survey on the worries felt by young people and

their families. Amongst the main worries of the youngsters we find their need to have a job and not be discriminated. Family's worries are similar to those of youngsters, but they show the need for a larger collaboration between experts in education, health, social services and employment (Clark & 2007; Ferreira, 2008). Hence the reason for the existence of a multidisciplinary team that may create a number of measures to guarantee personal, social and career success of young people. This team should develop a dynamic which promotes cooperation between school and after school life and that responds to the students and their parents/families' expectations (Afonso, 2005; Oliveira, 2012). It is their job to build networks of support, to bring down barriers and to build ways that may promote life paths and conditions to have quality of life (AEDSE, 2006; Ferreira, 2008; Oliveira, 2012). Likewise, lifestyle, professional, academic and personal interests and preferences must be specified. Family must be associated to students' learning processes, and this is the first step of their subsequent engagement in the process of transition and integration in life after school (Ferreira, 2008; Patton & Dunn, 1998).

### **Conclusion**

The transition for active life is a changing process that demands multidisciplinary teams that share measures taken, it also demands a collaboration between school/family/community with the students active intervention (contemplating expectations and skills), and it demands the existence of a dual system (the principle of combining school SIC with the practice in the community context). The process of transition planning requires assessment, individual planning, ITP, maintenance, its continuity and coordination to be executed in a chronological way and in a shared process, involving school workers, student, family and a number of adult services providers (Patton & Dunn, 1998). It is urgent that, throughout the whole process, students and their families are assured that the years spent in school are an important step in the construction of their future.

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## **Preparation and insertion of the disabled person in the labor market**

Allyne Cristina dos Santos  
Federal University of São Carlos -UFSCar  
[allyne.csantos@gmail.com](mailto:allyne.csantos@gmail.com)

Maria da Piedade Resende da Costa  
Federal University of São Carlos- UFSCar  
[piedade@ufscar.com](mailto:piedade@ufscar.com)

### **Abstract**

The theme of the research is professionalization and integration of people with disabilities in the labor market. The present study aimed to verify how they are being prepared people with disabilities in vocational courses and as it has its insertion and inclusion in the labor market. The results realized in the participating institution, disabled workers are satisfied and fulfilled with activities that develop. The company proved to be committed to fulfilling its social role and make the inclusion of these workers properly. And by teachers, sought to provide quality education and adequate to ensure effective job placement these people.

**Key words:** Special Education, Disability, Inclusion Labour, Labour Market, Employability and Professionalization.

### **Introduction**

The process of inclusion of people with disabilities in the labor market has gone through various stages until you get to what is currently, they are: exclusion, phase in which the disabled person was totally excluded from society; segregation, this it was seen just how easy profit by firms; integration, here it becomes contracted from having professional qualification and can use the space and equipment, without any adaptation, some signings occur for practical reasons and not social integration, others make use of segregativos sectors; and finally the current inclusion, seeking the equalization of opportunity. At this stage of inclusion, that we live in today and support to ensure people with disabilities their direct benefits and services. Some studies in local, regional and national level, carried out with the focus of verifying the professionalization of disabled people, show that despite the professionalization programs designed to qualify people with disabilities, are still far from preparing them for the demands the current labor market (Goyos, 1995; Lancillotti, 2000; Rubim, 2003; Piveta, Marquezine, Faleiros, 2003; Candido, 2010).

To defend the rights of people with disabilities, the laws were granted between integrationist containing separate devices on the person with disabilities and inclusive policies that give clear guarantee to all persons irrespective of color, gender or disability (Sasaki, 1997). For nearly two decades, the laws standardize the access of people with disabilities to work, federal laws such as the law n° 8112, December 1990, sets up to 20% the percentage of vacancies in public procurement; the law n° 8,213, of July 24, 1991, determines a quota of places for people with disabilities, ranging 2-5%, with the

private companies with over 100 employees. But the existence of these laws does not guarantee access and retention of people with disabilities in the labor market. In a country where unemployment is very high and there is great competition, the difficulties are greater for these people, in spite of the law, which provides for the guarantee of their rights, the absorption of these workers still falls short of social needs (Darcanchy 2007). As shown, the present study aims to describe how to verify are being prepared people with disabilities in vocational courses and as it has its insertion and inclusion in the labor market.

### **Method**

This study was produced in the exploratory mode and the data were analyzed according to the Content Analysis as proposed by Bardin (1977). This study was conducted in an institution of vocational education in the city of São Carlos, São Paulo, and as a direct source of data, semi-structured interviews were used. Were part of this study 14 participants while they were disabled workers (P1, P2, P3, P4, P5 and P6), responsible for the company (RE1, RE2 and RE3) and teachers of vocational courses (D1, D2, D3, D4 and D5).

### **Results and Discussion**

According to interviews with workers with disabilities, responsible for enterprise and teachers of vocational courses was possible to highlight some important points on the subject of preparation and job opportunities for people with disabilities.

Vision for Disabled Workers on the labor issue:

- How to deal with disability: the participants were shown-informed about their disability, noting that this issue does not hinder the activities of daily living, P3 just pointed out that your disability prevents you from performing certain activities, like walking long distances, lack of agility to develop some physical activities.

- Prejudice: most of them believe that this bias does exist, and it is a result of lack of information, they do not believe in their abilities, lack of respect, patience. About bias in the labor market in general, participants had different opinions, as P1, P4 and P5, believe that there is discrimination in the job market, but according to P4 it is decreasing because people with disabilities are qualifying and fulfilling assignments that were passed to it. Have P2, P3 and P6 claim they never had problems with it.

Regarding prejudice within the company, P2 and P3 claim never to have seen this kind of attitude. Have P1, P4, P5 and P6, claim there, that people show bias in their attitudes, the way they treat people with disabilities.

- School Career: all participants have completed high school. Regarding the professional participants underwent training courses, such as training courses, technical, graduate and post - graduate. P1 and P3 believe that when a person has a qualification she is better prepared for insertion in the labor market.

- Difficulty as to the labor market: attitudinal difficulties, The difficult of access in some places, physical barriers, the issue of wages, lack of opportunities, professional qualification, difficulties in adapting to the work objects, not believing in people with disabilities and their potentialities.

Through professional experiences reported by people with disabilities, you can verify that they are ensuring their place in the labor market, having opportunities to make decisions before their career choices, But it is worth noting that this is not something that happens with unanimity with this population, it is a small portion that achieves this, it is very significant to help people with disabilities to attain their place in society.

The vision of the company before hiring and performance of workers with disabilities:



□ Inclusive character of the company: three company representatives claim that she is trying to adhere to that inclusiveness, performing adaptations for people with disabilities start to have autonomy.

□ View the company has about hiring people with disabilities: responsible for the company said that it recognized the potential of people with disabilities because they develop quality work. The hiring of these people is taken as any other, employee, but as highlighted RE2, we must give special attention in some respects to that person receives the necessary conditions within the company to do their work.

□ Quotas for people with disabilities: the company representatives believe that this law would be one way of job opportunities for people with disabilities, because if it did not exist it would be very difficult for companies to conduct this type of contract. Moreover, as RE2 states require companies to hire would not be the best solution, because in most cases the companies hire just because it is required, and if it does not, she is fined.

□ Adaptations: respondents emphasized that the company is seeking to make the necessary adaptations for people with disabilities, both staff and students can have access to all facilities in the company. RE3 adds that the same, having all the necessary adjustments where necessary to make adjustments according to business needs, and to improve productivity.

Participants emphasized only positive about hiring people with disabilities points: they are hardworking, seek learning, motivate staff, are able to show their abilities and potential, promising way of play activities, the team learns to work and respect differences, overcoming these people end up serving as stimuli for all, among many other benefits.

Educational vision Workers with Disabilities while students of Vocational courses:

□ Difficulties in the teaching-learning process: reconcile attention to all students (with and without disabilities), lack of adequate materials and equipment, lack of experience and knowledge about disability. However, two teachers: D3 and D5 had no difficulty on that process.

□ Adaptations: were held to receive students with disabilities, it can be seen in the discourse of teachers that such adjustments were varied, depending on each student's disability. D1, D2 and D3 reported that adjustments were made regarding instructional materials, content, Outdoor activities, attitude of teachers.

□ Development of students with disabilities: During the courses, all faculty realized one significant to the formation of positive student development, noting changes in posture during the course, these being able to be inserted into the job market students.

□ Law of quotas: teachers reported the existence of the law is the only way the person with disabilities be included in the labor market, because otherwise companies do not mobilize to make this type of contract.

The vision of both the company responsible for much of teachers of vocational courses about the Quota Laws, is that the existence of quota laws, is the easiest way in which people with disabilities have opportunities to be inserted in the labor market, but recognizes that the obligation on companies often hire just to avoid fines, not providing adequate working conditions for these people.

## **Conclusions**

From the above we can see that people with disabilities are having opportunities to qualify and prepare for a suitable placement in the labor market and can compete on a more equal level with others, unlike what happened before, the proof is positive account of the development of the potential and capabilities of these people during the course, and their job placement at the end or even during a qualification.

It is a fact that hiring people with disabilities, most often, is carried out on behalf of the fulfillment of quotas, exposing these people to many precarious work situations, but there are companies that are recognizing the capabilities of these professionals, admitting the benefits of hiring them and providing a workplace adapted so that they perform their activities, such as the company that the study was conducted.

From this it becomes significant in the company's effort to get its inclusive nature, providing appropriate and adapted for people with disabilities can have autonomy in their work environments, thereby recognizing its social responsibility as part of a just society and demonstrating that initiatives should be taken by all of us.

One must understand that the inclusion people with disabilities in the labor market must happen because these meet-qualified for the job and not just to enforce laws. This breakdown of obsolete paradigms is a slow and difficult process, which will only be completed when all look the relationship of this issue from the perspective of diversity, whose focus is to be a human being and not a difference.

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## **Curriculum-Based Measurement: Research about specific learning disabilities in Mathematics**

Ângela Cristina Marques Anfilóquio  
University of Minho, CIEd

Ana Maria Roque Boavida  
Escola Superior de Educação, Instituto Politécnico de Setúbal

Ana Paula Loução Martins,  
University of Minho, CIEd  
[apmartins@ie.uminho.pt](mailto:apmartins@ie.uminho.pt)

### **Abstract**

This research aims to examine the use of curriculum-based measurement as a way to identify students at risk for the development of specific learning disabilities in Mathematics. Using a quantitative research method, data were gathered from a sample of 367 students enrolled in second grade of Basic Education. A curriculum-based measurement prove was used to collect data. Data were analyzed using descriptive and inferential statistics.

The results of this study revealed that the curriculum-based measurement probes that were used were economical, quick and easy to apply. The reliability of results was strong ( $r$  de Pearson=0,853). The scores obtained by girls and boys do not reveal statistical significant differences between them, while the results in different school clusters show differences. The 20th percentile value stood at 19 or below, which means that within these results, 80 students are at risk for developing specific learning disabilities in Mathematics. A comparative analysis with other studies showed differences in relation to the scores used to define the risk.

The use of the term specific learning disabilities (SLD) is frequent and repeated despite the substantial controversy that still exists over his definition. Samuel Kirk, in 1962, had made the first steps in the field by using the term learning disability referring to children who were having difficulty in school but who weren't considered mental or emotional disabled (Hallahan, Lloyd, Kauffman, Weiss, & Martinez, 2005).

Since then a range of definitions have been used but the most recognized were the ones are the one from IDEA and the one from the NJCLD. According with Kavale and Forness, cited by Friend (2008) in spite of the many differences between then, most professionals seem agree about the dimensions that the definition should contain: a) LD involve a heterogeneous group of disorders. Students with SLD may have reading problems, difficulty in mathematics or a disorder related to written language. Social perceptions, motor skills or memory could be compromised; b) LD can affect young children, students, and adults; c) LD are intrinsic to the individual and have neurological basis, exist because of some type of dysfunction in the brain, and not because of external factors such as limited experience or poor teaching; d) LD are characterized by unexpected underachievement, which means that the academic achievement is significantly below students' intellectual potential, even after intensive, systematic interventions have been implemented; e) and LD are not a result of the other disorders or problems, but individuals with learning disabilities may have other special needs.

The circumstance in which a student's learning disability is most significant in areas

related to mathematics is entitled learning disability in mathematics (LDM) (Smith, 2007). According to Geary (2004) LDM can result from deficits in the ability to represent or process information in one or all of the many mathematical domains (e.g., geometry) or in one or a set of individual competencies within each domain. The identification process is complex because implies establishing the difference between poor instruction and disability to explain students low achievement (Fuchs, 2005). Early identification and the consequent intervention are essential to reduce mathematics difficulty before it become chronic and difficult to remediate. Therefore response to intervention emerged as an innovate approach to identification and prevention of learning disabilities (Fuchs, Fuchs, & Hollenbeck, 2007; Fuchs, Compton, Fuchs, Paulsen, Bryant, & Hamlett, 2005). The identification process follows by the evaluation of student's responses to an appropriate intervention. Curriculum-based measurement (CBM) arises as a progressively popular form of alternative assessment in different academic domains: reading, spelling, mathematics, and written expression, within the response to intervention approach. CBM is a set of standardized and validated short duration tests that samples each dimension of the annual curriculum on each probe (Deno, Fuchs, Marston, & Shin, 2001).

This measurement system is used by teachers and school psychologist in numerous ways because is simple and efficient. The original purpose of CBM was being a tool for teachers collect simple data that could document student growth and determine the necessity for adjusting instructional programs (Stecker, Fuchs, & Fuchs 2005).

Since CMB is appropriated to repeated assessment and sensitive to student progress is a valuable tool for identifying students rate of improvement. According with response to intervention model, this is an important feature for identifying potential candidates at risk or for special education evaluation and then monitoring their progress as well as the effectiveness of educational programs (Fuchs & Fuchs, 2008; Stecker & Lembke, 2007; Vaughn, Wanzek, Woodruff, & Linan- Thompson, 2007).

In this context our investigation aimed to study the use of curriculum-based measurement as a way to identify students at risk for the development of specific learning disabilities in Mathematics.

## **Method**

### **Design**

Data was collected by a weekly administration of five math CBM computation probes, from 22 April to 20 May of 2010. The probes were applied by the investigator and supervised by the class teacher who acquired the role of observer. As an observer, the teacher had the important function of follow the probes administration and register in a checklist if all the procedures were fulfilled entirely.

### **Participants**

Participants were 367 second-grade students of twenty-seven public schools in Portugal. The selection procedure follows two steps, the consent of the direction school and the permission of the parents or guardian after receiving the information letters. The sample was composed of 197 male and 170 female students.

### **Materials and Procedure**

The math CBM is a 25-item test, which samples the universe of computation skills addressed in first-grade. The probes were administered weekly and students had two minutes to write the answers (Fuchs et al., 2005; Fuchs et al., 2007). The probes were prepared by Cunha (Cunha, 2011) based on Fuchs et al. (2005) research, and following

the Mathematic Portuguese curriculum in 2007/2008. Student's performance was scored as the total number of digits correct, by receiving one point for each correctly answered digit. Students who were at or below the 20th percentile were considered at risk for poor end-of-year math outcomes. In this investigation the data was collected from the fifth probe and the maximum possible score were 30.

Data were statistically analyzed using measures of central tendency and dispersion, and by parametric tests, such as the t test for independent samples and the One-Way ANOVA test. The statistical significance level adopted was 0.05 ( $p < 0,05$ ).

### **Results and Conclusions**

The conclusions are presented in six parts: the acceptance of the probes; performance of the students; the impact of gender and school cluster on the results; students at risk for developing LDM; comparing the values of identification of risk; and reliability of the results.

1. According with the acceptance of school community and the simplicity of implementation it is possible to conclude that the CBM math probes are economical, quick and easy to apply.

2. Mean performance of students was 24.01, standard deviation was 6.880, mode was 30 and 45.4% of students achieved scores of 28, 29 and 30. These three scores correspond to higher values. These values contrast with the results in other investigation and the moment that tests were applied can explain it. In U.S. the administration of the probes occur at beginning of first grade, while in this research the administration occur in middle of second grade. The application was planned to the beginning of the second grade regarding the Portuguese curriculum, however some logistic problems delayed the implementation of the probes.

3. The mean performance of male students was 24,37 and female students was 23,59, so it is interesting to note that in the analyses of students at risk of developing LDM, girls and boys do not show significant differences. Establishing a comparison between the mean performances of the students of different school cluster helped to point out that there are significant differences between them. One of the school clusters stood out, presenting the best results (mean=26,15). The other two don't show significant differences between them (mean=22,55; 23,32). These data allow us to conclude that the learning experience in mathematics in different school cluster have a real impact in the acquisition and performance of students.

4. The performance of students in mathematics CBM is used as an indicator of risk to developing LDM. According to Fuchs et al. (2007) research the data indicated that 80 students are at or below 19 value, being at risk. These outcomes indicate that these students aren't responding positively to the education provided in regular context (Fuchs & Fuchs, 2002).

5. When we established the comparison between the identification of the risk value obtained by the total sample and the same value in each school cluster, we concluded that in the total sample the 20th percentile corresponded to the value of 19, and that in school clusters the same percentile corresponds to value 18, 24 and 16. In the Fuchs, et al. (2005) study, as referred earlier, the value of the risk was 11. The students that scored at or below 11 points were considered at risk to develop LDM. In Cunha (2011) study, the score that determined the risk placed on 12 points. These differences are significant and the moment of probes administration can explain it.

6. The reliability of the results is ensured through calculation of correlation of results. There are several approaches to perform this calculation. One is the test-retest method, which determines the stability coefficient between the results of individuals at two different times (Gall, Walter, & Gall, 1996). In this study the test-retest method was

applied, using the results obtained with one week interval (4th and 5th tests). The correlation coefficient Pearson  $r$  had a value of 0.853, which indicate a strong correlation of results (Hopkins, Hopkins, Glass & 1996).

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## **Adapting Teacher-based Scale for International use**

Emily. Durall  
University of Tennessee  
[emily.durall@utk.edu](mailto:emily.durall@utk.edu)

R. Steve McCallum  
University of Tennessee,  
[mccallum@utk.edu](mailto:mccallum@utk.edu)

Bruce  
A. Bracken  
College of William  
[babrac@wm.edu](mailto:babrac@wm.edu)

Mary, & Sandra M. Silva,  
Centro Desenvolvimento Infantil-Diferencas  
[sandrasilva@diferencas.net](mailto:sandrasilva@diferencas.net)

### **Abstract**

Use of the Universal Multidimensional Abilities Scales (UMAS) for international application is described via two case studies, one from the U.S. and one from Portugal. The cases illustrate how UMAS data offer potential for helping educators identify and more effectively address their student's needs, particularly given its unique development properties (i.e., sensitivity to local standards and to any/all communication strategies) and strong psychometric properties (e.g., Alphas > .97). It has potential to be used internationally because of its reliance on teachers to rate performance relative to peers in six areas (i.e., Cognition, Creativity, Leadership, Literacy, Math, Science) and without regard to the student's communication mode.

**Key Words:** Universal Multidimensional Abilities Scales, international translation, universal application

### **Introduction**

Because academic/cognitive strengths and weaknesses and even identification for eligibility for Special Education are culturally and socially bound, performance that characterizes those who evidence strengths/weaknesses in one geographic region of (any) country might not in another region. Consequently, educators need teacher-based mechanisms to fairly characterize diverse students for a variety of purposes (e.g., grouping for more efficient intervention, creating intellectually and/or academically diverse groups, identifying those who may need more intensive attention including special education) and not penalize students from diverse backgrounds (e.g., those who do not speak the native language as a first language). This presentation demonstrates how one rating scale can be adapted for diverse populations within/across national boundaries, and provides examples of its use in Portugal and in the U.S.

### **Methods**

Pilot data and standardization data from over 2,400 students representative of the United States were used to develop the Universal Multidimensional Abilities Scales (UMAS). The UMAS includes six scales; 15 items are nested within each scale. Reliability and validity data are strong. Reliability data range from .84 to .99 and Alphas for each scale > .97. The following items are typical: Cognition (learns with minimal instruction), Creativity (produces innovative and novel ideas and products), Leadership (is emotionally resilient during difficult times), Literacy (articulates thoughts clearly), Math (recognizes and appreciates mathematical properties of objects), and Science (predicts consequences of natural events). The behavioral characteristics embedded in these items have been identified by experts in the field as critical to successful performance in the classroom (Gagne, 1999; Sternberg, 1985).

UMAS requires only about 15 minutes to complete; it can be used independently or as part of a comprehensive evaluation. Teachers are presumed to be the most effective raters and are typically chosen to respond to each item; there is strong evidence to support the validity of their ratings (Crosby & French, 2002; Gresham, MacMillan & Bocian, 1997).

Directions for the UMAS requires that raters, typically teachers, compare examinees on a five-point likert-like scale from Well Below Average (1) to Well Above Average (5) for each of the 15 items per scale, relative to the behavior of the student's same-age peers in the same locale, and independently of the particular language or communicate medium the student uses.

Average performance earns a rating of 3. Given this scoring procedure average for each scale is set by definition to a raw score of 45, i.e., 15 (items) multiplied by scores on each item that sum to 45. This procedure allows the examinee's teacher to provide local norming based on his/her experience, and is based on the literature mentioned above and cited in the UMAS Manual (McCallum & Bracken, 2012) supporting the validity of teacher ratings.

Directions and items on the UMAS have been translated into Portuguese. Data from case studies from a 6 year-old, male student from the United States and a 9 year-old, female student from Portugal will be shared with participants. Data from results of the administration of the UMAS for the 6 year-old from the United States are presented below.

### **Results and discussion**

The UMAS yields information in six areas which are helpful in making decisions about students who are being assessed to determine if they meet eligibility criteria for an intellectual disability, learning disability or gifted education services. A case study from the United States provides an example of data obtained through the administration and interpretation of the UMAS. Demarcus is a student who was evaluated due to interpersonal difficulty existing co- oncomitantly with abilities that are consistent with giftedness. Demarcus's General Aptitude Index (GAI) was 128 (90% Confidence Interval, 126-130), which is in the 97th percentile. The score indicates that in general, Demarcus's cognitive and academic behaviors fall in the advanced range and supports identification of giftedness, which is shown by elevated scores on all the UMAS subscales, except for Leadership. Results also reflect his difficulty interacting with peers as evidenced by his Leadership scores, which are lower than his average and the normative average. These results are consistent with school-based data.

### **Conclusions**

As demonstrated by the case study, the UMAS has potential for helping educators



identify and more effectively address their student's needs, particularly given its unique development properties (i.e., sensitivity to local standards and to any/all communication strategies). The UMAS has potential to be used internationally because the ratings do not depend on the particular communication mode employed by the student. Teachers may use results to track students into groups for intervention.

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## **Special education teacher's vision of student's evaluation**

Eniceia Gonçalves Mendes  
Universidade Federal de São Carlos - UFSCar  
[eniceia.mendes@gmail.com](mailto:eniceia.mendes@gmail.com)

Sabrina Mazo D Affonseca  
Universidade Federal de São Carlos - UFSCar  
[samazo@hotmail.com](mailto:samazo@hotmail.com)

### **Abstract**

This report focuses on data from a survey conducted in one of the municipalities investigated by the National Observatory of Special Education (ONEESP) in the state of São Paulo, Brazil. Seven teachers from Multifunctional Resources Room (MRR) and seven ONEESP members attended meetings. The present data focus on two meetings that discussed student's evaluation. The results showed that the practitioners of the MRR had trouble and did not feel able to identify conditions involving cognitive aspects, such as intellectual disabilities and giftedness. Because of this uncertainty, the majority of cases were referred to other professionals and / or a specialized institution of the municipality. Once identified, the evaluation of the student continued in order to develop the Plan of Specialized Educational Services (PAEE). Teachers acknowledged the difficulty of following strictly the principle of keeping all students of MRR all the time in regular classrooms of regular schools, while they recognized the dangers of a temporary exclusion for behavioral problems become the pattern of the common class. In teachers' view, assessment of student performance suffers with the divorce between teaching at the MRR and the common class. In this context, where much still needs to be defined and discussed, it is aimed to show that training strategies should boost teachers' critical reflection about their practices.

**Keywords:** Special Education, evaluation, Multifunctional Resources Room, Brazil

### **Introduction**

The National Observatory of Special Education (ONEESP in Portuguese) is a Brazilian national research Project which aims to evaluate the national implementation program of Multifunctional Resource Room (MRR) promoted by Special Educational Secretary of Ministry of Education (MEC) (Mendes, 2010). Special education researches of 17 Brazilian states (Alagoas, Amapá, Bahia, Espírito Santo, Goiás, Maranhão, Mato Grosso do Sul, Minas Gerais, Rio de Janeiro, Rio Grande do Norte, Rondônia, São Paulo, Santa Catarina, Sergipe, Paraíba, Paraná), representing 43 higher education institutions, developed a network research doing local studies with MRR teachers in the municipalities based on collaborative research. The present study focuses on data about evaluation processes on MRR, one topic of Oneesp investigation.

Although the evaluation of special education student historically excluded these students of regular classrooms (Bastos, 2002), nowadays it became essential to enable them to have access to specialized educational services. Besides, it is also as a key element in student's learning since it shows student's necessary resources to accomplish the tasks in regular classrooms and have success at school (Oliveira & Campos, 2005).

The Brazilian politics on school inclusion published by Ministry of Education (Brasil, 2001) assumes a pedagogical diagnostic model at the expense of the medical model in the assessment for the identification of special educational needs (Castro, Veltrone, Rabello & Mendes, 2011).

1 The pedagogical diagnosis allows one to know the students individually, in groups and family; the characteristics of the learner, their needs, motives, abilities, habits, skills, knowledge, self-esteem, and potential differences (Fernandes & Viana, 2009, p.310)

2 The medical-psychological model emphasize the pathological aspects at the expense of healthy as well as the difficulties instead of the potential of the students (Fernandes & Viana, 2009, p.310)

3-Assuming that the evaluation process is vital to the decision-making on resources that should be available to the students, including their access to MRR, the special education teacher has a central role on this process since they are responsible for determining both the resources and the individual plan of education. Considering this, the present paper aimed to comprehend how special educational teachers of a municipality of São Paulo were evaluating their students to: (a) identify eligible students to MRR; (b) elaborate individual plan of education and (c) analyze their learning at school.

## **Method**

### **Participants**

Seven MRR teachers and seven Oneesp members took part in the study. All MRR teachers had graduation course in teaching with a specialization on Special Education. One had Masters degree in Special Education.

### **Procedure**

After ethics procedures, the Educational Secretary of the municipality was contacted in order to present the Project and have their approval. Eight two hour sessions were conducted fortnightly and discussed vocational training, legal issues in special education and its implementation, and the evaluation of the special educational students. At the end of the meetings, participants received a certificate of participation. The audio of those meetings were recorded and later transcribed by undergraduate research fellows who were part of the project, and analyzed qualitatively by members of Oneesp. The data presented here were extracted from the second and fourth meetings, which addressed the issue of evaluation.

## **Results and discussion**

Evaluation to identification of students Regarding the assessment to identify target students of Special Education , participants reported that the process began with the teacher of the common class, which identifies the difficulties of the student and headed for the coordination and direction of the school. Then the Department of Special Education of the City was notified and gave continuity to student assessment, which was conducted by an assessment team from the municipality (composed of a psychologist, a speech therapist and an educator) or a specialized institution (APAE) which had an agreement with the Municipality. In general, the evaluations carried out by a specialized institution followed a medical-psychological model that little contributes to plan educational activities (Fernandes & Viana, 2009), in detriment to pedagogical diagnosis processes which allow us to know the particularities of each student (needs, motives, abilities, habits, skills, knowledge, self-esteem and potential differences) (Fernandes & Viana, 2009) .

According to the participants, the most difficulty they faced was to evaluate conditions that involved cognitive aspects, such as intellectual disability and giftedness. The

participants' difficulties were due the lack of specific criteria that permitted them to make conclusions about the case and also for the different possibilities of evaluation (psychological and pedagogical).

It is worth noticing that although the participants felt disprepared to evaluate the conditions cited above, almost of 80% of the students referred to MRR in elementary school of the municipality were classified as having intellectual disability, a proportion higher than literature estimates (50%), which could raise doubt about criteria for assessment and identification of students with intellectual disabilities.

Participants then considered that the fact of not feeling safe to perform this evaluation somehow favored referrals to other professionals and to the specialized institution, which evaluated cases with developmental delay, or had already done tutoring and/or educational projects without academic success, or cases that were regressed on the development or repeating students. Despite this partnership, not all participants relied on the assessment of the institution. Some reported that the assessments conducted by the institution of elementary school children were not compatible with their observations. It is worth noting that most of MRR students were classified as intellectual disability (mild or moderate), a condition which, together with high abilities/giftedness, are commonly identified later, or when children are between 6-10 years of age (Ayoglu et al., 2008; Koirala, Kumar & Bhagat, 2012), i.e., during the first years of elementary school, precisely the period in which the diagnosis and services offered by the institution cease to be evaluated positively by the participants.

#### Assessment for planning

After the identification of the student and their eligibility to specialized educational services, the special educational teacher had to elaborate the Plan Specialized Educational Services (PAEE). In order to accomplish this task, teachers should identify skills necessary to be developed by the student. The municipality had an evaluation instrument composed of four columns, each to register: (1) general purpose, (2) specific purpose (3) activity and (4) procedure for each service offered. Although there was a recommendation for the development of this plan, difficulties were present, for example, differentiating goal and strategy.

Furthermore, special educational teachers faced difficulties to work collaboratively with regular classroom teachers. Some participants declared that they needed mediation of the school's principal in order to have access to the regular classroom teacher. Commonly the "Pedagogical Working Hours" were the time they could share information about the student, which, most of the time, showed to be ineffective as they couldn't plan together the activities or discuss ways to help the student achievement.

Participants declared that there was a recommendation by the Secretary of Education that the PAEE should be reassessed every semester in order to restructure it with the school community. However, most PAEEs were merely repeated according to the frequent absences of students to meet the MRR or lack of progress of the student. It is worth noticing that even when there were information about the student achievement in the classroom, the MRR was focused on the skills of the student, with the expectation that when these skills were developed he/she would enhance academic learning, i.e., a student-centered focus and not an educational context focus.

#### Evaluation of school performance

To assess the progress of the student who attends the MRR, specialist teachers highlighted that they analyzed student's achievement qualitatively. They took into account the initial evaluation, the reports of attendance and the final goal established to

the student. So, they checked whether the student "fulfilled the task" (sic), without quantifying student achievement, i.e., without giving grades.

The academic performance of students in the regular class was another point explored. Participants said that regular classroom teachers usually requested some help to evaluate them. According to them, the most difficult was if they should consider student's achievement in relation of their own progress or comparing them with the other colleagues of the class, which in turn leads to different criteria to assigning grades: some give top marks regardless of student performance, others prefer not assign grades or concepts, while others seek to adapt the evaluations according to what the student can do and thus evaluate and grading student's performance.

Anyway, specialist teachers felt that the student's grades in regular class did not reflect their performance at school because other criteria were considered, such as behavior/discipline, attendance, participation and achievement of homework. To prove these, they mentioned that of 58 students who attended MRR, 4 were literate (about 7 %) and dominated addition and subtraction. None of them dominated the four numeracy. It should be taken into account that the students were from first to ninety year of elementary school.

Another aspect discussed was about who decides on the promotion or retention of students. Participants declared that this was a collective decision between management and staff of special education, considering each case individually. The most discussed cases were students with learning disabilities, and retentions usually occurred when students were in the 1st and 5th year of elementary school. Mainly what was considered to define the advance or not of the student is not the fact of having more opportunity to connect with the same academic content, but the likely benefits to the student, the criteria age/grade lag, and overcrowded schools.

### **Conclusions**

Data collected pointed that special education teachers still face difficulties to evaluate their students. The assessment of target students to Special Education and the technical guidance provided in official documents (Brazil, 2001; Brazil, 2006) lead to a student-centered practice and a focus on the disability, reproducing the medical-psychological mode of evaluation. Besides, special education teachers felt uncomfortable with their central role in the process of identification and referral to MRR.

Along with that, participants mentioned the obstacles and difficulties in elaborating the Plan Specialized Educational Services for the students, especially because of the hard task of elaborating it with the regular classroom teacher. Overall the planning was restricted to what would happen in MRR, therefore not considering the whole schooling process of the student.

The evaluation of the student's achievement, on the other hand, was also suffering from the divorce between teaching at the MRR and the common class. The assessment practices to assign grades to these students varied according to the teacher's conception of disability and indicated the lack of clear guidelines on how to monitor the student's performance in regular school.

In this context where much still needs to be defined and discussed, training strategies should boost teachers' critical reflection about their practices, and collaborative studies, when well conducted, can achieve these research goals of mobilizing beliefs, knowledge and opinions that support teachers' practices .

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## **National Observatory on Special Education: network study about inclusion in Brazil**

Enicéia Gonçalves Mendes  
Universidade Federal de São Carlos  
[eniceia.mendes@gmail.com](mailto:eniceia.mendes@gmail.com)

Fabiana Cia  
Universidade Federal de São Carlos  
[fabianacia@hotmail.com](mailto:fabianacia@hotmail.com)

### **Abstract**

Considering the importance of collaborative networks of research, a group of Brazilian researchers has created the National Observatory on Special Education (in Portuguese Oneesp), whose focus is the production of integrated studies about policies and practices directed to the issue of school inclusion in Brazilian reality. The present project has as focus a nationwide study about a government policy to stimulate the creation of support services to students with special educational needs in regular schools, called "Multifunctional Resource Rooms (MRR)". According to official data, between 2005 and 2011 the Brazilian Ministry of Education had financed 30.000 MRR spread in all Brazilian states. To what extent this type of service has supported the education of children and young with educational special needs? To answer these question 203 researchers from 16 Brazilian states, representing 22 universities are leading a network study to analyze the municipalities' implementation of this policy. Studies were conducted involving 58 municipalities for concurrently produce, knowledge and professional development through collaborative research, conducted through interviews with focus groups composed of approximately 450 MRR teachers, and then a national study survey in progress, directed to about 500 MRR teachers. The analysis of the results, still preliminary, indicated that the policies of the municipalities, despite following some guidelines from the ministry of education, are translated to their reality and assume quite different local expressions depending in part on local history of the development of services of special education in determined reality.

**Keywords:** Special Education, inclusion, educational policies, Brazil

### **Introduction**

The issue of school inclusion has aroused a passionate debate in the last 30 years, in Brazil and in the world. As pointed by Sowell (1995), there is, at present, an ideological division in which one side is represented by those who advocate more strongly in favor of the total, more radical inclusion, and that has been hegemonic in defining the ways of policies, and by those that exhibit any kind of resistance, extreme caution or even rejection to this type of proposal. Thus, this context has shown that, once instituted a policy proposal, any empirical evidence that points to unexpected impacts, shall be explained in terms of a conflict between visions, between "us " and "them", as if we were measuring forces of morality against immorality between right or wrong, and not looking for advances in our theoretical, practical and political propositions (Kavale & Forness, 2000).

Therefore, the area of Special Education involves tensions between those who point to the need of a radical change, and others who recommend a more cautious approach, based on empirical analyzes and historical considerations (Meredith & Underwood, 1995; Mendes, 2006).

In Brazil, the Federal Constitution of 1988 and the National Educational Bases and Guidelines Law (LDBEN No. 9.394/96) assumptions about inclusion, appeared in refereed initiatives aimed to reform Brazilian educational system. Regarding the target population of Special Education it was legally guaranteed equal access with other children in regular public schools, which, in theory, would allow the expansion of educational opportunities to these population and universal access to education for them. However, the assurance of permanence and, consequently, the right to education and academic success, will only be possible if the common school is able to meet the special educational needs of these students.

National Educational Bases and Guidelines Law (LDBEN No. 9.394/96) signals in his article 58 that the enrollment of target audience of Special Education should be provided, preferably, in the regular school system. These movements have led Federal Government, States and municipalities to adopt public policies that guarantee the right to education for students with disabilities, pervasive developmental disorders and high ability/gifted.

The "National Policy On Special Education From The Perspective Of Inclusive Education" from Ministry of Education (Brazil, 2008) defines who are eligible for Special Education and reinforces the principles and foundations of inclusive schools. In summary, the proposal of the Brazilian government is to prioritize that Special Educational students have their education in regular classes in regular schools and receive assistance from specialized educational services.

The Decree No. 7.611/2011 (Brazil, 2011) defined Specialized Educational Services (SES) as:

a set of activities, with accessibility and pedagogical features institutionally and continuously organized, provided complementary or supplementary additional training for students in regular education (Brazil /SEESP,2011, Artigo 2,§ 1).

Under article 5 of the decree, it specified that the MEC will provide technical and financial support to the following actions to offer specialized education, among others that meet the objectives set forth herein:

- I - Enhancement of specialized educational services already offered;
- II - Implementation of multi-functional resource classrooms;
- III - Continued teacher education , including the development of bilingual education for deaf or hearing impaired students and the teaching of Braille for blind and low vision students ;
- IV - Training managers, educators and other school professionals of education in the perspective of inclusive education , particularly in learning, participation and the creation of interpersonal bonds;
- V - Architectural suitability of school buildings for accessibility;
- VI - Development, production and distribution of educational resources for accessibility, and
- VII - Structuring of core accessibility in federal institutions of higher education.

In addition, the Decree No. 6.711/2011 (Brazil, 2011) specifies that the specialized educational services may be offered by public school systems and the specialized agencies and defines the Multifunctional Resource Rooms (MRR) as endowed environment equipment, furniture and learning materials and teaching for the provision of specialized educational services.



As we see the education legislation prescribes that the SES should preferably arrange for the provision of Multifunctional Resource Rooms (MRR), so that the target audience of students in Special Education does not interrupt their school careers in the common class, but at the same time is able to meet their demands for schooling. Therefore, the Ministry of Education launched in 2005 the "Programme deployment Multifunctional Resource Rooms" to support educational systems to create MRR for the offer of ESE , complementary or supplementary schooling .

According to data provided by the MEC, between the years 2005-2011, there were 39,301 Multifunctional Resource Rooms for the most of the 4,564 Brazilian municipalities, distributed in all states and the Federal District. This program is for state schools and local education networks, based on the enrollment of students with disabilities, high ability/gifted and pervasive developmental disorders recorded in the Ministry Education School Census .

As seen Brazilian policies are grounded in a simplified design of support systems, and the question that guided this study was: Is the MRR able to meet the needs of all students target of Special Education?

### **Method**

To answer this question, 25 researchers representing 22 universities and 18 graduate programs have gotten united. Subsequently the network has grown so to 808 participants: 203 researchers (49 of the national network of 72 state research networks, 82 associated researchers); 217 students (142 students in 22 undergraduate, 75 of 14 different graduate programs); 446 specialized teachers that worked in the MRR and 36 municipal administrators of special education from form 17 Brazilian states (Alagoas, Amapá, Bahia, Espírito Santo, Goiás, Maranhão, Mato Grosso do Sul, Minas Gerais, Rio de Janeiro, Rio Grande do Norte, Rondônia, São Paulo, Santa Catarina, Sergipe, Paraíba, Paraná).

And thus the studies at municipal level with meetings with teachers of resource rooms for conducting focus groups about the topics covered in the project began, based on the methodology of collaborative research that aimed to produce knowledge and training of those involved. The triggering questions for discussions in the focus groups addressed three topics: the student assessment , teacher training and functioning of the MRR . Further details of the methodology of the project are on the site <http://www.oneesp.ufscar.br/>.

### **Results and discussion**

Thus, the database project resulted in a collection of : 1 ) about 300 documents being analyzed to form the state of the art theme in the study, of which 30 are official documents from the Ministry of Education that rule these services, 18 journal articles , 70 dissertations and theses, and 180 papers published in national scientific events on the subject, b ) a database consisting of 4,300 pages of interviews obtained through meetings with focus groups with teachers of 56 municipalities , which were transcribed and typed into an electronic file , c) 500 pages of interviews being 36 municipal, transcribed and typed into electronic file management, and d) 500 forms filled in an online survey for MRR teachers.

Regarding the assessment of the student, the study confirms the findings of several other studies that indicate that the policy of inclusion in Brazilian school has various problems due to the lack of precise guidelines for assessment for identifying and defining eligibility for services from students audience of Special Education (Veltrone, 2011) , the assessment for the planning of teaching for these students through the

development of a plan individually tailored to meet the needs of these students (Tannús-Valadão , 2010, 2013 ) and, finally, in the assessment process for monitoring the process of teaching and learning through formal and informal standardized measures and performance to achieve a successful educational journey (Capellini, 2001) .

Regarding the organization of the specialized services, given the recency of the proposed deployment of these services and the growth in the number of MRR around the country, we sought to investigate how teaching is being structured in such spaces. Evidences indicates that the MRR in general cannot answer it, generally for one or two hours of care in alternate shift , the different needs of various children, who generally only come to school at six years of age, with no minimum requirements and now with considerable delays in development. One difficulty has been appointed to organize the service by the same teacher for students with disparate ages and disabilities. In relation to understanding that teachers had about that service, data generally indicate the existence of significant challenges regarding a definition on how Specialized Educational Services should be conducted within the MRR, and even more in the relationship between the MRR and the curriculum of the regular classroom. However, the main problem seems to be the political conception of the support service based in MRR, which becomes the locus of accommodation of difference, which still focuses on student disabilities and their care, causing little or no impact on a school that needs to change to offer quality education for all.

Regarding teachers' training for work in MRR, the evidence confirms the shortage of specialist teachers, managers with complaints about the lack of competent teachers, who are often met with the allocation of untrained teachers in the area. The study still found a huge demand for training for both special education and regular teacher, which is being supplied by the government in distance education courses of short duration.

## **Conclusions**

It is worth noticing that the project has still not been concluded yet, but preliminary results are amazing and extrapolate a lot what was expected because in three years it can already be seen its impact in order to :

- 1 ) Contribute to the advance of municipal policies of local school inclusion from the collection and systematization of information that supports decision-making , allowing, for example, to identify demands for the training of teachers , limits and possibilities of MRR, performance monitoring target population of students in Special Education at school etc.;
- 2) Strengthen ties between universities and the Municipal Education expanding opportunities of the university to produce knowledge that contributes to advancing policies and practices;
- 3) Provide ongoing training for specialist teachers who work in MRR in public schools;
- 4) Provide training to all researchers and students involved in collective and collaborative production of typical knowledge networks research contexts;
- 5) Provide an opportunity for exchanging and training among members of research groups from 22 Brazilian universities that have special education as an object of study and thereby strengthen national scientific production in the area of Special Education , and finally
- 6) Increase the impact of scientific knowledge in policy of school inclusion within the municipalities, states and the country.

In relation to the main findings, data have pointed out that, although the instruments that force the standardization of school inclusion policy by the Ministry of Education, in the context of municipalities this policy ends up suffering multiple translations at various

levels, so local policies end up taking different contours.

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## **Alternative Communication in Brazil: Report on Research**

Fabiana L. Evaristo  
Federal University of São Carlos.  
[fab\\_lacerda15@hotmail.com](mailto:fab_lacerda15@hotmail.com)

Maria A. Almeida  
Federal University of São Carlos  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

Iasmin Z. Boueri  
Federal University of São Carlos.  
[boueri.iasmin@gmail.com](mailto:boueri.iasmin@gmail.com)

### **Abstract**

The alternative communication is one of the areas of assistive technology, ie, in different cultures throughout history, people have created adaptations and used special tools and equipments to assist people with special needs in their societies. The research aims to present the key aspects of Alternative Communication studies conducted in Brazil in the last 7 years. The cited articles were acquired on a literature Database - SciELO Brazil. Data were described quantitatively by using graphs and percentage calculations and qualitatively with detailed descriptions of important aspects of the articles. It was found a total of 77 articles with the descriptor “Alternative Communication”, where 25 of them are related to the topic; 2 articles with the descriptor "Special Education and Alternative Communication"; 8 items with the descriptor "Alternative Communication and Cerebral Palsy". Most of the research reported in these articles were made using pupils with Cerebral Palsy and performed in clinics, and in 88 % of articles and analysis of the data was presented in a qualitative way. It is suggested to conduct research that describe effective ways of assessing communication skills with other people, in addition to cerebral palsy with the use of specific instruments that guide the implementation of various systems of Alternative Communication. Through this study, it was concluded that the production of alternative communication published in SciELO Brazil is still quite low.

**Keywords:** Alternative Communication; Special Education; Cerebral Palsy.

### **Introduction**

The alternative communication is an area that is part of Assistive Technology, ie, in many different cultures throughout history people have created adaptations and special tools and equipments used to assist people with special needs in their societies (LIMA, 2008).

Based on these articles, the Communications Systems Alternative constitutes a communication option for people who have impaired oral communication, either permanently or temporarily manner. Therefore, these systems allow users to have the best opportunities for interaction in different contexts (SILVA, 2008).

According to Deliberato and Sameshima in 2009, the communicative skills of students with disabilities without orality have been the subject of studies by the researchers, who

are concerned to ensure that these individuals can demonstrate their true potential in different contexts, especially with speakers interlocutors.

The Assisted Assessment, as well as Extended and Alternative Communication, are subjects of recent research in the country incremented by research undertaken in universities from the 90s (PAULA; ENUMO, 2007).

During the research it was reported the main aspects of Alternative Communication: to understand who are the beneficiaries of this feature, the main methods and the most recent research in the area.

These small details are essential for the progress of research, awakening increasing interest in the topic and so reporting our experiences.

Were studied approximately 25 articles from the years 2007 to 2013, studies accomplished in Brazil, with the objective of reporting by these quantitative studies which are its main aspects, bringing the various studies that cover this area; through this area to observe a greater number of research with students who have cerebral palsy, as well to check whether there has been a gradual process in studies from 2007 until 2013.

### **Method**

Database research: The database searched was the website of scientific research: Electronic Library Online, FAPESP, CNPq, BIREME / PAHO / WHO FapUnifesp - SciELO Brazil, available online at <http://www.scielo.org>. To select articles, the base offers various ways to search: by integrated method (word lexical closeness), with one or more words and where the research was conducted, as in the case of this research in Brazil.

Descriptors of Articles: As descriptors for the search of articles were used in portuguese: Alternative Communication, Alternative Communication and Special Education, Alternative Communication and Cerebral Palsy; Alternative Communication and Collaborative Work.

Articles researched: In a research conducted at Scielo Brazil, through the descriptor "Alternative Communication", 77 articles were found, where 25 articles fit with this research theme, with the descriptor "Special Education and Alternative Communication", 2 articles were found, being equal to the previous descriptor; With the descriptor "Cerebral Palsy and Alternative Communication", 8 articles were found, also being the same as those found in research with the theme "Alternative Communication"; and finally, the last survey conducted with the descriptor "Alternative Communication and Collaborative Work", were no articles found.

Instruments: The research instrument was a protocol documentary analysis.

Data collection procedure: For the collection of articles it was conducted a bibliographical survey in Scielo Brazil website with articles related to the topic of Alternative Communication in the last 7 years (2007 - 2013). After collecting the journal articles, they have undergone a documentary analysis.

Data analysis procedure: For the record the data analysis during the process of data collection, all of articles were saved in separate in computer folders by descriptors. After this procedure, following a chronological order, the articles were analyzed and described in the protocol documentary analysis. This protocol allowed a more detailed description of all items, where applicable: title, objective, method, analysis procedure and the main results obtained.

### **Results and discussion**

As a search results were found a total of 77 articles with the descriptor Alternative Communication, where 25 articles are related to the theme; 2 articles with the descriptor

"Special Education and Alternative Communication"; 8 articles with the descriptor "and Alternative Communication Paralysis brain. Done this survey, we can report that 25 articles are valid and that although the descriptors are different, the articles found were the same. It should be noted that were part of this survey, only items from SciELO Brazil

According to the results, the theme "Alternative Communication" presents a reasonable amount of articles researched in Brazil, but we can observe that most of the authors are basically the same. Still there is a lacking of commitment and interest of professionals in the area.

It is also observed that there was an increase of research on the topic between 2007 and 2010, but in 2011 there were only two surveys found in SciELO Brazil website on the topic.

In Brazil, although most studies in CA are in the field of Education and had intensified in recent years, the adoption of these approaches in the school environment can be considered incipient especially if we take into account that the institutions are located outside of regional clusters already constituted and recognized as and producers and disseminators of knowledge and practice in this area (CARNAVALE; BERBERIAN; MORAES; KRÜGER, 2013).

However, one can affirm that alternative communication is used a lot, mostly with students who have cerebral palsy and autism. Also it is worth reporting the importance of the Brazilian Congress of Alternative Communication, which according to Oliveira, in 2010, the III Brazilian Congress of Alternative Communication, which addressed the theme "Any way of communicating is worth", produced a work composed with the texts of presenters who contributed to the event. It is worth mentioning that this is an important initiative that comes to publicize and to consolidate the academic and scientific knowledge produced in the field of Alternative Communication.

## **Conclusions**

The present study observed that alternative communication is a form of communication for people who have communication problems. For example, is a communication through gestures, symbols, expressions, and is constantly used the plank with the alphabet, among many other materials that are of high and low technology.

This important area of knowledge involves resources that provide people restricted from communicating, through oral or having the understanding of the speech impaired, the possibility to communicate and still making themselves understood. Such a perspective contemplates, from children undergoing language acquisition for adults who have suffered accidents or diseases that compromise their communication (OLIVEIRA, 2010).

It is concluded according to the research, the alternative communication is an area that finds in this growth and is the most effective method to this days.

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## **Brazilian perspectives on teaching science to students with deafness**

Fabio de Souza Alves  
University of São Paulo - USP  
[fsalves@usp.br](mailto:fsalves@usp.br)

Eliza Marcia Oliveira Lippe  
University of Campinas - UNICAMP  
[emolippe@unicamp.br](mailto:emolippe@unicamp.br)

Ida Lichtig  
USP School of Education  
[idalightig@yahoo.com.br](mailto:idalightig@yahoo.com.br)

### **Abstract**

In the last two decades, Brazil has introduced its agenda and different politics to expand access to education. The results of these politics show that there were significant social and economic advancement in this period reflecting significantly on the Human Development Index by municipalities - IDHM presented this year by the United Nations Development Programme - UNDP. Along with this economic growth has opened up spaces for the creation and implementation of various policies given previously excluded social groups, such as people with disabilities. Thus, this work aims at analyzing the advances and dilemmas for access to education for deaf people in teaching science, which until the last decade were limited to attending special schools and institutions are often prevented from attending public schools, or were prevented from having their rights recognized. In this sense, we analyze qualitatively the National Politics on Special Education in Inclusive Perspective of the last decade, legislation and country opinions for the teaching profession in the context of science education. From the analysis of the documents, it was possible to identify the limitations and contradictions in relation to national policy, the specialized education and teaching and learning in science for deaf people, which may limit the progress for this social group.

**Keywords:** Science education, national politics including Brazilian, deaf, LIBRAS

### **Introduction**

Public education and private Brazilian has undergone several changes changes in the last twenty years, it is a long process of restructuring of the Brazilian education result of a dictatorial regime and various economic plans without success.

The scenario for the moment is difficult to understand because of the importante changes in the last two decades, there are huge structural changes regarding the construction of new schools, nurseries and universities as well as in terms of the creation and preparation of teaching materials, beyond concern about the quality of education in the country, and in this regard it has happened more slowly. There was an expansion of the features that were on the order of 700 million year to 5 billion in Primary education which includes payment of teachers and a national minimum wage. Due to the geographical size of the country many teachers because they are farther away



received according to GDP / per capita in the region, the national minimum wage has enabled greater opportunity for teachers.

Concomitantly there was a concern with the formation of new university professors and public school teachers. 11 new universities and 147 campuses were created. CAPES agency that controls the graduate in our country records that in 2000 there were 7 graduate courses in science education and in 2010 the number jumps to 60 programs, bringing together 78 courses across the country. Courses are 29 academic masters, 19 doctoral and 30 professional master (BRAZIL / MEC / CAPES, 2010).

Figure 1 shows the distribution of science education at post graduate nationwide.



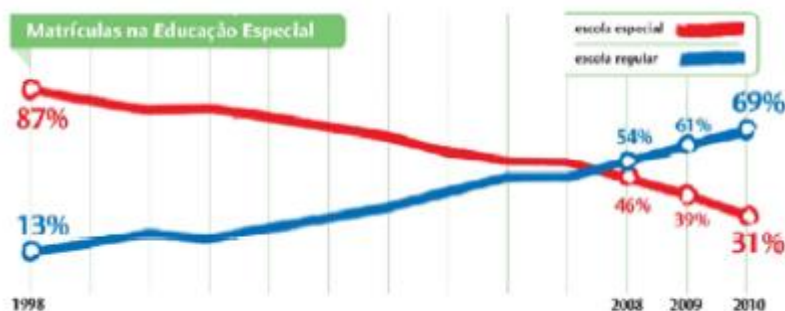
Figure 1 Geographical distribution of accredited programs in 2010 (CAPES, 2009)

Along with these movements has expanded access for people with disabilities, movement started by the initiative of social groups previously excluded. Organized as associations these groups were reaching their spaces for discussion and access recognizing the school as a site for the construction of knowledge (ALVES, 2012). To ensure the objectives of including the constitution in its Article 206, Item I, says that "Education shall be based on the following principles: equal conditions for access and retention in school." However, even in this period, in 1988, the Special Education was treated substitutive way, ie, was a parallel to the common teaching form and therefore closer to the concept of integration.

The current National Policy on Special Education in inclusive perspective January 2008 reaffirms the right to education of these students. The school census of 2010 shows the change basic education enrollments of students with disabilities. These students migrated from substitute special education in the 1990s, understood as special schools for the common class rooms (BRAZIL / MEC / INEP / DEED, 2010).

Census of 2010 (BRAZIL / MEC / INEP / DEED, 2010) reveal that in 2010 there was a 10% increase in enrollment for people with disabilities at all levels.

Figure 2 - Graph of Special Education Enrollment



The figure above shows the change of position in relation to the understanding of education as a social right, in which the enrollment of students with disabilities were

concentrated mainly in special schools substitute in the final years of the 90s, as opposed to what we see at the beginning of decade of the 2000s.

These special schools maintained the educational assistance of several persons having various disabilities, and some even receive public funds to operate, in practice the state was absent from liability by transferring it to another.

Table 1 below shows that progressively in common schools.

Número de Matrículas da Educação Especial por Etapa de Ensino - Brasil - 2007 - 2011

Ano	Total Geral	Classes Especiais e Escolas Exclusivas						Classes Comuns (Alunos Incluídos)				
		Total	Ed. Infantil	Fundamental	Médio	EJA	Ed. Profissional	Total	Ed. Infantil	Fundamental	Médio	EJA
2007	654.666	346.478	64.501	224.506	2.066	49.208	7.545	306.186	24.604	259.566	13.506	28.255
2008	685.689	319.524	65.694	202.126	2.768	44.384	4.952	375.775	27.603	297.986	17.344	32.296
2009	638.718	352.687	47.748	182.644	1.263	38.913	1.119	387.031	27.031	303.383	21.455	34.434
2010	702.603	318.271	35.397	142.886	972	38.353	663	484.332	34.044	380.112	27.695	41.585
2011	752.305	193.882	23.750	131.836	1.148	36.359	797	558.423	39.267	437.132	33.138	47.425
Δ%2010/2011	7,1	-11,2	-32,9	-7,7	17,3	-6,2	16,7	15,3	15,6	15,0	19,7	14,6

Table 1 - Enrollment of students in special schools and - School Census MEC / INEP / DEED For the deaf Law No. 10436/2002 and Decree No. 5626/2005 and the National Plan for Special Education, (2007) are guiding documents for the education of the deaf in Brazil. These documents determine in general terms that the deaf student should attend ordinary classroom transforming the school into a bilingual school in which, there must be deaf figure of the translator / interpreter of sign language for all subjects and in all modalities.

Thus, these students are in contact with new content and second Lacerda (2010), Mendes (2006) and Alves (et al, 2013) teachers do not feel prepared to work with these students and with this new reality, many Libras do not know, barely know what strategies should be applied to these students, besides not knowing what and how these students learn. Even on official documents to Law n°. 10.436/2002 passed to consider the Brazilian Sign Language - LIBRAS as the language of communication and expression through the deaf and the Federal Decree n°. 5626/2005 although the federal level has been considered by various government levels as an indicator for document drafting of laws and resolutions in accordance with the Brazilian constitution to promote inclusion of deaf people in our society.

Decree by the school, which include the presence of a deaf student should adapt turning into a school called and bilingual subjects, deaf student, the audit student, teacher and translator interpreter signs - TILS share knowledge and knowledge made there.

Thus, teachers in the context of classroom instruments should have read the various interpretations on the different areas of knowledge, therefore a current challenge considering that the presence of students with disabilities in the ordinary classroom is latest in our country for many students with disabilities are not provided for school situations. The LBS as a language does not yet have a differentiation between the nature of concepts.

These data are worrisome, because the internalization of scientific concepts by deaf people finds a major obstacle in comparison to listeners students, language, since many scientific concepts are nonexistent in LIBRAS (ALVES, 2013). In view of the formation process of interpreters LIBRAS who have no specific training in science, translation of scientific concepts can become a hindrance to student learning.

Understanding scientific concepts contributes to the formation of critical citizens who are aware of their social demands. The sciences form a body of knowledge built historically and as such, should be shared by all humanity, and not be the privilege of a few.

The school, today, has had a very challenging role in this learning environment implies performing some task with some success. On learning of the deaf, according Goes

(1999), the deaf showed slow and incomplete development of abstract thinking that lacks consistent mastery of language and is marked by poverty experiences of communicative exchanges.

Regarding TILS have a bigger problem, once again, that the TILS often not in the area of knowledge it takes a teacher to monitoring the performance of TILS and na ongoing dialogue with the teacher TILS in order to guide you to which case there is any doubt he is stopped. The role of teacher and TILS is key to success and the success of the student. Furthermore, the use of visual aids can help the deaf students in the understanding of utterances, but a caution with videos and slides as the playback speed is necessary because the deaf needs time to view the context of the material (CRUZ e DIAS , 2009). There is also the possibility of providing a printed material so that it accompanies the content proposed by the teacher. The use of speech teacher should speak slowly and look directed to the deaf student (CRUZ e DIAS, 2009). The big challenge is to cross the theoretical content to practice in the classroom, developing new teaching methods for deaf students and listeners do not feel satisfied and induced to believe that they are prepared to solve problems of this nature with teaching as below the real needs. Also it is necessary to review the educational materials available, because studies show that the material sciences is fully phased in relation to the concepts.

### **Method**

This work presents a literature survey on the topic of inclusion of Deaf Education in Brazil and its importance and relevance to the School of Science was held.

### **Results and discussion**

In this work the results indicated in the introduction to this text.

### **Conclusion**

We conclude that public policies are in the proper way, but require adjustments along the way in the country even though inconsistently, were of great value and huge advances for Brazilian society.

In general terms, the Brazilian education has advanced, more effective tools to control which unfortunately occur by operation of law which shows that the subject is not as well accepted and consolidated in terms of debate by Brazilian society that considers it contradictory on several points.

Specifically in relation to the deaf, we realize that the discussion of the presence of these individuals in the classroom will still have numerous ramifications, academic research only began investigating the teaching practices and the development of materials that can go towards the proposal of school inclusion.

There is also the position of two important professionals in this context the teacher and the interpreter translator, the first needs to be better paid, need instruments of protection of the state to perform its function, work with this type of student completely changes the practice and the mechanisms teaching in the classroom.

Finally, there is also the need for continuing research epistemological vigilance of the sciences as a field of knowledge, so that opportunities are provided equally to all individuals the environment.

### **Acknowledgements**

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## **Differentiated instructional strategies and assistive technology: are we talking about the same**

Gerusa Ferreira Lourenço,  
Federal University of São Carlos  
[gerusalourenco@gmail.com](mailto:gerusalourenco@gmail.com)

Adriana Garcia Gonçalves  
Federal University of São Carlos

Nassim Chamel Elias  
Federal University of São Carlos

### **Abstract**

Considering the need to use different strategies to teach special education students in inclusive classrooms, assistive technology is a theme present in policy and educational practices. However, the question that arises is the importance of providing and mediating a variety of instructions and strategies by the teacher, even when these resources are available in the classroom.

**Keywords:** special education, inclusion, assistive technology, teaching strategies

### **Introduction**

The movement for the right to education and, more specifically, for the inclusion of special education children in the regular classroom, has strengthened in the last decade in Brazil. Policies were restructured to organize potential services and practices to provide access and permanence of these students in regular schools. The Policy of Special Education in the Perspective of Inclusive Education (BraziL, 2008) guides the need for special educational services and resources to support, complement, and supplement the regular educational services, so as to provide trained and expert faculty, curriculum flexibilizations, and use of specific teaching methodologies, providing resources, special materials, and accessibility.

Therefore, the presence of special educators in regular schools has a special spot in the Multifunction Resource Classrooms, aiming to support the organization and provision of Specialized Educational Support (SEA), provided in complementary or supplementary form to students with disabilities, and autism spectrum disorders, and gifted students enrolled in regular classes, ensuring them conditions of mobility, participation, and learning (Brazil, 2009).

The current Brazilian policy corroborates findings in the literature regarding the potential implementation of differentiated resources with the goal of providing equal teaching opportunities to all students, and states their use by teachers working with specialized educational interventions.

Thus, multiple distinct teaching and instructional strategies should be part of the teacher's routine in the classroom, in order to allow access and success for all students in their teaching and learning processes. And beyond these teaching resources, the use of technology resources has gained voice in the country, towards the specific demands of students' participation in the proposed activities.

The technology follows human evolution according to the demands and requirements that the environment imposes for survival and continuity of the human species. Thus, the technological development of each period marked the culture and the way of understanding their history and thereby the technology alters human behavior.

In the context of school classrooms, academic content are determined by the curricula defined according to social, political, and ideological demands related to information and functional knowledge for a person to perform active role in the society. The use of technology is an important ally for mediating teachers' actions, students' performances, and the contents to be taught.

With regard to special education students, there is a need to promote general adjustments, such as architectural adaptations, and more specific adjustments, such as curricula and material adaptations. The literature confirms that to provide the effective educational services to special education children may be necessary to implement assistive technology resources as well as augmentative and alternative communication systems, appropriate furniture, physical spaces and teaching aids oriented to the development of their capabilities.

Among the available technological possibilities, assistive technology has gained prominence in order to provide functional improvement and success in the completion of activities by people with disabilities.

Assistive technology resources are considered to be an efficient tool for access to the curriculum when properly implemented, and their use has been greatly encouraged worldwide and, more recently, in Brazil for the teaching of special education students (Okolo & Bouck, 2007; Brasil, 2008). Thus, Brazil is beginning a movement of theoretical definition and service organization by political entities seeking to effectively deliver these resources to the interested population. Laws and decrees are being formulated with the aim of establishing action targets for these resources in Brazil, and their use in the educational context has gained prominence.

The use of assistive technology in certain areas and activities, such as daily life activities, establishment of effective communication, and participation in the classroom by the students, should be prioritized. The assistive technology may help children that are deprived of experiences offered to other children and unable to handle teaching materials and to respond the way other children do, due to their functional differentiated condition.

The potential participation achieved by using a resource properly implemented makes this subject present in educational policies aiming the inclusive education, permeating the need for the teacher to make use of these resources in his/her interventions with the special education students.

However, in everyday practice and on spaces of knowledge production, an issue has gained outline as to understanding how to mediate the use of assistive technology resources, the use of teaching technologies and strategies in special education child's daily life.

Therefore, the aim of this study is to present the relationship between teaching strategies and instruction with the use of assistive technology for special education students, considering inclusive schooling.

## **Method**

This research focuses on the qualitative approach to the Grounded Theory method. According to Brantlinger et al. (2005), this type of method develops a research to generate or discover a general theory or an abstract analytical hypothesis based on the study of a phenomenon in a particular situation.

Thus, the phenomenon investigated here relates teaching strategies and instruction with the use of assistive technology in the inclusive school context. Data analysis was done through the interrelation and description of terms relevant to the understanding of teaching strategies, instruction, and assistive technology.

### **Results and Discussion**

The motivation to use resources and methodologies brought the need for teachers to review their practices in order to encompass different teaching and instructional strategies to produce the equalization of opportunities and participation for special education students.

However, as pointed out by Dalton (2002), a proposal for the effective integration of technology in an educational system must include components of technology, professional development of educators, student's individualized planning, integration between technology and curriculum, the presence of a technical professional board, students and families, results evaluation and impacts presented by the student in the activities, organizing initiatives for technology assessment, ways of providing and maintaining the resource, institutional changes, and integration of assistive technology training in special education teachers' training programs.

Special education teachers, through the specialized educational service planning offered to special education students, must introduce the use of technology coupled to school contents and not in isolation and out of context as it generally occurs in everyday school practice.

However, by just having the resource available in classroom does not guarantee that it will benefit student learning; it is necessary to introduce differentiated instruction strategies to carry out the activity, because each student has specific needs that must be met.

When using educational strategies to facilitate student participation, as, for example, in the case of establishing alternative communication, the teacher must develop strategies for the students to reach the resource and point or look at symbols or pictures, as well as category photographs that are part of the student's routine, starting with photos of classmates, teachers, and elements in the classroom.

Thus, teaching strategies are defined as the actions that the teacher plans and performs, detailing all the possible answers the student may present according to the school subject he/she is learning.

Teachers who use differentiated instruction are quite aware of the goal they want to achieve and of the curriculum sequence defined by the governing bodies of education, and care about the teaching and learning of academic contents with the necessary adaptations for special education students. They are aware that students are at different skill levels, but in a continuous learning of novel skills. The main goal of assistive technology, associated with the applicability of appropriate strategies, is to maximize the skills of each student by teaching and helping him/her to develop it as much and as quickly as he/she can.

When a teacher chooses the resource, he/she should consider the best teaching strategies such as better positioning of the resource on the table, and should respect student's response latency or reaction time. Furthermore, it is important that the teacher thinks about differentiated instruction that will be used with the student (verbal, physical, and/or sensory), because teacher's assignments go from organizing teaching strategies to producing accessible resources.

Specifically in the school context and according to the policy of including special education students in regular classrooms, one way to encourage more assertive practices

of real integration of different resources has been the business among various professionals. Regular classroom teachers, multi-functional resource classroom teachers and professionals in health and education areas such as occupational therapists and special education teachers may work collaboratively to contemplate the real needs of students with disabilities and ensure success with teaching-learning quality, selecting the best available resources and strategies.

### **Conclusions**

The inclusion of special education students in regular classrooms may be understood as a bidirectional process that includes, on one hand, the manifestation of the needs of the special education student and, on the other hand, the implementation of adjustments and actions needed to allow access and living together in a common, not segregated, space.

In the school context, all types of support (personal, physical, material, equipment) should be available to the students in order to allow them accessibility and functioning in the community. Also in the school context, assistive technology resources are used to maximize students' skills and, through educational planning based on strategies and differentiated instruction, to allow accessibility to the curriculum and quality of the teaching-learning process.

Therefore, there must be a strong interrelationship between differentiated teaching instructions and strategies and Assistive Technology.

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## **Program for professionals working with intellectually disabled person**

Iasmin Zanchi Boueri  
Federal University of São Carlos  
[boueri.iasmin@gmail.com](mailto:boueri.iasmin@gmail.com)

Maria A. Almeida  
Federal University of São Carlos  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

The precarious situation faced by individuals with intellectual disabilities in the Brazilian sheltered institutions cannot be ignored by society. The aim of the current research was to elaborate, implement and evaluate the efficacy of an Educational Program for professionals working for individuals with intellectual disability. The participants were three professionals and four residents, who were living in a residential facility for intellectual disability. It was used a multiple probe design across subjects and behaviors in order to verify the intervention effects. The events were registered in protocols designed to evaluate the repertory of inputs and the behavioral changes of the participants before (baseline), during (intervention) and after (probes and maintenance) upon the implementation of the program. The comparison of the protocols after and before the interventions demonstrated changes in the repertory of the participants in respect of the professional independence to teach the individual with intellectual disability to perform the activities. In general it was verified that during the maintenance periods the individuals kept executing the activities with independence. The results show that occurred significant behavior modifications and also demonstrated that when the contingencies of the environment are modified it is possible to improve some important learning for the development and adaptation of the individuals in society. The study leads to the discussion, from the implementation of the programs, that teaching professionals to transform daily activities into learning moments, the environmental contingencies can be modified and provide the development of potentialities in individuals with intellectual disabilities.

**Keywords:** Intellectual disabilities. Educational program. Training for professionals. Resident institution.

### **Introduction**

With the development of the area interest about appropriate procedures for teaching people who showed difficulties or people with disabilities, it was created functional curriculums based on the applied behavior analysis principles that underlies the procedures for natural functional curriculum (NFC) that follows and assists scholars in the field of education to properly plan their procedures.

The NFC was first developed in the Department of Human Development at the University of Kansas . It was then adapted and improved in the Ann Sullivan Center in Peru , which is still developed and improved constantly being challenged by the development of new concepts , procedures and theoretical orientations ( LEBLANC ,

1998).

The NFC according LeBlanc (1992), proposed educational objectives, with emphasis on teaching something that is working currently and also in the future for the person making the learning environment and procedures the closest as possible to what happens in the real world.

The NFC principle was related to conducts that were required for all individuals to behave properly in their own environment. As studies were developed teaching procedures were performed and inserted different ways to teach in natural environment, such as: 1) Teach in natural environments, leveraging the events that occur in the real world, 2) make a motivating learning experience; 3) teach functional skills that are necessary to gain independence and be able to integrate into society, 4) use teaching procedures that have shown good results and are foolproof, thus reducing the number of instructions and modeling the behavior of the individual, 5) partnering with family, or persons present in everyday life, as this is a fundamental part of the work, since it is in the family that can be offered many opportunities for the disabled person put into practice the content learned. (LEBLANC, 1998 cited by GIARDINETTO, 2005; WALTER, 2006).

You could say that the CFN is based on teaching skills with natural sequences that must occur in environments in which individuals are embedded using real materials and natural reinforcers. Doing like this generalization and maintenance of learned behaviors will be facilitated (GIARDINETTO, 2005).

According to the theoretical framework presented so far, we can say that the person with disabilities requires specific teaching procedures so that learning be observed. However, in Brazilian institutions it is not reported any kind of contingencies that facilitate learning. The applied behavior analysis brings contributions to the development of studies in the field of Special Education and the ability, through the arrangement of contingencies, to make the environment conducive to learning. This study was proposed to build and implement an appropriate educational program adapted to the contingencies presented in sheltered institutions that welcomes young people with intellectual disabilities. The activities developed in the Educational Program are based on the NFC, because it proposes learning performance on the natural environment.

### Objective

The aim of the current research was to elaborate, implement and evaluate the efficacy of an Educational Program for professionals working with intellectually disabled individuals living in residential institutions.

### Method

Participants: three professionals and four residents with intellectual disability

Location: the research was developed in one residential institution in São Paulo state - Brazil.

Instruments: it was used a protocol for registration of the events in order to evaluate the entry repertoire and the participants behaviors change occurred during all experimental phases.

Data collection procedure: The teaching procedures were based on applied behavior analysis and natural functional curriculum aims to decrease the difficulties, and encouraging behavioral change for each participant.

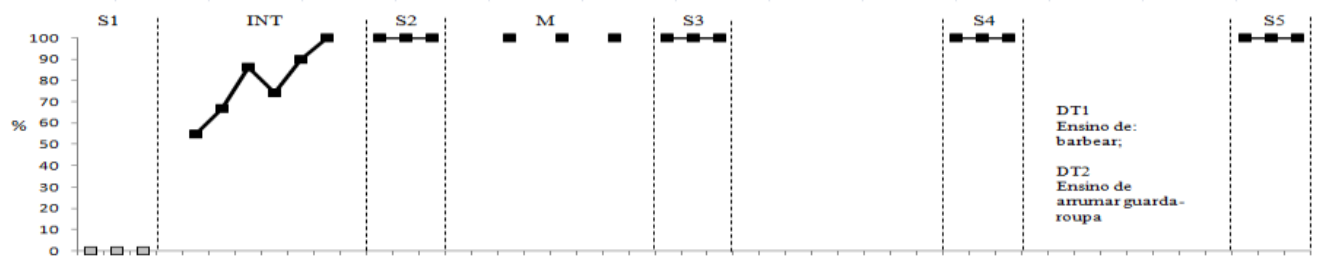
Data analysis procedure: the multiple probe design within behaviors and subjects was

used to check the effects of the intervention, since it allows the demonstration the experimental control and validity, once the independent variable is introduced sequentially at different times to each participant, and the dependent variable is measured before, during and after the Educational Program implementation.

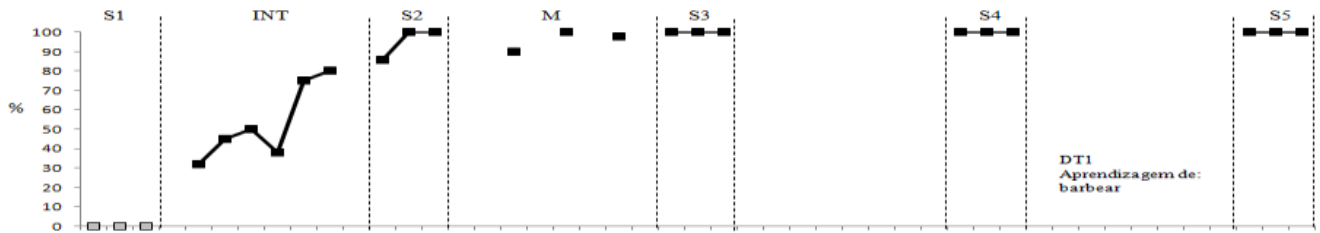
**Results**

The data concerning the percentage of independence were obtained before, during and after the PEP-DI implementation. For data presentation (Figure 1) on the y axis is shown the percentage of independence (0-100%) and the x axis are shown the experimental phases to which participants were experimental phase.

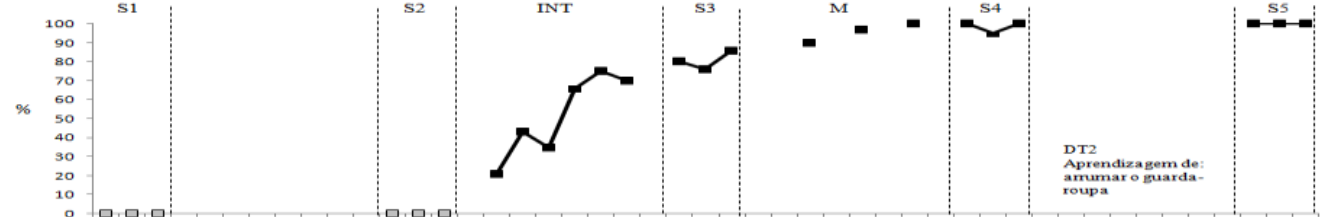
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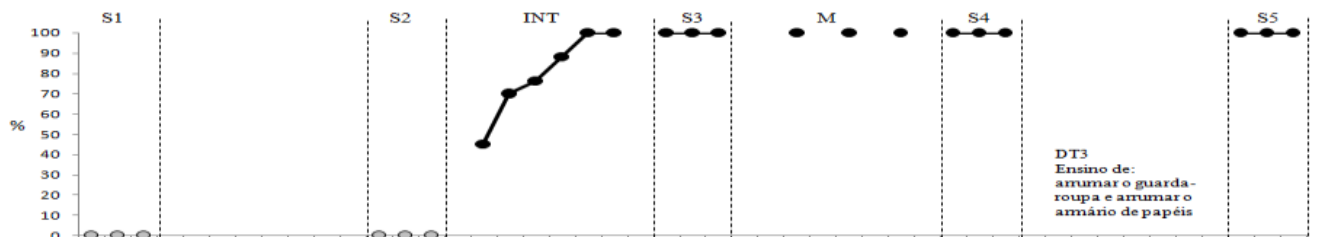
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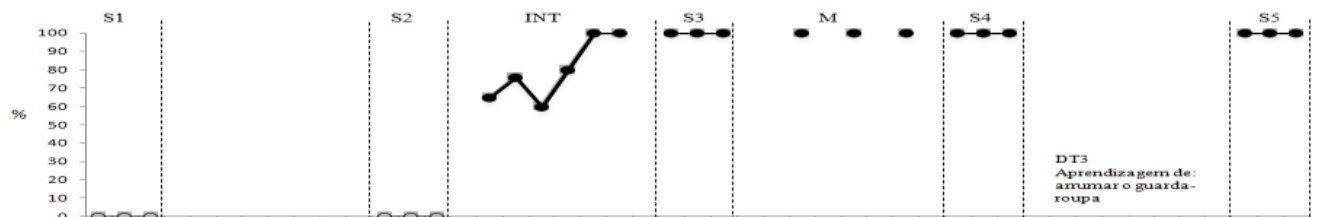
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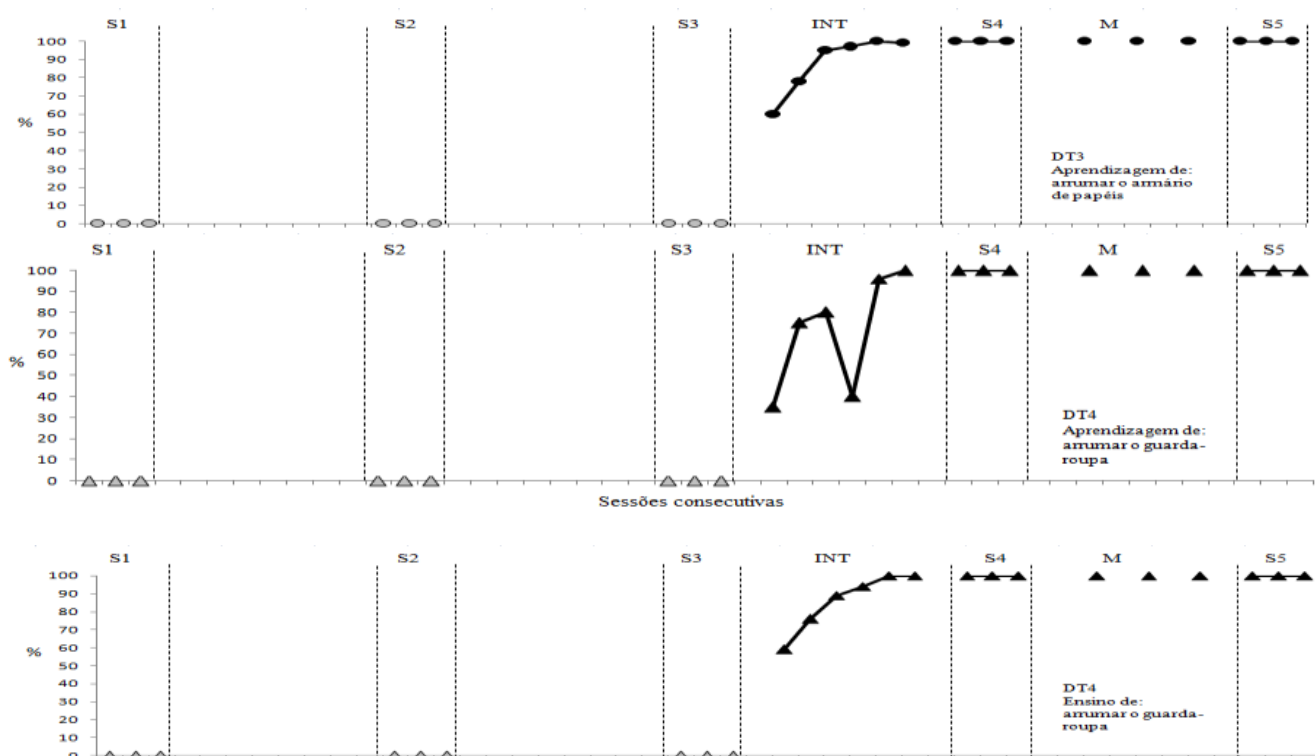
R02



R03



P03



Legend: S – Probe ; INT – intervention; M – maintenance; P – professional; R – person with intellectual disabilities.

**Figure 1. Percentage of independence obtained from the participants in the development activities of PEP-DI .**

The data concerning the percentage of independence were obtained before, during and after the implementation of the PEP-DI. For graphical presentation (Figure 1) on the y axis is shown the percentage of independence (0-100%) and the x-axis are shown the experimental phases to which participants were exposed. The dotted lines determine experimental phase's changes (probe, intervention and maintenance).

It is found that the independence percentage was increased only when started the intervention - PEP-DI. In maintenance periods the participants' performance continued the learned activities. The data collect after intervention compared to those performed before the PEP-DI implementation, demonstrated positive changes in the behavior repertoire of the participants.

### Conclusion

From the conclusion of this study, it was possible to conduct a discussion about professionals and residents learning process, as well as pointing out the positive and negative aspects of the implementation of the educational program - PEP- DI.

The educational program exposed in this research can be considered as an initiative to bring educational aspects to residential institutions or to contexts that do not have this focus and have to attend people with intellectual disabilities.

From the implementation of the educational program , it was found that the professionals when trained, they carry out teaching procedures during routine , thus promoting independence in instrumental daily living activities to institutionalized young people with intellectual disabilities . Some studies (LAUAND , 2000; DAREZZO , 2004; CARNEIRO , 2006; PRADA , 2007) point to the realization of practical and theoretical activities as being beneficial to participants learning. This was also observed with the development of this study, because of theoretic and practical sessions were effective to produce the behavioral change and also that the professional could provide

simple learning activities to the residents.

The literature (SKINNER , 1972; MATOS , 1993) say that, for learning to be achieved, an arrangement of contingencies that targets a set of functional relationships between environmental conditions and stipulated performances, should be performed . From the foregoing, it can be said that it is possible to promote, through the implementation of PEP- DI, changes in environmental contingencies present in residential institutions, making them favorable to the issue of behavior that foster the independence of the sheltered. The attendants were capable of performing teaching procedures during the development of activities worked with residents who were the targets of the intervention, as well with those who have not passed specifically to the teaching of such activities. The attendants were surprised about the residents performance in the activities they taught them, demonstrating they have potential to learn, but they need to be afforded with favorable conditions for learning in the environment.

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## **Evidences of Therapeutic Horseback Riding in Autism Spectrum Disorder**

Jéssica Jaíne Marques Oliveira-  
UFSM  
[jessica.jaine@yahoo.com.br](mailto:jessica.jaine@yahoo.com.br)

Fernando Copetti-  
UFSM  
[copettif@gmail.com](mailto:copettif@gmail.com)

Carlo Schmidt –  
UFSM  
[carlopsico@gmail.com](mailto:carlopsico@gmail.com)

Mylena Alcantara Medeiros-  
U of M  
[mylena@equoterapia.org](mailto:mylena@equoterapia.org)

### **Abstract**

Besides psychoeducational and psychopharmacological approaches to treating the symptoms of Autism Spectrum Disorder (ASD), there are some less traditional treatment modalities. Therapeutic Horseback Riding (THR) is a large method used around the world for several physical and psychological diseases. The goal of THR is to promote physical, emotional, cognitive and social growth of the riders. In the ASD riders, the evidences rely on the belief that being around, grooming, working with the horse, as well as riding the horse can promote these benefits. Rigorous scientific evidence of any form of treatment is necessary for verification and reliability of its benefits. This poster presents an overview of the major evidences of the THR in ASD. The purpose is to show to families, educators and public politicians that THR can be an important and reliable practice to be incorporated in the routine of the person with ASD. A systematic review was conducted in eight databases. Thirty four eligible papers were found, and nine peers reviewed selected to analysis according inclusion and exclusion criterions. The main results observed were in social communication (Ward et al. 2013), sensory processing (Ward et al. 2013; Kern et al. 2011), ASD's severity of symptoms (Ward et al. 2013), Kern et al. 2011), quality of life (Kern et al. 2011), quality of parent-child interaction (Kern et al. 2011), self-regulation behaviors (Gabriels et al. 2012), adaptive living skills (Gabriels et al. 2012), motor skills (Gabriels et al. 2012), social attitudes (Tabares et al. 2012), psychosocial function (Memishevijkj and Hodzhykj, 2010), verbal and non-verbal communication skills (Keino et al. 2009), developmental areas and degrees of behavioral abnormality (Leitão 2004), volition (Taylor et al. 2009) and social function (Bass 2009). This systematic review provides the first comprehensive overview of empirical research on ASD and THR. Reported outcomes provided evidence that for some individuals with ASD Therapeutic Horseback Riding increased motor skills, social interaction, and communication. In addition, it helped to reduce behavioral problems and severity of autistic symptoms. THR can be a good opportunity to be inserted on the routine of ASD persons. However, more rigorous

research is necessary.

**Keywords:** Autism, Horseback Riding Therapy, Hippotherapy

### **Introduction**

The term Pervasive Developmental Disorders emerged in the early 1980s, in the DSM-III (APA, 1980). In the latest update, the DSM-5 defined this nosological entity as Autism Spectrum Disorders (ASD), recognizing that people may have different levels of impairment within the spectrum. The DSM-5 adopts a dimensional perspective of the disorder which overlaps the old categorical approach, based on the notion that a single condition would better reflect the different levels of severity of symptoms. The essential characteristics of Autism Spectrum Disorder consist of a markedly abnormal or impaired development in socio-communicative areas and the presence of restricted and stereotyped repertoire of behaviors, activities and interests (APA, 2013).

Early intervention programs that focus on the development of the individual with ASD rely on different theoretical perspectives, such as the behavioral (e.g. ABA - Applied Behavior Analysis), psychoeducational (e.g. TEACCH - Treatment and Education of Autistic and Communication Handicapped Children) or developmental ones (e.g. Play Project). Studies show that these programs tend to have positive results, helping to lower the frequency and/or quality of undesirable behaviors, causing improvements in communication, as well as providing autonomy and independence to the child (Simpson, 2005).

A therapy that has been gaining ground as a treatment for people with ASD is Hippotherapy. It is characterized by the use of the horse within an interdisciplinary approach (ANDE Brasil, 2013). Although the more consolidated evidences of this practice are related to physical-motor aspects, studies on the social and behavioral variables have also substantially grown in the recent years. In particular, the studies on ASD patients receiving hippotherapy showed improvements in several areas of development such as interaction, communication, and affection, among others (Gabriels et al, 2012).

By identifying the importance of the benefits produced by hippotherapy in people with ASD, it is possible to see the need to examine in the literature the evidences already found on this topic. Thus, the aim of this study was to review the evidences of the benefits of hippotherapy for the individual with Autism Spectrum Disorder.

### **Method**

A systematic search was conducted in the HOMEINDEX databases, Portal Periódico Capes (CAPES Scientific Journals Gateway), COCHRANE, PEDro, LILACS, SCOPUS, WEB of SCIENCE PUBMED and SCIELO. The keywords used were: "developmental riding therapy", "equine-movement therapy", "therapeutic horseback riding", "riding for disabled", "therapeutic horse riding", "equoterapia", "equine-therapy", "horseback riding therapy", "riding therapy", "hippotherapy", "equitherapy", "animal-assisted therapy". All searches were associated with the word "autism"/"autismo", using the logical operators "AND" and "OR". Articles published in peer-reviewed journals in English or Portuguese, and the ones published up to December 2013 were included.

#### **Discussion and Results**

Fifty-eight articles were found and 20 of them were excluded because they were duplicates. The remaining 38 articles were analyzed and 29 were excluded because the therapy used other animals or the subjects presented other syndromes or diseases other

than ASD. Nine articles were analyzed. A summary of the studies is presented in table 1 below.

**Table 1- Study characteristics and main outcomes Study Sample Size Intervention Assessments/Measures Main results**

Study	Sample Size	Intervention	Assessments/Measures	Main results
<b>BASS et al. 2009</b>	N=34 EG 19 CG 15	12 Weeks 1 X Week	Sensory Profile (SP)  Social Responsiveness Scale (SRS)	Improvements in: - The overall sensory profile; - Distraction/lack of attention; Sensitivity; - Sedentary behavior and Social motivation.
<b>GABRIELS et al. (2012)</b>	N=42 EG 26 CG 16	10 Weeks 1 X Week	Aberrant Behavior checklist- Community (ABC-C) Vineland Adaptive Behavior Scale- II (VABS II) Bruininks-Oseretsky test of motor proficiency (BOT II) Sensory Integration and Praxis test (SIPT)	Improvements in adaptive language expressive skills, motor skills, and praxis/motor verbal planning skills.
<b>KERN et. al (2011)</b>	N=48 EG 24 CG 24	06 Months 1x Week	- Parent- rated measures - Clinician-rated measures - Childhood Autism rating scale (CARS) - Timberlawn parent-child interaction scale - Sensory profile	- General reduction in scores of CARS (Rating Scale for Childhood Autism). - Reduction of negative considerations and mood improvement - Significant improvements in the subject's quality of life.
<b>LEITÃO(2004)</b>	N=5 GP 5	16 Weeks 73 Sessions	- Psychoeducational Profile revised (PEP-R) - Autism treatment of Evaluation Checklist (ATEC) - Observation grid (individual)	- Improvements in behavioral, cognitive and social- emotional areas. - Progress in levels of self-sufficiency in tasks that require manual coordination.



<b>M MEMISHEVI K Jand HODZHIKJ (2010)</b>	<b>GP 2</b>	10 Weeks 1x Week	Autism Treatment Evaluation Checklist (ATEC)	-T wo subjects had improvements in the areas of language, socialization, cognitive/sensory and health/behavior awareness.  -T wo subjects showed no changes.
<b>TABARES et al. (2012)</b>	<b>GP 8</b>	04 Weeks 1x Week	E lectro-chemo-luminescence (ELISA)	I mprovementsinsocial attitudes.
<b>TAYLOR et al. (2009)</b>	<b>GP 3</b>	16 Weeks 1x Week	Pediatric Volitional Questionnaire (PVQ)	I mprovementsinchildren's volition.
<b>WARD et al. (2013)</b>	<b>GP 21</b>	30 Weeks 1x Week	G illian Autism rating Scale 2 (GARS 2) Sensory Profiles school C ompanion (SPSC)	- Decrease in the severity of symptoms associated with Autism; - Increased social interaction and sensory processing.
<b>K EINO et al. (2009)</b>	<b>GP-4</b>	UN	Humans- Equips- Interaction on mental activity (HEIM scale)	I ncreasedeyecontact, language skill

Among the studies found which use intervention and insertion of a hippotherapy program with individuals with autism spectrum disorder, all report that through the practice of hippotherapy with activities planned for the subjects with autism, there are gains in these subjects' behavioral and developmental areas, as well as several other aspects that are directly and indirectly modified (Gabriels et al 2012, Keino et al 2009, Memishevikj., & Hodzhikj 2010, Kern et al 2011, Tabares et al 2012, Taylor et al 2009, Ward et al 2013, Bass et al 2009, Leitão 2004.)

The studies also identify the gains of self-regulation (irritability, lethargy, stereotyped behavior and hyperactivity), adaptative language expressive ability, motor skills and praxis and motor verbal planning skills (Gabriels et al 2012), increased eye contact (Keino et al 2009), socialization, cognitive and sensory awareness (Memishevikj., & Hodzhikj , 2010), quality of life, parents /children interaction (Kern et al, 2011) and significant improvements in social attitudes (Tabares et al, 2012).

The analysis of these studies showed that hippotherapy causes a positive impact on the lives of individuals with ASD. The most cited benefits are not directly received through the movement of the horse, but rather indirectly received through the proposed activities that promote interaction between the practitioner with ASD, the horse and the environment. All this provides a greater bond and participation, aiding the achievement of psychosocial and neuromotor benefits to be acquired during the hippotherapy sessions. However, the researches related to ASD and hippotherapy are few, based on the disabilities treated by the therapy and which have a large body of research. It is suggested that studies of larger samples should be performed so that the results can be more reliable.

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## **Characterization of students with disabilities at the university**

Josilene A. S. Zampar  
Federal University of São Carlos, Brazil  
[josartorizampar@gmail.com](mailto:josartorizampar@gmail.com)

Isadora G. Marchesini  
Federal University of São Carlos, Brazil  
[xyzisa@hotmail.com](mailto:xyzisa@hotmail.com)

### **Abstract**

The number of targeted people of special education who enter higher education is increasing both in Brazil and worldwide. Thus, it is important to know the profile of those students, to be possible rethink strategies for access and retention of high quality. Therefore this study aimed to characterize the university with disabilities who enrolled in a Brazilian public university, between 1995 and 2009, according to the type of disability or special educational need informed, the course area of knowledge in which this student was or is registered and if he belongs to the male or female gender. Data were obtained from the database of the research target university. Through the data collected, it was noticeable that the highest incidence of entrants is represented by students with low vision and physical disabilities, most of them male and predominantly enrolled in courses of exact sciences. Thus, it was concluded that having knowledge of characteristics from special education target students, allows the academic community fits the needs of each college student and thus can support strategies to support these students and strengthen measures to enable inclusion in the social context and in the academic context for these students.

**Keywords:** college students, disabilities

### **Introduction**

The access to higher education democratization has resulted in increased special education students entering the universities, both in Brazil and worldwide. Universities have sought to adopt inclusive policies in order to promote minority groups access to higher education (Almeida & Soares, 2003). However, to facilitate the entry of students with disabilities in higher education does not guarantee their full inclusion in the college context. The university should create conditions to promote not only academic success, but also the student psychosocial development. This involves changes by the university community as a whole, as material adaptation, adequate physical accessibility as well as training teachers, servers and other students to provide appropriate support for students with disabilities (Fernandes & Almeida, 2007).

Concerned about the inclusion of students with disabilities to university (Bisol, Valentini, Simioni, & Zanchin, 2010; Fernandes & Almeida, 2007) researchers suggest that the academic community to know the specifics of this population in order to contribute to the academic and psychosocial success of these students.

In the present study we sought to characterize the college students with disabilities who enrolled in a Brazilian public university between 1995 and 2009.

## Method

Initially were identified in the database of the institution, students who self-reported having some type of disability or special educational need and who joined the institution from 1995 to 2009. The database allows college students to select one of eleven kinds of disability or special educational need registered, namely: hearing impairment, physical disability, multiple disabilities, mental retardation, typical behaviors, high skills, other needs, low vision, deafness, blindness, deaf blindness.

Later, the students identified were divided into two groups: the first group, called by the authors of G1 refers to students who have left the institution for many reasons, which were not the purpose of this study. The second group, called G2, refers to students who still attended the institution during the data collection period. Due to an issue of the university's database record, students with hearing disabilities were excluded from the sample.

We sought to identify the type of disability or special educational need informed, knowledge area studied and which genre the student belonged to.

### Results and discussion

Data show that 32 students entered the university in the mentioned period. From the total sample, 26 of them have already left the university (G1) and 6 were still attending the university during the data collection period (G2).

In both groups there is a significant incidence of students with low vision and physical disabilities. In G1, low vision appears first (42%), followed by physical disability (23%). In G2, low vision is in second place with 33% of cases, also followed by physical disability (17%). However, the results differ in the incidence of "other needs" option, declared by students: 8% for G1 and 50% for G2.

In G1, the other types of disability or special educational need self-reported by the student were high skills (12%), typical behaviors (8%), intellectual disability (4%) and multiple disabilities (4%). In G2, there were not disabilities/ special educational need self-reported registered in the institution database.

The results of this study converge with data found in other studies conducted in Brazil and other countries (Smith 1993, Duarte 2010, Moreira 2011, Castro 2011, Guerreiro 2011), in which the types of disabilities more often present in higher education were low vision and physical disabilities.

**Table 2: Percentage of students with disabilities by course knowledge area (G1 and G2)**

K knowledge Areas	G1	G2
Exact	65%	100%
Human	27%	0
Biological and Health	8%	0

**Table 3: Percentage of students with disabilities by gender (G1 and G2)**

Gender	G1	G2
Male	81%	100%

Female

19%

0

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As seen in Table 3, the prevalence of male students is also a common feature in both groups (81% for G1 and 100% for G2).

The results suggest no significant difference between the characteristics of the students belonging to the group who has left the University for some Reason, and belonging to the group of students who still attend classes. So if there are no significant changes in the characteristics of the two groups over the years, we can consider the possibility of implementing permanent measures to encourage academic and social success of youth with disabilities who are going to the university.

One element that draws attention is that the results of 6 students belonging to G2, which means still attending university, 4 of them should have already completed the course for at least 1 year and 2 of them should have completed the course at the end of the year 2013. Although the purpose of this study was not to analyze the academic performance of students with disabilities, this fact deserves attention from researchers in future work. Thus, a review about the course completion time as well as reasons that led the student to leave the university (some cases of G2), are also important topics to be investigated in the future.

### **Conclusions**

The intention of this study was to provide an overview about the reality of a Brazilian public university on the characteristics of their students with disabilities, which may be similar to other higher education institutions.

To know the specific points related to each disability is assumed, as well as the needs of each college student with disabilities, can support strategies to support these students. Thus, the results of this study can assist people engaged in the academic community to become aware of the students with disabilities presence at the university, enabling reflection on what measures can be adopted for these students to succeed in academic and social areas.

It is important to note also that future studies examine in more detail the academic performance, dropout rates and course completion of people with disabilities who enter higher education in order to identify what are the major difficulties faced by such students as well as what are their suggestions to have more adequate support.

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## **Verbal Language in Down Syndrome and the school inclusion process**

Maria Grazia Guillen Mayer;  
Universidade Federal de São Carlos – UFSCAR  
[mggmayer@hotmail.com](mailto:mggmayer@hotmail.com)

Sônia Maria Rodrigues Simioni;  
Universidade Federal de São Carlos – UFSCAR  
[soniasimioni@uol.com](mailto:soniasimioni@uol.com).

Maria Amelia Almeida  
Universidade Federal de São Carlos – UFSCAR  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

Down syndrome is a genetic disorder whose language difficulty is one of the main features. It is known that verbal language is one of the prerequisites that assist in the academic process. Thus, the aim of this study was to know how families of Down syndrome children contribute early on language stimulation to, when started the schooling process do not suffer sharp impacts in relation to their peers. In which way do the families are or are not contributing to language stimulation of down syndrome children who in the future will suffer impacts in the schooling process? Studies have shown that students with Down syndrome do not present evolution in their schooling process in the inclusive education perspective. And for academic success it is necessary a partnership between family and professionals that will meet this student. In school issue language losses affect ownership of academic content and the socialization within the formation environment. It was found that students with Down syndrome that start their school life and do not have the prerequisite language are people with a failure history, even staying an average of seven years to complete the early years of elementary school. In family matter was conducted a study in order to verify the interaction between mothers and child, with variables that interfere directly in language stimulation, being them: interest, patience, rules and instructions providing, vocabulary complexity, use of techniques for improving the child's speech and speech intonation. It was found that mothers have behaviors that do not assist in these children language stimulation and consequently will affect school performance. In this way was conducted a stimulation program involving the family and the child, whose results showed that from information, guidelines and training families became eligible to contribute on language stimulation, including child's relevant linguistic evolution in a period of one year. Future work with this population will be necessary to verify the program effectiveness as regards the academic environment and school evolution of these children.

**Keywords:** Down syndrome, inclusion, family, special education

### **Introduction**

According to Schwartzman (1999), Down syndrome (DS) is a chromosomal whose

overall clinical picture is explained by an imbalance in the cellular chromosome constitution. Its incidence is about one in 1000 births to one to 800 live births (Mustacchi, 2000). The occurrence of this syndrome has no preference for gender or race. Maternal age greater than 30 years is reported as a risk factor, but does not exclude the possibility of the father contribution to the occurrence.

DS is the most common genetic cause of intellectual impairment (YODER and WARREN, 2004). Määttä et al. (2006), consider that changes in cognitive abilities in DS is a primary result, and appears as a result of structural and functional abnormalities of the central nervous system. These changes also influence the relationships that the child lays her environment, assuming thus that the child acts more passively in the environment where she is.

Language is the area in which the child with DS has higher delay. Usually these children understand much more the information than verbally produce them, which means that the understanding better than the expression. They have articulation difficulties that may persist into adulthood. Nevertheless, most individuals make language functional use and understands the rules used in conversations (RONDAN, 2002).

Lamônica (2004) and Webster et al. (2005) state that the child acquires language in the exchange with the environment, by the active exploration of the relationships she has in her environment, suffering influences of anatomical and physiological aspects, of cognitive, perceptual sensory, motivational and environmental abilities. This brings reflections on social skills, self-care, learning and independence.

Therefore, a child deprived of stimuli will present linguistic and consequently school damages.

The birth of a child with DS will somehow interfere in the family environment, the mother who has just had a child feels more sensitive even if the child does not have any kind of disability, mothers of children with DS need professionals humans training, with sensitivity to understand the suffering and frustration surrounding the birth of a baby with disabilities, and the ability and competence to act appropriately, both in the transmission of this information as guidance and support. Would be expected that the graduation courses and professional already working know how to use these lines to broaden their learning and teaching horizons (AMORIN ET AL; 1999).

Pazin and Martins (2005) reported that within the family context, the person who assumes the caregiver role may produce care demands that affect their physical, mental and social dimensions. In the group studied, caregivers fully assumed the burden of children care and were mostly women, married. Caregivers are preferably mothers living with the child and who have emotional closeness, data also observed in other studies, as Mayer et al. (2013).

The burden to the mother, since it is a child with DS, arguably requires more time, attention and care than a non-special child. These studies suggest that the labor division with the father and other family members will provide better relationship between them, thus minimizing the feelings of jealousy and competition (PAZIN AND MARTINS, 2005).

When it comes to school and DS child, many parents feel distressed and anxious, the knowledge produced in the study of Luiz and Nascimento (2012) intended to make the Down syndrome child inclusion process, in regular education, a step to be experienced by her and her family the best way as possible, feeling prepared and accepted. The results confirmed the need for continued work with mothers, fathers or other family members for the child's inclusion process, not only during the period when they are attending a specialized institution. This monitoring is intended to guide, support, provides opportunities for family members to express themselves. It is for the



professionals involved to be alert to the constant need of data collection and updating in the families throughout the inclusion process, so that they can assist them by planning and carrying out creative and appropriate interventions to their needs (LUIZ AND NASCIMENTO, 2012).

According to Pereira Silva and Dessen (2007), school and family have complementary roles in the child development process and, accordingly, support and family involvement at school can provide the Down syndrome child advances necessary for her development. It is possible to infer that educators should strive for students with special needs inclusion in classes composed of students with similar ages. This is because people with similar age groups tend to have common interests and experiences, which can facilitate the establishment of friendly relations. Moreover, simple strategy such as putting the child in the desk in the middle of the room, to promote more interaction among friends, helps in the social development of that child.

### **Method**

Participants:

3 families of Down syndrome children have participated, and the children were in the age group of 5 to 8 years old.

Location: In the families own residences.

Materials and equipment:

For data collection a digital camera, bond paper, TV and DVD were used, as well as micro computer and printer for protocols manufacturing and printing. The materials used for recording were previously selected, so that they could be a way of promoting communication among participants. The researcher took them in a transparent box, and inside contained the following toys: 1 domino set, 1 education domino, modeling clay, color pencil, crayon, gouache, a sketchbook, 2 children's books, a puzzle with 20 pieces and another one with 60, a memory game and 2 children's games that promote communication.

Data collection procedure:

3 sessions of parent-child interaction were performed through digital video camera recording, the interactions happened on different days and with each dyad separately. One who attended the first recording was also the participant of the others, and could not change during the recordings, and in all interactions was the mother who participated. These interactions occurred through recreational activities of 30 minutes each recording.

The sessions were videotaped and subsequently recorded on DVD. The researcher explained the procedure to the participants, removing any doubts and then, left the room so that way interaction was the most natural as possible, returning after 30 minutes.

Data Analysis

The images were analyzed and a protocol was completed by two judges for data reliability. The protocol called "Adult Verbal and Nonverbal Communicative Behaviors in Relation to the Child Observation" consisting of questions related to verbal and nonverbal communicative behavior that parents show with their children during the interaction session observed.

The protocol issues are related to the game rules explanation, conversation domain, interest in the performed activity, used discursive form, speech complexity and vocabulary, techniques for improving communication providing and intonation used by the adult to the child, these factors necessary to an effective language development.

### **Results and Discussion**

The data analysis revealed that mothers of children with DS had behaviors that did not stimulate their children's language development. Therefore, it was proposed to establish a program that could help families in stimulating these children speech at home and, that consequently, there was improvement in school life.

The program had guidelines on the Down syndrome, on language, social and school issues. As strategies for language stimulation four games were used, and from these, adult behavior was modified to effectively stimulate language development in children with DS.

As for the results it was found that there was a change in the family behavior after the interventions and observed that there were significant improvements in children's receptive and expressive language. Furthermore, the researcher acted as a kind of "mediator" taking information, guidance and assisting these families about the children with DS inclusion.

The family needs to have someone to share their experience and someone with whom they could get information about their children overall development, as states Terrassi (1993) the preview of a permanent state of dependence or independence with supervision seems to strongly affect the emotional balance and the family system action efficiency. Thus, there is an evident need for professionals prepared to welcome, guide, inform and supervise these families, regarding to diagnosis and intervention. The conscious and responsible family ensures greater development opportunities for children with disabilities.

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## **The challenges and consequences with Down syndrome on families as a system and on the individuals who make up that system**

Marina Ndrio  
Faculty of Social Sciences  
[marinandrio@yahoo.it](mailto:marinandrio@yahoo.it)

Zela Koka  
Chairwoman of MEDPAK Association Rruga: "Sh.Ishmi"  
[zkoka@medpak.org](mailto:zkoka@medpak.org) [www.medpak.org](http://www.medpak.org)

### **Abstract**

From a family systems' perspective the life's relations of families provides the central ecological context, in which children are nurtured. The family system is influenced by the attributes each individual brings to family relationships as well as by the perceptions of those attributes by the family members themselves. The birth of a child with Down syndrome is likely to affect the family system in many ways, from the micro level of dyadic interaction to the macro level of the cultural views guiding parent perceptions about a developmental disability. Through a qualitative analysis, the study reflects the perspective of the development of families who have children with Down syndrome, the effects that brings the family the birth of a child with disabilities. The purpose of this study is to identify and analyze some aspects of family life, which are largely influenced by the birth of a child with disabilities. Through contemporary international literature review, and semi-structured interviews with parents of children with Down syndrome, the author has identified and analyzed some aspects of family relations and family life after the birth of a child with Down syndrome. The findings of this study show that the birth of a child with Down syndrome affects the family system: Family life is changed, often in major ways. Care-taking responsibilities may lead to changed or abandoned career plans. Female family members are more likely to take on care giving roles and thus change or give up professional or career roles.

**Keywords:** a child with Down syndrome, the family system, family welfare, parents

### **Introduction**

When a family learns that their newborn child is with disabilities each one of the members are victims of a chronic stressful situation, associated with economic, social and psychological consequences.

Learning that a newborn is with disability is the most fearful and worst news a family can ever get (Beckman & Beckman Boys, 1993) .Families of children with disabilities are equally exposed to the negative episodes in lives as those non-disabled children's families. These episodes include: having a sick relative, the death of a beloved husband/wife, losing the job, etc. All the above listed can damage the families 'capacities in confronting effectively demands and tensions for their entire life in caring for their children with disabilities (Olson et al., 1983).

The experience of having a child with disabilities is very unique almost very common

for every family of this kind and of course can affect all the dynamics and functions within the family (Corman,H.,&Kaestner, R.(1992).

The process of taking care for a child with disability is long and challenging for the entire family. Giving birth and rearing a child with disabilities is seen different from every member in two perspectives:

On one side: those families that are devoted in caring for their disabled child are more aware for the specific needs of their child development. They also have a higher level of cohesion (are distinguished for their inner emotional strength in confronting life's challenges). They are much more encouraged in establishing relations with the community, groups and religious institutions.

On the other side: Time and dedication that family members are investing for the physical, health, social-emotional needs of their disabled child increase the financial costs, increase tiredness especially for the female parents of these children.

The amount of all these consequences mentioned depend on the disability type of course on the financial situation and on the psycho-social conditions of the specific family, without bypassing the possible sources that the family disposes and the gender stereotypes/ roles effects in the process (Mauldon, J. (1992).Taking care on a daily routine can cause a lot of physical and emotional exhaust to parents that care most for their disabled child; usually mothers are those suffering the most this type of exhaust. Life can rapidly change in these families.

Care-taking responsibilities may lead to changed or abandoned career plans. Female family members are more likely to take on care giving roles and thus change or give up professional or career roles.

Taking care for a long time increases the stress levels primarily mothers (Johnson & Catalano, 1983). With the passing of time children grow and it becomes more difficult and challenging for parents taking care for their child (Birenbaum (1971) & Farber (1959).

Usually an emotional tension is created within the family, parents feel upset, guilty become anxious; feel insecure for their child with disability but also for every members' needs within the family.

They also get concerned for the services that their children should access and get provided with. Emotional reactions as a result of parents' expectations and lost of hope for their child may continuously disrupt the family harmony.

Disability can cause major consumption of different sources within a family, such as: time, energy and money causing also insufficient provision and fulfillment of the family needs. Families express themselves "day after day" feeling insecure and anxious for the future. Every part starts disrupting little by little, such as: their dreams, future plans and social roles because of the lack of money, energy in fulfilling them.

Giving birth and rearing later a child with disabilities usually affects the levels of stress in parents, primarily parents in manifesting numerous issues of their mental health (Powers, E. T. 2001).

Psychological studies have demonstrated that specific conditions that dictate the health of children with disabilities are associated with the manifestation of several mental health problems in parents, grandparents and siblings (Reichman, N. E., Corman, H., & Noonan, K. 2004).

Under these conditions it is hard for parents to pay the same attention to other children in the family. They face a lot of obstacles in taking the right decisions for different matters such as education, employment and vocational trainings for the rest of the members within their family.

This can also cause a deterioration of other functions in the family. The financial cost

of the services needed for the disabled child affects all other possibilities of the parents for having an active life; it also affects their relation in the actual family life and in the future (Powers, E. T.2001).

When there is a child with disabilities in a given family, time and other financial sources are limited for the rest of the members. Sometimes parents use bad parental behavior, or practices by getting isolated from grandparents and the wider community.

All these effects influence the overall wellbeing of children with disabilities. Other children in the family often feel left out of their parents' attention as they spent more time with the child with disabilities.

Studies done in several countries have shown that when a child manifests serious problems of his development, the family suffers many of the consequences. It might happen that parents can divorce, mothers never work out of their homes, fathers reduce work schedules; reducing of the social activities in different levels, parents demotivated in having other children compared to those families that don't have children with disabilities (Swaminathan,S.,Alexander,G.,Boulet,S.2006).

Despite the continuous stress, financial problems because of the expensive health costs or other related services for the disabled child, many of the problems derive from the existing gender stereotypes among parents in regard to children and the overall family life. The gender stereotypes affect parents' attitudes, behavior and reactions toward disability, adaptation styles needed, confronting ways in regard to the situation within their family.

All the listed problems can severely influence the lives of an entire family. "It is not disability that inhibit and ruin families, but is the only way how its members can react with each other" (Dickman & Gordon, (1985, p 109). It is very important for new parents to take responsibilities such as parenting which in itself is a process helping parents managing their roles through all their life (Heard, 1977). Parenting roles affects many aspects of daily life routine activities how to organize them and complete different tasks. These roles help parents in adapting to the new requirements; fulfill their interest and scopes (Kielhofner (1995). The way how parents perceive "family" and their "roles" affects their capabilities for functioning much more effectively. Families can offer a micro-culture of traditions, values and opinions (a place where children can grow, educate, where love can be given and received, where stress can reduce, where anxiety and delusion can be avoided (Carpenter, 1999).

Studies in this regard show that mothers are more involved in different tasks related to child caring and rearing as they spent more time in taking care for their children. They perceive themselves as caregivers of their children.

These gender differences continue even when children grow older even when they leave the family living in another place, in residential centers, or daily centers. Disability tends to affect more mother's live rather than father's, because women act in response to stressful situations in the family lives, compared to father, as they worry more about the financial and job situations.

Mothers on the other side perceive the caretaking as a responsibility and burden for them, as they stay closer and support children more than fathers (Conger, Elder, Simons, & Xiaoja, 1993). Because mothers and fathers can change in perceiving differently their family's situations and the ways they confront the disability of their child. It is very important that both parents get informed in order to better understand the influence of their roles and gender stereotypes of parents through all this process (Pelchat, Lefebvre & Perreault, (2003).

## **Method**

Through a thorough analysis this study reflects the perspective of families with Down syndrome children, the effects of having a child with disabilities. It documents the life experiences of several families with Down syndrome children focusing on how rearing a child with Down syndrome might affect the family lives, mothers and fathers.

The scope of this study is to identify and analyse some life aspects which are mostly affected when a child with disabilities is born.

Through secondary data review (mainly literature review) and semi-structured interviews with parents of children with Down syndrome authors have identified and analyzed the side effects.

There have been conducted 15 interviews with parents of children with disabilities (Down syndrome) in the city of Tirana. **Results and discussion**

As per data analysis obtained from the interviews with parents of children with disabilities it resulted that:

- Confusion among members in regard of roles;
- Wrong perceptions in how disability might affect personal and family lives;
- Confusion in perceptions how disability can affect the entire family system and the family functioning;
- Negative consequences that disability might have in one's couple life and their marriage; behavioral problems of the Down syndrome child's siblings;
- High unemployment of mothers; physical problems; emotional and mental health disorder, isolation and lack of interaction with relatives, community and society.

All the included families in the study had numerous financial difficulties; as a result they couldn't afford the high cost of the needed health, educational and rehabilitative services for their children with disabilities.

Participants confirmed that families faced a lot of problems:

- Children suffering health problems;
- Concerned about the future of their children;
- Education problems their children face;
- Problems related with their children autonomy and independency;
- Problems in regard with the existing stigma and prejudice in front of disability, lack of child all inclusive child friendly kindergartens and schools.

The interviewed parents showed their needs:

- The need for vocational trainings of their children;
- The need for the babysitting service;
- The need for voluntarily services;

The study showed that mothers are more involved in caring about their children with disabilities, in their time spent together and other responsibilities they have. They perceive themselves as primary caregivers and also they perceive this offered care as a huge responsibility, as a burden as they are more involved with children in front of their husbands.

Mothers included in the study have showed that giving birth to a Down syndrome child have inhibited them to care about the rest of the family members or even lose their social engagement.

The majority of the mothers included in this study show that their children when hospitalized they had different health problems such as cardiac issues, epilepsy, hormonal issues, etc.

So in the end, mothers had to stay for weeks and months in hospitals with the children (10 mothers indicated that their children are hospitalized more than twice a year and have stayed for long periods in hospital (from two weeks up to 6 months). They show

that, they have stayed together with their children in hospitals, thus getting disconnected from their personal life, family and work. They look so intense when children get sick with viral infections of the season, and in thus their overload and fatigue multiplied.

Had been difficult for mothers to make decisions related to bringing to life the other children, because of their physical overload, social and emotional care for the child process with Down syndrome. Fear and uncertainty to bring to life children healthy, and lack of family support services, community, institutional and economic problems that their families had. Only two mothers had other children born after the birth of a child with Down syndrome.

Families who have children with Down syndrome face many difficulties ranging from: the economic, couple issues, difficulties in maintaining a positive climate in family, lack of appropriate services, high levels of stigma in the community, lack of access to educational services, and social health of their children and for their parents, behavioral problems in children and other family members, high unemployment mothers. Mothers and fathers of children with Down syndrome in these families face numerous and specific challenges. These challenges have to do with the timing requirements that parents must spend to meet the complex needs of children with high financial costs for services that the child needs, with limited employment opportunities and career achievements, concerns and emotional difficulties that parent's experience, the limitations of having social interaction etc. Many of the findings of the study do not resemble those of other studies in this area, leaving the path free to interpret these changes from the context and culture perspective. These discrepancies in findings obtained in the studies can be explained and interpreted by approaching various contexts in which Albanian families and families living in other countries, where these studies were conducted. Changes in the results obtained from the studies can be explained if we analyze first the economic, political, cultural and social factors that influence the life of the respective communities. One of the most distinctive aspects of the impact that gender roles have in social behavior is exactly the culture.

### **Conclusions**

The study showed that the birth of a child with disabilities affects the lives of parents, because their lives are often shaken by stronger crisis. This experience may have profound effects on all the complexities of family life for parents, siblings and other members of the extended family.

Birth of a child with Down syndrome brings effects on family life, time and commitment that family members should be available to physical needs, health, social and emotional wellbeing of a child with disabilities, increase financial costs, consumption of all family members, especially the mothers of these children. Difficulties of parents increase greatly, decrease in satisfaction that parents take from their parental role as parents and reduced opportunities in other areas of life such as career success, professional growth.

There are differences in some areas between mothers and fathers. They include: adaptation, perception of severity of illness, the need for social support, self-esteem, adaptive behavior, marital satisfaction and involvement in childcare.

All mothers included in the study were only caretakers, that take care for their children and family affairs after their husbands work long hours to provide needed income for families.

Engaging in the process of mothers caring for their children with disabilities is very large, in comparison with fathers. Mothers spend more time and energy in physical and emotional care to children with disabilities. They are responsible for all processes associated with the growth and development of children, processes related to: nutrition



, personal hygiene for children , toilet services , care for sleep , play , fun , learning new skills , therapeutic services , medical visits , walks , learning the rules of daily life , work with individual educational plan of the child ( if the child has one ) , watching TV programs , reading books for children etc. Mothers are those who accompany children when hospitalized in certain periods of time for various development issues.

Fathers are involved a little or no care in providing physical, emotional health of children, compared with mothers and have few contact and interaction with professionals who work with children. They fail to perceive or feel ,that their involvement in this process should be larger.

Fathers claim that their employers do not recognize their need for flexible work schedules so that they could be able to spend more time at home , near their children . Likewise, other services professionals do not consider the needs of the fathers to the consultation meetings at convenient times for them.

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## **Reducing Latency to Task Engagement for Struggling Adolescent Readers**

Nathan A. Stevenson  
Michigan State University  
[steve229@msu.edu](mailto:steve229@msu.edu)

### **Abstract**

The current study examined the effect of a planning and goal setting intervention in reducing latency to task engagement. This study used a multiple baseline design across participants for two seventh and two eighth grade students in a reading intervention class. The behavioral intervention was administered in small groups at the start of each class period. Latency for transitions was measured from whole-class instruction to independent academic tasks assigned by the teacher. Results showed the implementation of the intervention was closely associated with immediate decreases in latency to task engagement and increased stability in transition time. The intervention reduced latency to task engagement for all participants. Implications for these results and suggestions for future research are discussed.

**Keywords:** behavior, compliance, engagement, latency, middle school, transition time

### **Introduction**

Students that repeatedly exhibit non-compliance or excessive delays in engagement are at risk for spending less time engaged in academic tasks (Good & Beckerman, 1978; Maag & Anderson, 2007). Among struggling learners, increased academic engagement is closely associated with increases in academic achievement (Carini, Kuh, & Klein, 2006). It is not uncommon for students to be engaged in non-academic tasks, for up to half of instructional time in the classroom (Coddling & Smyth, 2008). In some instances, time spent transitioning from one activity to another can account for up to 25% of all non-academic activities in the classroom (Fisher et al., 1978). The greater the delays in compliance and engagement, the less time students have to devote to academic tasks (Coddling & Smyth, 2008).

There is a growing body of work exploring the use of classroom-based interventions to reduce delays in task compliance. Classroom-based positive behavioral interventions are indispensable in managing behavior for all students and maintaining a suitable inclusive environment where students with disabilities can thrive academically. These interventions require little training and minimal disruption to established classroom routines and procedures. Interventions such as high-probability request sequences, teacher greetings, and the use of sound field systems have been shown to have positive effects on compliance behaviors (Allday, Bush, Ticknor, and Walker, 2011; Wehby & Hollahan, 2000). Unfortunately, these interventions focus largely on teacher level variables and offer limited opportunity for generalization and maintenance outside of the classroom in which they are implemented.

The current study examines the effectiveness of a classroom-based positive behavioral intervention that focuses on student-centered behaviors to help struggling learners be successful in inclusive classrooms. Students engaged in a brief planning and goal setting session prior to the start of each class period as a means to reduce delays in compliance

with teacher directions.

## **Methods**

### **Setting and Participants**

This study was conducted in a suburban middle school in the Midwestern United States. The school serves approximately 513 students in seventh and eighth grade. The student population is demographically diverse including 40% of students identified as African American, 40% Caucasian, 15% Hispanic, 4% Asian, and less than 1% Hawaiian or Native Alaskan. Just over 47% of students were identified as socio-economically disadvantaged. Approximately 14% of students qualified for special education services. Intervention implementation and all data collection were done in a mixed grade remedial reading class. The class included two students with learning disabilities in reading comprehension and two students without learning disabilities.

### **Target Behaviors and Definitions**

The target behavior under investigation was the latency to task compliance of teacher directed behaviors during transition periods to one of three assigned tasks; (a) independent reading, (b) computer time, or (c) small group instruction. Latency was measured between when the classroom teacher gave directions for independent work and when students complied with the directions provided by the teacher.

Latency was recorded for each individual once they engaged in task assigned by the teacher. Observations timed-out and the timer was stopped if, latency exceeded 10 minutes. All observations that timed out at 10 minutes were included in the data during both baseline and intervention phases.

### **Baseline Condition**

During baseline, latency to task engagement data were collected for all four participants. Students were timed between the time they were dismissed to begin assigned tasks and the moment in which they engaged in the assigned task.

### **Experimental Condition**

The intervention for this study was a packaged intervention using planning and goal setting. Upon entering the classroom, students in the intervention phase met with the researcher to briefly discuss and; (a) plan what station and assignment they would assigned first, (b) list the materials required for the station, and (c) set a personal goal time for the transition between whole-class instruction and the first task. Students then recorded their plan, materials, and goal time on a form developed specifically for this intervention. Total time for each intervention session lasted 3 minutes or less including planning, listing materials, and goal setting. Students then joined the rest of the class for whole-group instruction before making their first transition to workstations.

### **Experimental Design**

This study used a multiple-baseline design across participants. Baseline data observations for all participants began concurrently. Implementation of the intervention was conducted sequentially. Data for each participant was determined to be stable or increasing (the opposite direction for which the intervention was intended) before the implementation of intervention. Visual analysis was also used to assess stability of intervention phase data before implementing the intervention with additional participants. Observation data was recorded and graphed for each participant. All latency timings were graphed for both baseline and intervention periods (see Figure 1).

## **Results and Discussion**

All participants showed immediate decreases in latency that corresponded to the implementation of the intervention (see Figure 1). All participants also showed

increased stability in transition timings over baseline during the intervention phase. Visual analysis of the data collected indicates that a causal relation between the implementation of the intervention and reduced latency to task engagement may be present. All participants in this study showed substantial reductions in the mean length of time between the completion of directions by the teacher and the initiation of task engagement. Visual analysis also shows the intervention increased the stability of transition time for all participants. Findings indicate that an intervention comprised of planning and goal setting can positively affect latency to task engagement.

The results of this intervention indicate that effective interventions for decreasing latency to task engagement need not be complicated nor interfere with the routines and procedures already in place within a classroom. Reducing latency between teacher directions and task compliance increases student's opportunity to engage in academic tasks. These findings are important given the current research in low-intensity, highly effective interventions to decrease latency to task compliance. Sufficient instructional time and effective intervention are currently both in short supply at many schools. Expanding the catalog of effective interventions that require minimal investments of time and resources is a worthwhile cause with great potential for effecting classroom climate and making classroom time more efficient. Like Wehby & Hollahan's (2000) work with high-probability request sequences and the work of Allday et al. (2011) in teachers' greetings, this study further indicates that lowintensity interventions with high social validity can positively impact students' behavior.

#### **Limitations**

This investigation tracked only latency to engagement and did not measure the amount of time students spent engaged in academic activity. It would be inappropriate to conclude that less time in transition leads to a direct increase in academic engagement. A more appropriate conclusion would be that, reduced latency to task engagement leads to more time available for engagement in academic tasks.

Furthermore, throughout both baseline and intervention phases, substantial instability exists for all four participants. Further investigation is warranted across settings and behaviors to verify the presence of a functional relation.

#### **Conclusion**

Results of this intervention show that planning and goal setting may be effective in reducing latency to task engagement for students that adolescents that struggle with reading. Though findings are promising and suggest the presence of a functional relation, the instability of data across both baseline and intervention periods indicates that further research is required to verify a functional relation between the intervention and the reduction in latency to task engagement. The small number of participants also suggests further research should be conducted across participants and settings. Results show that effective interventions can be infused into classroom environments without disrupting established instructional practices and routines. Suggestions for future research include examination of the intervention with the addition of a feedback component and should include measures of total time of engagement after task initiation. Future research should also examine this intervention across a variety of types of directions, settings, and grade levels.

#### **Acknowledgements**

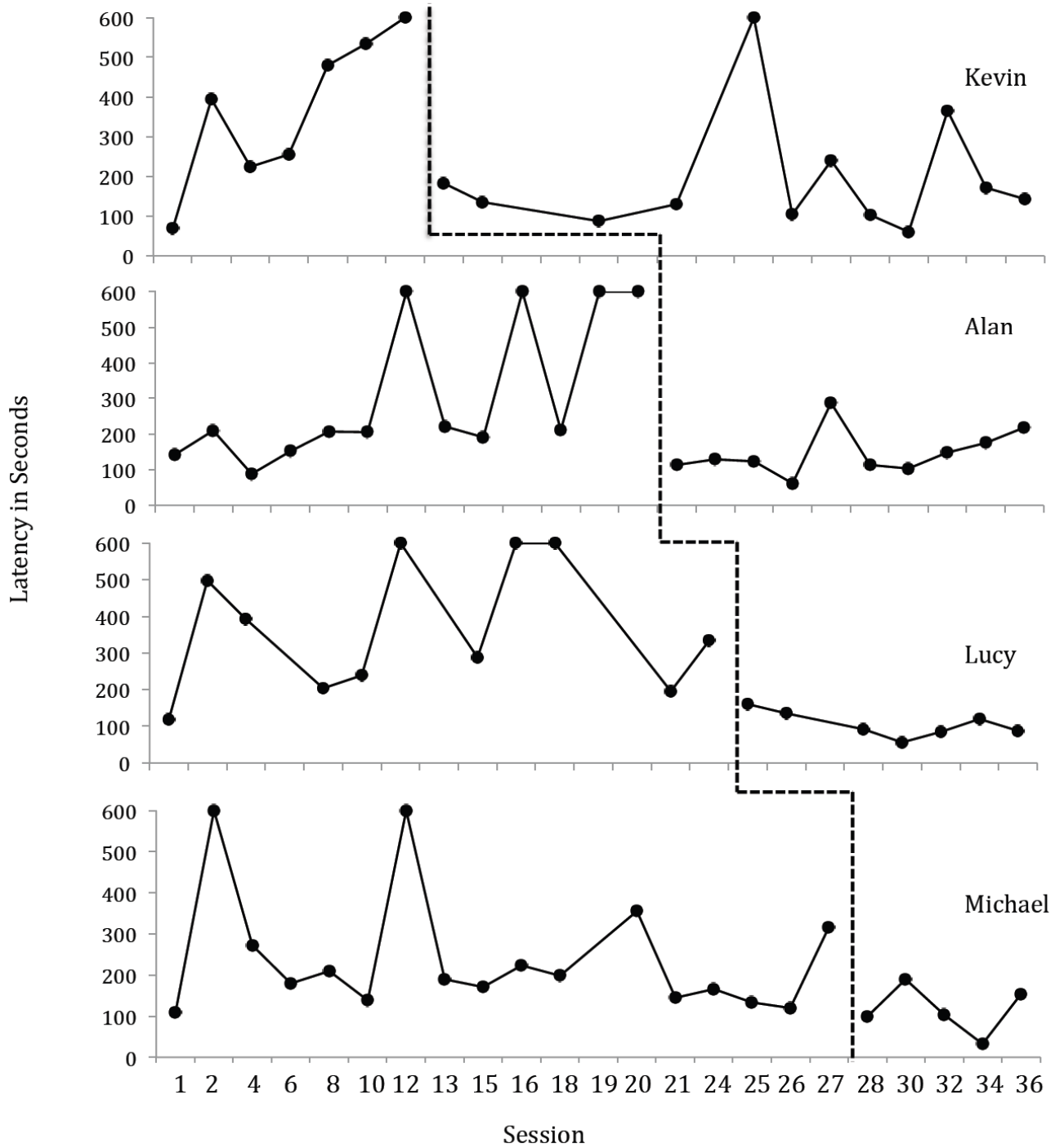
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Figure 1.  
*Intervention Results on Latency to Task Engagement: First Transitions following teacher directions*



## **Assessment of Social Skills in Students Nonspeaking Using Alternative Communication**

Patricia Lorena Quiterio  
Universidade do Estado do Rio de Janeiro  
[patylorenaq@gmail.com](mailto:patylorenaq@gmail.com)

Leila Regina d'Oliveira de Paula Nunes  
Universidade do Estado do Rio de Janeiro

### **Abstract**

Interpersonal relations have been the focus of interest in various studies in the field of human and social sciences. Students with cerebral palsy may be incapable to express feelings and thoughts and, consequently, their academic and social development are hindered. The goals of the present study are: (i) to adapt the Social Skills Inventory to twelve students with cerebral palsy by employing Augmentative and Alternative Communication resources and (ii) to verify the feasibility of the proposal of a Social Skills multimodal assessment for nonspeaking individuals with cerebral palsy. This assessment involved the application of the following instruments: the Social Skills Inventory for Nonspeaking Individuals (SSINSI), direct observation of students in school, parent questionnaire and interviews with school teachers. In order to SSINSI validity, the Wilcoxon Signed-Rank Test ( $H_0$  to  $p \leq 0.02$ ) was applied and such procedure produced satisfactory findings. Final data revealed that subjects displayed better performance in the Assertiveness, Self-control and Emotional Expression subclasses. The subjects displayed reasonable performance in the Basic Skills of Communication, Empathy, Civility and Social Academic Skills subclasses. However, there were significant deficits in Friendliness and Interpersonal Problem Solving. The present findings indicate the need for Social Skills Training for nonvocal individuals with cerebral palsy.

**Keywords:** special education; social skills; cerebral palsy.

### **Introduction**

Interpersonal relations have been the focus of interest in various studies in the field of human and social sciences. Social skills relate to behavioral repertoire necessary for a successful interpersonal relationship as typical parameters for each context and culture, and as such may be evaluated and trained.

It is worth noting that Social Skills Training and its proposals around people with disabilities are being studied increasingly in several countries. In Brazil, however, these studies are more recent (Del Prette & Dell Prette, 2004) probably due to the need for development and adaptation of assessment instruments. Studies about Social Skills with people with learning disabilities, intellectual disabilities, sensory impairments, global developmental disorders, high skills and physical disabilities have been conducted in Brasil since 2005 (Quiterio, Nunes & Gerk, 2009), notably in regular schools. Such investigations have highlighted the importance of developing social skills in this population, emphasizing that adequate social performance can mitigate the adverse psychological and social effects, especially in interaction with non-disabled people,

enabling a better quality of life. The understanding of social and communicative processes is regarded as a key factor in the social inclusion process of students with cerebral palsy, with no ability to engage in effective oral communication. This population may be incapable to express feelings and thoughts and, consequently, their academic and social development may be hindered.

The goals of the present study are: (i) to adapt the Social Skills Inventory (Del Prette & Del Prette, 2005) to nonspeaking students with cerebral palsy by employing Alternative Communication resources; (ii) to verify the feasibility of the proposal of a Social Skills multimodal assessment for nonspeaking individuals with cerebral palsy, and (iii) to describe the social skills repertoire of such students.

## **Method**

**Participants.** In the first study, the participants were four nonspeaking students with cerebral palsy, aged between 18 and 23, who systematically used those resources of AAC, their relatives and the classroom teacher. In the second study, the participants were eight nonvocal student, with cerebral palsy aged between 9 and 24, their parents and their teachers

**Setting and instruments.** Both studies were held at a special school. There was held a multimodal evaluation which collected information from different partners, employing: observational protocol, questionnaire, interview, and Social Skills Inventory for Nonspeaking Individuals (SSINSI).

**Procedures.** Initially, the nonvocal students were filmed in the classroom. The interaction with their colleagues and their teacher were transcribed and analyzed in order to observe specific aspects of their social behavior, besides providing situations that generated the elaboration of the Inventory. Then, the parents answered a questionnaire in which the answer alternatives were based on Likert scale criteria. The questionnaire considered the different answer options that the individual could give either through gestures or through communication boards. The teachers were interviewed about their students' Social Skills. The interviews were recorded, transcribed verbatim and submitted to the interviewed people who had the chance to make comments, correct ideas and clear up their remarks.

The next step was to elaborate the Social Skills Inventory for Nonspeaking Individuals (SSINSI). This instrument, composed by twenty multiple choice items, describes situations lived in the school by nonvocal students. The SSINSI was, then, applied both to students and to their teachers having the students as their targeted subjects. The items relate to a problematic situation for which the subject has

reaction alternatives: clever, passive not clever and active not clever. This inventory was based on the Multimedia System of Social Skills Evaluations (Del Prette & Dell Prette, 2004), on the Assertiveness Scale and generative situations selected from observational recordings. The SSINSI was adapted in order to comply with the motor difficulties of the targeted students for whom such AAC resources were used. Thus, at every item of the Inventory, on the upper part of the board the title of the scene is presented. Then comes the report of the situation and on the side there were the three scenes drawn which represent the possible reactions of the subject. To answer the items, the student had the options of pointing to the figure or signaling to the answer figures scanned by the researcher. An example is

**Situation 14- Academic Social Skills:** In the classroom, the class is making a dish of recycled material. Clara, the teacher, is using the AAC posters with the symbols of the material and of the classroom assignment. Julia did not understand a symbol of the activity and noticed that Henry understands all the symbols. What is Julia going to do?



Reaction 1: Julia keeps quiet and still does not understand the symbol.

Reaction 2: Julia starts yelling and disturbing the class.

Reaction 3: Julia uses the plank to show Henry that she does not understand and needs his help.

The answer options were presented through cards and each student pointed at his/her answer option to each situation. The five options were based on the Likert Scale. The student's answers were recorded in the SSINSI Protocol, as well as the response duration. Each answer was classified as Competent (CT), Passive Incompetent (PI) and Active Incompetent (AI). According to the theoretical foundation, competent answer is considered adequate to the social context and both the passive and the active answer were considered inadequate to the social demand. In the first study, the evaluation instruments were analysed and elaborated for later use on the participants of the second study.. The students did not present any difficulty in handling or pointing to the boards in the SSINSI, and it was therefore considered that the stimuli presentation and size were adequate to the population.

Although there was no indication of fatigue, it was noticed that every movement demanded great effort, for there were about sixty movements for just one task. Another consideration was that the five kinds of options presented to the first study group were proved adequate to the age group. However, for younger students, that number of options might contribute to some lack of attention, and fatigue for the activity execution. Considering the aspects above indicated, the cards were withdrawn and exchanged for the direct reading of the situations. Thus the answers might be emitted through direct pointing at one of the three options or the "yes" or "no" indication when the examiner went through the answer options. Thus, this second version of the SSINSI was ready to be applied to the students in Study 2.

## **Results**

First study: The observations showed that the most used non-verbal behavior was agreement with the head through which the student emitted yes/no answers to direct questions. According to literature, the other most frequent behaviors were the eye/visual contact followed by gestures and smiles. The questionnaires revealed that participant's subclasses Making friends (67%) and Civility (70%) presented a partial deficit. The interview pointed at behavior deficit in the accomplishment in the Solution of Interpersonal Problems. The subclasses Communication basics, Assertiveness, Making Friends, Civility and Social Academics also presented partial deficit, and the subclasses considered as presenting adequate performance were Self-control and Emotional expressiveness. The SSINSI evaluated that the subclass Self-control and Emotional expressiveness presented significant deficit and the other subclasses presented partial difficulties.

Second group: The parents considered through a questionnaire that their children showed adequate behavior in Communication basics (78.8%) and Self-control and Emotional expressiveness (78%). Partial difficulties were presented in Assertiveness (65%), Civility (59.3%) and Empathy (54.1%). The subclass Making friends (47.5%) was considered as having unsatisfactory index. The teachers, through interviews, considered that the subclasses Solution of Interpersonal Problems and Civility presented significant deficits. Assertiveness was evaluated as adequate behavior and the others showed partial deficits. The SSINSI revealed adequate ability in Assertiveness. On the other hand the subclasses Making friends and Interpersonal problems solution revealed a significant deficit.

To evaluate the agreement between the self-evaluation and the teacher's evaluation

through the SSINSI , the Wilcoxon Signed-Rank Test ( $H_0$  to  $p \leq 0.02$ ) (Siegel & Castellan, 2006) was applied and such procedure produced satisfactory findings. It is worth mentioning that all the instruments were submitted to the analysis by ten judges, participants of the research group, who considered the instruments use viable.

### **Conclusions**

In analyzing all instruments, it was noticed that the subclasses Assertiveness and Self-control and Emotional Expressiveness were the ones that presented best performance. The subclasses Communication basics, Empathy, Making friends and Academic Socials showed partial development. There were significant deficits in Civility and Interpersonal Problems Solution. The data of both studies signaled that the instruments were adequate to the population, and so they may serve as a basis for the development of future research studies with a significantly greater number of participants. Another follow-up of those studies is the elaboration and implementation of the Training in Social Skills (TSS) using resources of AAC, aiming at improving the individual and interpersonal competence in social situations.

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## **The use of Information and Communication Technologies in Augmentative and Alternative Communication - Literature review in Portugal**

Patrícia Alexandra Pinheiro  
University of Minho, CIEd

Maria João Gomes  
University of Minho, CIEd  
mjgomes@ie.uminho.pt

Anabela Cruz dos Santos  
University of Minho, CIEd  
acs@ie.uminho.pt

### **Abstract**

The applicability of the information and communication technologies, especially mobile devices, to augmentative and alternative communication is relatively recent in Portugal. Their characteristics of universality and portability allow to access information, communicate through voice, image and writing, working, perform recreational activities and multiple others activities almost anywhere and any place. It also promotes skills development in people with special educational needs, like physical, cognitive and social skills, when using the appropriate adaptations and digital augmentative and alternative communication software or other applications adapted to their physical or sensory disabilities. The aim of this work is to reveal the state of the art about the use of information and communication technologies in the context of special educational and more specifically in augmentative and alternative communication in Portugal, supported on the literature review. We selected the Portal B-on - Online Knowledge Library, since it allows us to have a perspective of several databases repositories of scientific research. This literature review aims to analyze, summarize and interpret some studies carried out in Portugal that focus on the binomial: Information and Communication Technologies and children with Special Educational Needs.

**Keywords:** Information and Communication Technologies, Special Educational Needs, Augmentative and Alternative Communication Systems.

### **Introduction**

Communicative competence is the ability to functionally use communication in natural environment by addressing the needs that arise during daily interactions that take place in this environment. It is the ability to express feelings, ideas and needs in an understandable way. As regards Trenholm (1999, p.22), communication "is a process through which people attach meanings to stimuli in order to make sense of the world." Communication is essential for the healthy and harmonious development of human beings. Learning is an interactive process between adults and children done by explaining the meaning of objects, gestures, movement, expressions and speech. To Tetzchner and Martinsen (2002) speech is the most natural form of human communication and adopted by people with active vocal apparatus and normal hearing.

However, a significant number of people are unable to communicate through speech, requiring an additional communication mode. The Augmentative and Alternative Communication (AAC) refers to all forms of communication that can complement, supplement and/or replace speech. It is intended to cover the needs of receipt, understanding and expression of language and increase communicative interaction of individuals without verbal communication. The main objective is to ensure an alternative form of communication with the subjects around us and increase the quality of life of individuals.

The Alternative communication is "any form of communication other than speech and used by an individual in the context of face to face communication. Sign language, Morse code, and writing are examples of alternative forms of communication to individuals who lack the ability to speak. "Augmentative Communication" means additional or supporting communication. The word augmentative underlines the fact that the teaching of alternative forms of communication has a dual goal: promoting and supporting speech and ensure an alternative form of communication if one does not learn to speak" (Tetzchner & Martinsen, 2002, p.22).

Communication is often a major difficulty for children with Special Educational Needs (SEN). The technologies have the potential to be a facilitator of learning and autonomy with strong motivating power, they may play a dual role: the playful and didactic. From the point of view of Rodrigues (1998), quoted in Moura (2006), there is an important feature that distinguishes the use of Informative Communication Technologies (ICT) in Special Education and Regular Education: the character of indispensability that they assume in Special Education for children with communication problems. For many children with SEN, technological resources are not only an advantage in access to learning, but supports them, in being more functional, have more control of the environment and can even help them in socio-affective domain, making easier for them do communicate with others.

Branson and Demchak (2009) stated that Augmentative and Alternative Communication Systems (AACs) are used to compensate or overcome temporary or permanent communicative limitations and its use can have three distinct user groups: a) group of people whose verbal language is impaired, but effectively understand what is said to them, b) group of people who only require augmentative and alternative communication at certain stages of life in order to overcome a temporary limitation, and c) group of people who need constant and definitely of AAC Systems. The main objective of any system of communication aid is to "compensate (temporarily or permanently) the communication patterns of individuals with severe expressive communication disorders with disabilities" (American Speech-Language-Hearing Association, 1989, cited in Mirenda, 2003, p.204). Early use of AAC Systems, even in children under three years of age, in the immediate moment that communication difficulties are recognized is recommended (Broberg, Ferum & Thunberg, 2012; Branson & Demchek, 2009).

Mirenda (2003) refers to two types of AAC Systems: with aid and without aid. The AAC Systems unaided require no external equipment to the body and involve the use of symbols such as hand signs and gestures. The AAC Systems with aid incorporate external use of symbols such as photographs, letters and words devices.

The ICT, particularly mobile devices, associated with AAC has potential that can be explored in various fields of life of children with SEN. Its portability, the multimedia features, binding capacity to digital communication networks, among other things, increase opportunities for social interaction and commitment in teaching and collaborative learning.

## **Method**

This research study aims to answer the following questions: What kind of research can be found in Portugal relating ICT and SEN? What studies about the relation between ICT and AAC exist in our databases?

For this research we selected the Portal B-on - Online Knowledge Library, since it enables us to have a perspective of several databases repositories.

To use the search engine of B-on the following keywords or expressions: Informative Communication Technologies (ICT), Special Educational Needs (SEN) and Augmentative and Alternative Communication (AAC) were inserted. We used all keywords/expressions in English and Portuguese to try to reach as many combinations as possible.

Recent research studies were our target, specifically in the last five years or so, since our goal was to analyze, summarize and interpret some studies carried out in Portugal using ICT with children with SEN.

## **Results**

Results of the studies found showed that there are in Portugal several perspectives of authors and researchers about the use of ICT in SEN and AAC. In order to understand these different perspectives and usability general results of the studies will be presented. To Santos (2006), the computer can provide individualized teaching and be a learning facilitator especially to students with SEN, assuming as a major resource for the recovery of these students or be used as a complement to education.

Rodrigues and Teixeira (2006), emphasize that ICTs enable's support, contents and forms that boosts the processes of inclusion and sociability. The technical aids in helping dimensions, adaptive and / or educational are essential to explore the potential of technology in everyday life of these children, fostering new perspectives on the involvement of children with SEN, facilitating access to knowledge, learning in the free time, culture and contact with friends or interest groups. Technologies act at the level of the child, reducing their disadvantages and improving their functional capacity and at the level of environment, reducing the demands of the teaching and learning process. Monteiro and Gomes (2009, p.5970), citing Freire (2004), report that digital inclusion is inevitably linked to accessibility. Although the technologies are not the complete solution, access to ICT enables better integration in society as they are associated with opportunity, citizenship and knowledge. So, they are considered key digital inclusion actions in public policies for social inclusion.

Gandâra (2013) showed the designs and practices of teachers in relation to the adoption of ICT in pedagogical practices with SEN students, evaluated the impact of ICT use on the learning of a child with SEN comprehended the real use of ICT in schools and finally learned about the tools used in the development of competencies of these children.

Correia (2012) showed an advantage of digital interactivity of the method of the 28 words in the process acquisition of reading competence in children with Trisomy 21. Concluded that Jclic software, thanks to its ease of use and variety of activities that you can develop, can be very useful in organizing strategies in the initiation process of learning to read in children with SEN.

Vaz (2012) carried out an investigation with a young with Rett syndrome. The author used a structured intervention in a dynamic planning, action, evaluation and reflection, generating differentiated educational practices and driving the use of ICT - Magickeyboard software - in favor of young's communicative success. The results indicate communicative progresses along the work sessions and expansion its

communicative level, facilitating interaction with colleagues, teachers and caregivers, helping to improve their quality of life.

Quelhas (2011) notes the high level of motivation and interest shown by the use of ICT by young people with Trissomy 21 as well as their capacity in use of general use equipment not specifically adapted. Silva (2011) focused on the importance of mathematics communication with a visually deficient student using Excel. The work allowed the development of communication and autonomy of visually deficient student. Oliveira (2010) conducted a study of exploration of ICT in the educational process of a student with Ataxia, total disability in oral communication and severe limitations in fine motor skills. The voice synthesizer software was used in the laptop and revealed new possibilities for student communication, which in the author's opinion could be expanded using communicator Go Talk 20 +25.

Afonso (2010) using the educational software Mimocas studied the impact in motivation for learning a child with Trisomy 21 and concluded that the software caused more motivation for learning and overcame some physical and cognitive limitations.

Henriques (2010) conducted a study whose objective was to evaluate the impact of using a computer application – Escola Virtual - in a child's learning with SEN in mathematics. The findings revealed a positive impact of ICT on learning of the child, benefits of the interaction between the interface and the student, ease of access to information necessary for the execution of tasks, increased motivation and aid in understanding the content and relative to each other.

Moura (2006) investigated the question of the introduction and use of ICT in supporting of formal education of students with Cerebral Palsy. As a result of empirical research, noted the importance of ICT in developing autonomy, learning and communication of these students. However, it was found that the complexity of the Cerebral Palsy determines the failure or success of the introduction and use of ICT technologies in educational contexts.

In the last years research done in this field have shown the importance and relevance of ICT in the life of people with SEN.

### **Discussion and final considerations**

In Portugal, research on ICT and SEN with focus on AAC is a recent field of studies which is growing up since 2010 according to most published papers.

Furthermore, this literature review illustrates several benefits of using ICT in schools and in daily living in relation to children with SEN, and points out for the need of promoting teacher training in this field and improving this research area. ICT are today an essential resource in supporting students with SEN and that any type of device that allows the student, write, communicate, explore the environment and make decisions will allow greater participation in school activities, in classroom dynamics and enhance the possibility of greater success in the learning process in order to promote the inclusion of children in the society, and furthermore reduce differences and inequalities in education (Batanero, 2004; Pérez & Montesinos, 2007).

In addition, most research have focused on ICT in SEN and general effects in learning and motivation, however it seems to be a gap in research performed in Portugal relating ICT and AAC systems. To conclude, more research studies associating ICT and AAC in order to establish a more effective intervention are needed.

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## **Teaching Functional activities for student with disability**

Patricia Zutião  
Federal University of São Carlos  
[patriciaeninho@hotmail.com](mailto:patriciaeninho@hotmail.com)

Maria A. Almeida  
Federal University of São Carlos  
[ameliana@terra.com.br](mailto:ameliana@terra.com.br)

Iasmin Z. Boueri,  
Federal University of São Carlos.  
[boueri.iasmin@gmail.com](mailto:boueri.iasmin@gmail.com)

### **Abstract**

The aim of the research was to evaluate the effectiveness of an educational program drawn from the natural functional curriculum. This research had as participant young man with intellectual disabilities in a specialized institution located in the state of São Paulo in Brazil. To collect data we used two instruments: the observation form, for the annotation of the levels of help the student needed to perform for each behavior during the activity; daily record in the field diary to record what occurred during activities. Were taught to the student three functional activities, being: Prepare the recipe, shopping list, and going to shop. The study had three phases, baseline, intervention and generalization / maintenance. Activities occurred in natural environments, as follows: experimental cooking school; fictitious market, and real market. The results were positive, the student gained his independence in all activities, reaching 85 % of independence in activity 1, activity 2 in 98%, and 95 % in the activity 3 . These advances were made possible primarily because it provided an opportunity for the student to carry out the tasks in the most independent way, providing assistance only when necessary , but also, for this teaching have been done in an individualized manner, with greater attention , respecting the pace and specificities . It is concluded that the procedure was effective with the student. However, more research in this area is needed, so that the effectiveness of the procedure can be proven or not with the application to other students and other realities.

**Keywords:** Special Education. Youth with Intellectual Disabilities. Educational Program. Natural Functional Curriculum

### **Introduction**

For this research, it was chosen an intervention procedure based on the Natural Functional Curriculum (Leblanc, 1992), based on surveys (Silveira, 2013; Boueri, 2010; Cuccovia, 2003; Suplino, 2005) to be a method that its use is expanding every day due to the positive results of their practice in different locations. The Natural Functional Curriculum emerged in the early seventies, in the University of Kansas and in the eighties, was taken to the Ann Sullivan Center and since then has grown its application in the field of special education. (SUPLINO, 2005) This curriculum is programmed individually, according to the reality and needs of the student. The focus is on what is

functional for the student at that time or in the near future, and their teaching is done in the most natural way and the next to student's reality . Furthermore, should include plans, procedures for effective teaching and continuous evaluation (LeBlanc, 1992). According Suplino, (2005), the curriculum should be: functional, natural, fun and that causes the fewest errors. It is observed that the natural functional curriculum is widely used and dedicated to students with intellectual disabilities. For the implementation of a program based on it, we have chosen a special institution in the stated of São Paulo, Brazil, which had a classroom for youths and adults with intellectual disabilities who could benefit from the proposed research to teach adaptive behavior.

## **Methods**

For this research to work in the best possible manner within the institution, a collaborative practice between teacher and researcher was done, which according DAMIANI 2008, is very important, because with it, people can share and refine ideas, stories, experiences and knowledge, reaching complex and better results than that derived from the individual work . Moreover, the collaboration offers teachers greater opportunities to enrich your way of thinking, acting and solve problems, having more chances of success in educational tasks.

### **Objectives**

To evaluate the effectiveness of a program drawn from the natural functional curriculum to teach the activities: Preparation of recipe, to make a List of food and going Shop. Method Participant: The participant of this study was a student diagnosed with intellectual disabilities, male, 22-year -old enrolled in a classroom for Youth and Adult. Location: The survey was conducted in a special philanthropic institution in a small city in the interior of São Paulo, Brazil. The research was conducted within the school in the classroom environment and in the experimental kitchen to conduct. And outside school, the research was conducted in stores such as markets, stationery and agriculture. Instrument: To collect the data two instruments were used: A protocol for daily field records field aimed to enable a qualitative analysis of the work routine of the classroom; the behavior of the students during the research, and the intervention and guidance that were performed. Observation forms were divided into two categories, one served as the observation form for recording the levels of aid used and a second as the observation form for recording the percentage of student independence in performing the activity. These observation forms.

Intervention procedures: During all activities, procedures to be performed were previously communicated and explained to the classroom teacher, by demonstrating the importance of providing opportunities for the student to carry out the activity independently. In Activity 1, the interventions were performed first in class, with an illustrated recipe, which was organized by the researcher, since the student was not literate. And then, this recipe was brought to the cooking class, where the student followed the step by step. In Activity 2, students received a Velcro plate with various products, which was also made by the researcher, in an adapted format, because the student had difficulty using scissors. After removing the ingredients to be bought from the plate, a second Velcro plate was done to be taken to the the market, where they went shopping with the help of the list. The purchases occurred in fictional and real trade. Procedures for data collection: For this research, a multiple baseline design across behaviors of an individual was used. First, the researcher collected data for the baseline, and when that was stable, the intervention was applied for the first series of behaviors. (ALMEIDA, 2008) At the end of the study showed a generalization of behaviors taught by the student. Procedures for Data

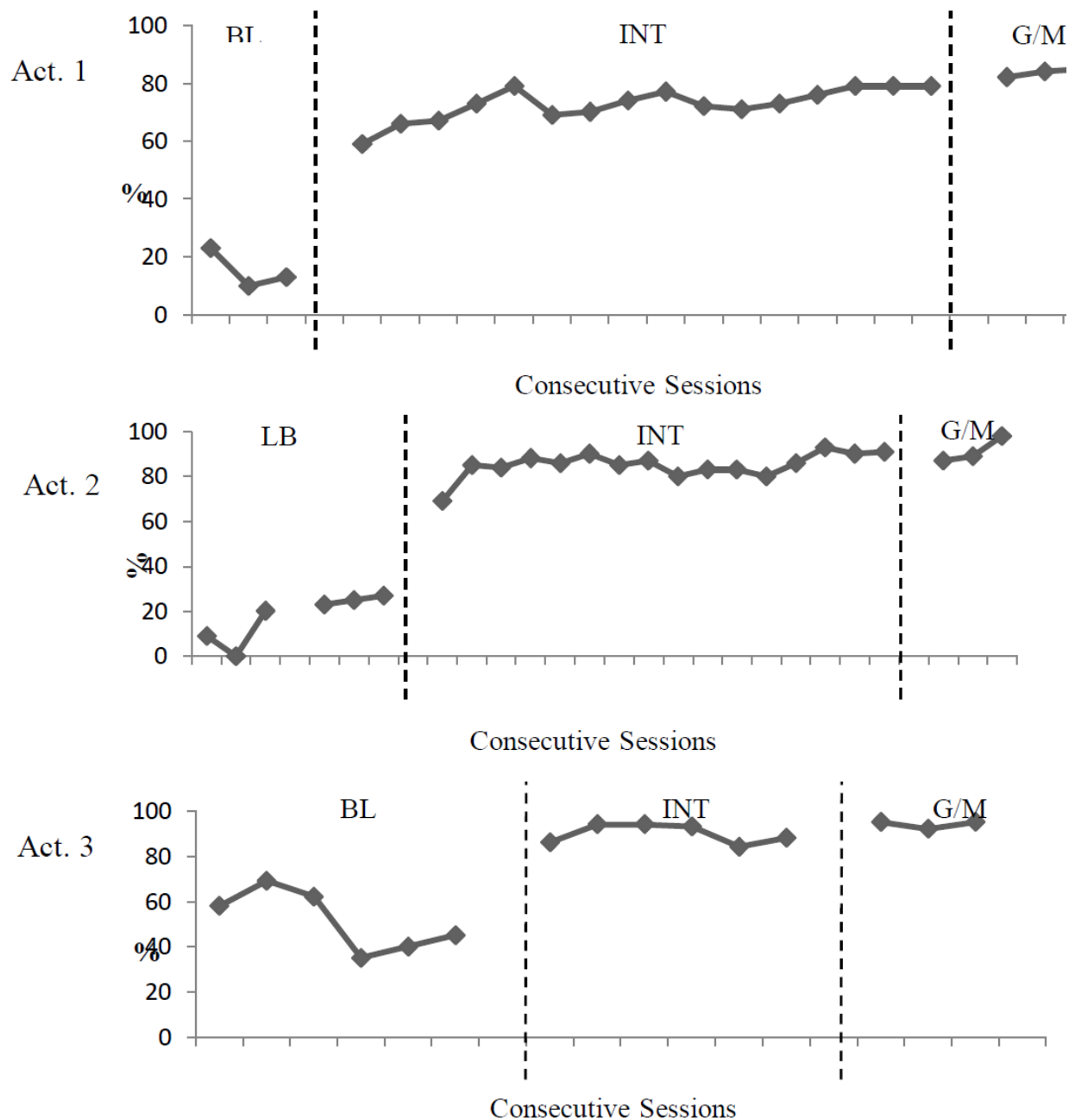
**Analysis:** To analyze the collected data it was decided to make use of both quantitative and qualitative way. Quantitative analysis was performed using multiple baseline design across behaviors. The qualitative analysis was performed by means of direct observations and field diary record.

### **Results and discussion**

The results from the implementation of the program can be seen in Figure 1 , which demonstrates how independence was the percentage of target students in three phases: baseline (before program implementation), intervention (during program implementation), and generalization / maintenance (during application of different activities of the intervention, but that had the same skills). The graphs refer to the percentage of the target student independence during the activities taught. The Y axis shows the percentage of the student's independence, this being measured from 0 % to 100 %, and the X axis marks the number of times the behavior was worked. Activity 2 and 3 lines were not continuous basis, which were taken before initiate interventions. As can be seen, after the beginning of the intervention, there was a great leap in the independence of the student. Some peaks occurred during the intervention as a result of some procedures and the adjustments that were made seeking to facilitate the independence of the student. The peaks of learning are common and acceptable for these reasons and in addition, the student remained with greater independence than 60 % in all activities, showing stability and that there was really a learning process. It is believed that these advances were made possible primarily because it provided an opportunity for the student to accomplish the task , but also because this teaching has been done in a more individualized manner , with greater attention , respecting the rhythm , the specificities having the person as a center of learning (according Suplino , 2005), thinking that everyone can learn , and taking as its starting point what the person has the best in their skills and glimpsing future possibilities . According to LeBlanc (1992, p. 1) \_ " a curriculum for a person with intellectual disabilities should be focused on teaching skills that make students more independent and productive and therefore more socially acceptable." Moreover, the teaching was done in natural environments, respecting the student's age.

### **Conclusion**

As can be seen according to the results, the procedure was effective for the participating student. The use of natural functional curriculum was essential to the procedure went well and, moreover, offering opportunities was essential to observe the independence of the student. However, it requires more research in this area, so that the effectiveness of the procedure can be proven or not with the application to other students and other realities. The internal validity of the research is pretty strong, because it shows the individual data compared to himself, ie, shows the degree of independence of the individual before and after the intervention. However, the external validity cannot be taken because the data obtained cannot be generalized for the study since the sample was small and due to this, as already said it will be necessary more research in this area of knowledge.



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Patrícia Alexandra Pinheiro  
University of Minho

Maria João Gomes  
University of Minho

Anabela Cruz dos Santos  
University of Minho  
acs@ie.uminho.pt

### **Abstract**

The applicability of the information and communication technologies, especially mobile devices, to augmentative and alternative communication is relatively recent in Portugal. Their characteristics of universality and portability allow to access information, communicate through voice, image and writing, working, perform recreational activities and multiple others activities almost anywhere and any place. It also promotes skills development in people with special educational needs, like physical, cognitive and social skills, when using the appropriate adaptations and digital augmentative and alternative communication software or other applications adapted to their physical or sensory disabilities. The aim of this work is to reveal the state of the art about the use of information and communication technologies in the context of special educational and more specifically in augmentative and alternative communication in Portugal, supported on the literature review. We selected the Portal B-on - Online Knowledge Library, since it allows us to have a perspective of several databases repositories of scientific research. This literature review aims to analyze, summarize and interpret some studies carried out in Portugal that focus on the binomial: Information and Communication Technologies and children with Special Educational Needs.

**Keywords:** Information and Communication Technologies, Special Educational Needs, Augmentative and Alternative Communication Systems.

### **Introduction**

Communicative competence is the ability to functionally use communication in natural environment by addressing the needs that arise during daily interactions that take place in this environment. It is the ability to express feelings, ideas and needs in an understandable way. As regards Trenholm (1999, p.22), communication "is a process through which people attach meanings to stimuli in order to make sense of the world." Communication is essential for the healthy and harmonious development of human beings. Learning is an interactive process between adults and children done by explaining the meaning of objects, gestures, movement, expressions and speech.

To Tetzchner and Martinsen (2002) speech is the most natural form of human

communication and adopted by people with active vocal apparatus and normal hearing. However, a significant number of people are unable to communicate through speech, requiring an additional communication mode. The Augmentative and Alternative Communication (AAC) refers to all forms of communication that can complement, supplement and/or replace speech. It is intended to cover the needs of receipt, understanding and expression of language and increase communicative interaction of individuals without verbal communication. The main objective is to ensure an alternative form of communication with the subjects around us and increase the quality of life of individuals.

The Alternative communication is "any form of communication other than speech and used by an individual in the context of face to face communication. Sign language, Morse code, and writing are examples of alternative forms of communication to individuals who lack the ability to speak. "Augmentative Communication" means additional or supporting communication. The word augmentative underlines the fact that the teaching of alternative forms of communication has a dual goal: promoting and supporting speech and ensure an alternative form of communication if one does not learn to speak" (Tetzchner & Martinsen, 2002, p.22).

Communication is often a major difficulty for children with Special Educational Needs (SEN). The technologies have the potential to be a facilitator of learning and autonomy with strong motivating power, they may play a dual role: the playful and didactic. From the point of view of Rodrigues (1998), quoted in Moura (2006), there is an important feature that distinguishes the use of Informative Communication Technologies (ICT) in Special Education and Regular Education: the character of indispensability that they assume in Special Education for children with communication problems. For many children with SEN, technological resources are not only an advantage in access to learning, but supports them, in being more functional, have more control of the environment and can even help them in socio-affective domain, making easier for them do communicate with others.

Branson and Demchak (2009) stated that Augmentative and Alternative Communication Systems (AACs) are used to compensate or overcome temporary or permanent communicative limitations and its use can have three distinct user groups: a) group of people whose verbal language is impaired, but effectively understand what is said to them, b) group of people who only require augmentative and alternative communication at certain stages of life in order to overcome a temporary limitation, and c) group of people who need constant and definitely of AAC Systems. The main objective of any system of communication aid is to "compensate (temporarily or permanently) the communication patterns of individuals with severe expressive communication disorders with disabilities" (American Speech-Language-Hearing Association, 1989, cited in Mirenda, 2003, p.204). Early use of AAC Systems, even in children under three years of age, in the immediate moment that communication difficulties are recognized is recommended (Broberg, Ferum & Thunberg, 2012; Branson & Demchek, 2009).

Mirenda (2003) refers to two types of AAC Systems: with aid and without aid. The AAC Systems unaided require no external equipment to the body and involve the use of symbols such as hand signs and gestures. The AAC Systems with aid incorporate external use of symbols such as photographs, letters and words devices.

The ICT, particularly mobile devices, associated with AAC has potential that can be explored in various fields of life of children with SEN. Its portability, the multimedia features, binding capacity to digital communication networks, among other things, increase opportunities for social interaction and commitment in teaching and collaborative learning.

## **Method**

This research study aims to answer the following questions: What kind of research can be found in Portugal relating ICT and SEN? What studies about the relation between ICT and AAC exist in our databases?

For this research we selected the Portal B-on - Online Knowledge Library, since it enables us to have a perspective of several databases repositories.

To use the search engine of B-on the following keywords or expressions: Informative Communication Technologies (ICT), Special Educational Needs (SEN) and Augmentative and Alternative Communication (AAC) were inserted. We used all keywords/expressions in English and Portuguese to try to reach as many combinations as possible.

Recent research studies were our target, specifically in the last five years or so, since our goal was to analyze, summarize and interpret some studies carried out in Portugal using ICT with children with SEN.

## **Results**

Results of the studies found showed that there are in Portugal several perspectives of authors and researchers about the use of ICT in SEN and AAC. In order to understand these different perspectives and usability general results of the studies will be presented. To Santos (2006), the computer can provide individualized teaching and be a learning facilitator especially to students with SEN, assuming as a major resource for the recovery of these students or be used as a complement to education.

Rodrigues and Teixeira (2006), emphasize that ICTs enable's support, contents and forms that boosts the processes of inclusion and sociability. The technical aids in helping dimensions, adaptive and / or educational are essential to explore the potential of technology in everyday life of these children, fostering new perspectives on the involvement of children with SEN, facilitating access to knowledge, learning in the free time, culture and contact with friends or interest groups. Technologies act at the level of the child, reducing their disadvantages and improving their functional capacity and at the level of environment, reducing the demands of the teaching and learning process. Monteiro and Gomes (2009, p.5970), citing Freire (2004), report that digital inclusion is inevitably linked to accessibility. Although the technologies are not the complete solution, access to ICT enables better integration in society as they are associated with opportunity, citizenship and knowledge. So, they are considered key digital inclusion actions in public policies for social inclusion.

Gandâra (2013) showed the designs and practices of teachers in relation to the adoption of ICT in pedagogical practices with SEN students, evaluated the impact of ICT use on the learning of a child with SEN comprehended the real use of ICT in schools and finally learned about the tools used in the development of competencies of these children.

Correia (2012) showed an advantage of digital interactivity of the method of the 28 words in the process acquisition of reading competence in children with Trisomy 21. Concluded that Jclíc software, thanks to its ease of use and variety of activities that you can develop, can be very useful in organizing strategies in the initiation process of learning to read in children with SEN.

Vaz (2012) carried out an investigation with a young with Rett syndrome. The author used a structured intervention in a dynamic planning, action, evaluation and reflection, generating differentiated educational practices and driving the use of ICT - Magickeyboard software - in favor of young's communicative success. The results



indicate communicative progresses along the work sessions and expansion its communicative level, facilitating interaction with colleagues, teachers and caregivers, helping to improve their quality of life.

Quelhas (2011) notes the high level of motivation and interest shown by the use of ICT by young people with Trissomy 21 as well as their capacity in use of general use equipment not specifically adapted. Silva (2011) focused on the importance of mathematics communication with a visually deficient student using Excel. The work allowed the development of communication and autonomy of visually deficient student. Oliveira (2010) conducted a study of exploration of ICT in the educational process of a student with Ataxia, total disability in oral communication and severe limitations in fine motor skills. The voice synthesizer software was used in the laptop and revealed new possibilities for student communication, which in the author's opinion could be expanded using communicator Go Talk 20 +25.

Afonso (2010) using the educational software Mimocas studied the impact in motivation for learning a child with Trisomy 21 and concluded that the software caused more motivation for learning and overcame some physical and cognitive limitations.

Henriques (2010) conducted a study whose objective was to evaluate the impact of using a computer application – Escola Virtual - in a child's learning with SEN in mathematics. The findings revealed a positive impact of ICT on learning of the child, benefits of the interaction between the interface and the student, ease of access to information necessary for the execution of tasks, increased motivation and aid in understanding the content and relative to each other.

Moura (2006) investigated the question of the introduction and use of ICT in supporting of formal education of students with Cerebral Palsy. As a result of empirical research, noted the importance of ICT in developing autonomy, learning and communication of these students. However, it was found that the complexity of the Cerebral Palsy determines the failure or success of the introduction and use of ICT technologies in educational contexts.

In the last years research done in this field have shown the importance and relevance of ICT in the life of people with SEN.

### **Discussion and final considerations**

In Portugal, research on ICT and SEN with focus on AAC is a recent field of studies which is growing up since 2010 according to most published papers.

Furthermore, this literature review illustrates several benefits of using ICT in schools and in daily living in relation to children with SEN, and points out for the need of promoting teacher training in this field and improving this research area. ICT are today an essential resource in supporting students with SEN and that any type of device that allows the student, write, communicate, explore the environment and make decisions will allow greater participation in school activities, in classroom dynamics and enhance the possibility of greater success in the learning process in order to promote the inclusion of children in the society, and furthermore reduce differences and inequalities in education (Batanero, 2004; Pérez & Montesinos, 2007).

In addition, most research have focused on ICT in SEN and general effects in learning and motivation, however it seems to be a gap in research performed in Portugal relating ICT and AAC systems. To conclude, more research studies associating ICT and AAC in order to establish a more effective intervention are needed.

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## **Evaluation of a program to promote musical abilities and emergent literacy**

Renata Franco Severo Fantini  
Federal University of São Carlos, Brazil.  
[renata.severo@yahoo.com.br](mailto:renata.severo@yahoo.com.br)

Tânia Maria Santana de Rose  
Federal University of São Carlos, Brazil.  
[tmsrose@terra.com.br](mailto:tmsrose@terra.com.br)

### **Abstract**

The study presents an initial evaluation of a program of music education with emphasis on simultaneous promotion of musical skills, phonological awareness and concepts of writing. The program is conducted among Brazilian student's at-risk students with psychosocial and intellectual disabilities in the first grade of elementary school. Results indicated improvement in some of the skills. Stands out the possibility of acting music educator also favor the promotion of learning relevant to success in reading.

**Keywords:** music education, special education, emergent literacy.

### **Introduction**

Literature has demonstrated a positive relationship between music and many other areas of development (Bolduc, 2008; Pacheco, 2009). Studies have shown that being involved in music activities is positively related to the development of linguistic skills (Ilari, 2005; Pacheco, 2009), communicative skills, and one's self-confidence (Bolduc, 2008, 2009).

Few studies relate musical development to emergent literacy skills, that is, to previous abilities and behaviors of reading and writing common to pre-school children (Sulzby; Teale, 1991). Stands out here the studies of Bolduc, 2009; Stedley and Hughes, 1997 and Register, 2001).

Literature makes evident a gap when it comes to the possibilities of musical education for the development of previous skills of writing and reading, as well as to the development of musical skills directed to a special public.

In this sense, Standley e Hughes' study (1997) proved itself to be the pioneer to assess the effects of a musical curriculum which was specially made to strengthen previous skills of writing and reading for 3 to 5 year-old children who were enrolled in inclusive Early Intervention programs.

From these studies on, Bolduc (2009) and Register (2001) also made research in order to observe how much musical activities can improve the development of child's previous skills of writing and reading.

The present study, just as Standley e Hughes' (1997), is based on a teaching approach considering meaningful social contexts in which children have the opportunity to interact with written materials, work with books and develop their oral skills. Besides that, we consider that the musical activities act favoring both previous reading and writing skills and elementary musical skills which will serve as a base for future

musical literacy. In this study we present data related to at-risk children, participants of this research, which main goal is to observe the effects of an interdisciplinary program of music and emergent literacy for at-risk children and intellectual disability. Data related to children with intellectual disability are still being collected.

### **Method**

**Participants:** we have as participants 3 male children with the average age of 6.7 years-old, members of families of low socioeconomic classes, enrolled in the first grade of Elementary School.

**Measures:** **Musical Diagnosis:** a musical diagnosis was elaborated based on Louro (2012). Skills were grouped in three categories: 1) Perception: Timbre and Pitch; 2) Pulse and Rhythm; 3) General Musical Knowledge.

**Phonological Awareness Assessment:** a test was applied which was adapted from Pacheco (2009) composed of 6 tasks: a) identification of rhymes; b) syllabic synthesis; c) phonemic synthesis; d) identification of different initial syllable; e) identification of different final syllable; f) identification of different medial syllable.

**Emergent literacy scale:** (Saint-Laurent, Giasson & Couture, 1998) adapted by Fernandes (2002). Nine out of twelve tests were used: a) interest shown in reading activities; b) interest in being read a story; c) active participation during reading; d) Book handling knowledge; e) reading orientantion; f) literary concepts; g) functions of print; h) pretend reading; i) writing concepts. Items 1,2 and 3 were grouped under the category "Interest in reading activities" and items 4 and 5 were grouped under the category "Handling and contact with books". Other items are identified by the names informed above.

**Scale of adverse events** (Santos, 1999): instrument formed by 36 descriptive items of adverse events that may have occurred within the last 12 months or earlier in child's life. Such survey was answered by a person responsible for the students.

### **Musical Education Program**

The elaborated program is based on the examples of activities related to music and literacy suggested by Standley; Hughes (1997). We attempted to integrate fundamentals appointed by the Referencial Curricular para Educação Infantil (Standard Curriculum for Early Childhood Education) (Brasil, 1998), principles suggested by music teachers such as Carl Orff, Jaques-Dalcroze and Edgar Willens, as well as to what current literature points to be important to the process of musicalization, like creating a routine sense (Joly, 2003; Soares, 2008), promoting contact with repertoires of different cultures (Standley, Hughes, 1997; Bolduc, 2009; Register, 2001) and forming bonds of affection between teacher and students (Joly, 2003; Ilari, 2003; Cançado, 2006). Meetings lasted about 50 minutes and were held by the researcher herself in a total of 14 meetings, held twice a week during school time.

### **Results and Discussion**

The results related to musical abilities show how acquainted the participants were when it comes to musical perception: Timbre and pitch. Regarding general musical knowledge, gains have been observed so the students came to master the subject.

However, the same did not happen with the abilities related to pulse and rhythm, when

no gains were observed and students couldn't master the matter. Probably not enough attention was given to the activities related to pulse and rhythm or the teaching strategies employed were not the best to be used. Another reason for such result could be that the demanded mathematical and motor skills involved in such tasks were not matured in these children.

The results related to skills of phonological awareness show that the students were well acquainted with one out of the five assessed skills, syllabic synthesis. The abilities to identify the initial and medial syllables had substantial increase and the abilities related to rhyme and phonemic synthesis had reduced gains, indicating that the experience was not long enough for the students to learn as much isolated phonemes and rhymes as it was expected of them.

Loningan, Purpura, Wilson, Walker & Clancy-Menchetti (2013) state that generally the children from low-income families have fewer opportunities to experience activities which would favor the development of their phonological awareness, being highly recommended that they have such experience at school so they can improve this skill to perceive and recognize sounds.

Regarding emergent literacy skills, students improved in all skills, varying in degrees enabling students to master some skills, but not all of them. Probably the nature of the activities and the manner in which were organized may have favored the presented gains.

We can consider that the results obtained in the present study reinforce the findings of Standleys & Hughes (1997), Bolduc (2009, 2011), Register (2001), as an improvement of the emergent literacy skills of the group was seen.

**Table 1: Scores and percentages for differences of musical abilities, phonological awareness and emergent literacy among the results from pre-test and post-test.**

	Nr. Items	Participant 1			Participant 2			Participant 3		
		Pre-test	Pos-test	Difference in %	Pre-test	Pos-test	Difference in %	Pre-test	Pos-test	Difference in %
Musical Diagnosis	Perception: Timbre e Pitch	4	4	-	3	4	+ 25%	4	4	-
	Pulse e Rhythm	9	3	-	4	4	-	6	5	- 12%
	General Music Knowledge	5	2	+ 60%	4	5	+ 20%	3	5	+ 40%
Phonological Awareness Assessment	Rhyme	6	1	+ 50%	2	2	-	0	0	-
	Syllabic Synthesis	6	6	-	6	6	-	6	6	-
	Phonemic Synthesis	6	2	+ 17%	3	4	+ 17%	1	1	-
	Initial Syllable Identification	4	0	+ 50%	0	2	+ 50%	0	4	+ 100%
	Final Syllable Identification	4	0	+ 25%	1	2	+ 25%	0	1	+ 25%
	Medial Syllable Identification	4	0	-	1	3	+ 50%	0	4	+ 100%
Emergent Literacy Scale	Interest in reading activities	9	6	+ 33%	8	9	+ 11%	6	9	+ 33%
	Pretend reading	5	1	+20%	2	2	-	1	3	+ 40%
	Literacy concepts	3	0	+ 67%	0	1	+ 33%	0	0	-
	Functions of print	10	10	-	8	10	+ 20%	0	10	+ 100%
	Writing concepts	16	10	+ 19%	14	12	- 12%	6	13	+ 44%
Handling and contact with books	8	7	-	7	8	+ 13%	8	6	- 25%	

## Conclusion

From a theoretical perspective, this study's main objective was to explore a possibility to the improvement of musical knowledge for Brazilian students.

A limitation for the present study was the fact that the design did not allow us to check whether the presented results came from the intervention that took place, although the gains seen in general have been presented by the 3 participants. Students were only

compared to themselves, before and after the intervention, so the results may be affected by other variables.

The significant number of children with development disabilities related to reading skills, either in pre-school or in the elementary school requires a different and greater commitment from the teachers.

Also, this study was developed to highlight the importance of significant activities for children to improve their own comprehension and expressions related to music, reading and writing.

It can be seen as premature to look to other areas when there is a specific area in need of attention how is the music education in Brazil. However studies (Figueiredo, 2005; Kater, 2004; Joly, 2003; Koellreutter, 1990) point to the necessity of taking into consideration the children's development as a whole, especially in a third world country, developing musicality and promoting human development.

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## **Secondary schools' collaborative strategies towards inclusion**

Annet De Vroey  
University College Leuven  
[annet.de.vroey@khleuven.be](mailto:annet.de.vroey@khleuven.be)

Prof. Dr. Katja Petry  
Leuven University  
[katja.petry@ppw.kuleuven.be](mailto:katja.petry@ppw.kuleuven.be)

Katrien Roelandts  
University College Leuven  
[Katrien.roelandts@khleuven.be](mailto:Katrien.roelandts@khleuven.be)

### **Abstract**

The demand for inclusive practices seems at odds with a policy of tracking that still exists in many secondary schools. Within this system, inclusive education challenges the inherent tension between accountability and equity. The current study aims to describe ways in which secondary schools find solutions to overcome these tensions and traditions, in order to open up their education for students with diverse needs. Using a qualitative multiple case-study design, inclusive school development and inclusive practice was described in twelve secondary schools. While these schools all have their own background and history of diversity, common collaborative strategies and relations can be identified that support inclusion at the secondary level. A processing model of collaborative actions, supportive leadership and transformative strategies towards inclusion in secondary schools is proposed as a reflection of inclusive cultures, policies, practices and challenges.

**Keywords** : Inclusive education, secondary education, inclusive school development

### **Introduction**

In Flanders (Belgium), secondary schools are used to ability grouping in a tracking system of general, technical and vocational education that starts from the age of twelve until eighteen. Due to the context of tracking, secondary schools have separate groups and programs. Across all streams, internal and external special needs support is provided as a means to expand inclusive practices towards students with special educational needs. In a three-year qualitative research project on inclusive education in secondary schools in Flanders, inclusive practices were investigated and analysed based on a school development perspective of inclusion as a school for all (Ainscow & César, 2006; Booth, 2011). As such, inclusive education is a complex process towards educational change. Especially in a more traditional tracking system of secondary education, this process collides with the debate of excellence versus equity (Clark, Dyson, Millward, & Robson, 1999; Florian & Rouse, 2001).

Earlier studies on inclusive school development in secondary schools have shown that collaborative practices among staff, peer support and self-determination of students with special educational needs are effective inclusive practices (Agran, Blanchard, Wehmeyer, & Hughes, 2002; Eisenman, Pleet, Wandry, & McGinley, 2010; Mastropieri

et al., 2005; Scruggs, Mastropieri, & McDuffie, 2007). By replacing the emphasis on the individual by coordinated collaborative actions, schools start to engage in social learning processes that allow to reconstruct the meaning of learning, inclusion and disability (Ainscow, 2004; Grenier, 2010; Korthagen, 2010). Still, inclusive practices remain a cause of concern in the area of leadership, teacher efficacy, grouping and program structures, and social processes among peers (Boscardin, 2005; Cushing, Carter, Clark, Wallis, & Kennedy, 2008; Ellins & Porter, 2005; Myklebust, 2006; Sharma, Forlin, Loreman, & Earle, 2006; Shippen et al., 2011). To comprehend the complexity of inclusive policies and practices, a framework is needed that helps to reveal a school's culture, its assumptions on ability and values on diversity (Angelides & Ainscow, 2000; Carroll et al., 2011; Schein, 1988), as well as the multilevel perspective of interacting settings in a large school organization (Bronfenbrenner & Morris, 2006; Tseng & Seidman, 2007). The purpose of this research is to identify key factors relevant to the process of inclusion in Flemish secondary schools and to describe inclusive school development processes, by means of the following research questions: 1) what are the attitudes and strategies of teacher staff, principals, students and parents that contribute to effective and sustainable inclusive school development? 2) how are these attitudes and strategies related?

### **Method**

A multiple case study research design (Yin, 1984) was used to investigate school level processes towards inclusive education in twelve secondary schools in Flanders (Belgium).

Twelve illustrative case study schools were chosen on the basis of their aggregated score on an online questionnaire on inclusive policy and practice, based on the Index for inclusion (Booth & Ainscow, 2002). Qualitative data were gathered from multiple sources to enhance data triangulation. For each school, semi-structured interviews were carried out with the school leader, a subject teacher, a visiting special teacher, a student with a disability, one of his peers, and a parent of a student with a disability and classroom observations were conducted across all grade levels. Three stages of analysis in grounded theory were applied (Strauss & Corbin, 1990; Bryman, 2004): 1) open coding to design a thematic framework, 2) axial coding to relate the former themes and 3) selective coding to emphasize the central themes in each case study. This paper will focus in short on the results of the cross-site analysis (Miles & Huberman, 1994), offering a processing structure of inclusive school development along the process variables of context, strategies, actions and outcomes. Table 1 gives an overview of participating schools and the students that were involved in the interviews. Table 2 displays the identified key factors in a flow chart of inclusive school development processes.

### **Results and discussion**

A thematic framework was first developed that placed the emerging themes in a matrix of school level, class level or student level rows and inclusive culture, policy or practice columns. To visualise the process of inclusive school development, themes were later rearranged as key factors in a flow chart as presented in Table 2. In what follows, key factors are discussed without reference to illustrations due to the limited space of this paper. First, inclusive culture emerges as the overall school climate. While schools differ in size, programs, urban or suburban surroundings, in all schools a shared culture of diversity and equity is found. Schools share experiences with multiple aspects of diversity and develop

ways of welcoming and encouraging students with diverse needs, which results in unique strengths or 'assets' built by school staff. In urban school settings, experience with cultural diversity serves as an asset to broaden the diversity perspective towards students with a disability. In general education streams as well as in vocational classes, sensitivity for the adolescent perspective, students' emotional or social needs, is reflected in positive teacher student relationships. Teacher attitudes become a strong undercurrent of inclusive school development, reflected in a positive class climate.

However, the principals' support and enthusiasm is the driving force for teachers and other staff to build an inclusive culture. Along with the principal, all members of the internal support team share positive attitudes towards inclusion and distribute professional knowledge and skills. A team of external special teachers joins them, as they become part of the team when schools have many students with a disability included. Because of the central role of teams as collaborative partners, in the processing of a school for all, members of these teams are called 'anchors' who construct and reconstruct inclusion. Second, inclusive policy is reflected in a broad set of strategies aimed at improving the accessibility of the curriculum. Faced with an increase of students with special needs, when first procedures are in place anchors start embedding support strategies, streamlining procedures and improving the efficiency of support. If too many external services are involved, internal support teachers take on responsibility towards teaching staff and internal procedures are facilitated, without ignoring the external support teacher's important role at the student level. Some schools have chosen a new grouping structure, accommodations and modifications for all, searching for unique ways of universal design for learning and formative assessment. This way planning time is reduced and professional learning is maximized. Some schools have built expertise in specific educational needs, e.g. students with ASD, to maximize resources and support services and improve their knowledge on social participation.

Third, inclusive practice shows the outcomes of implemented strategies, reflected in daily actions at the classroom and school level. Although the outcomes differ across schools and individual teaching practice, they reinforce the existing openness for diversity, sensitivity of teaching staff and flexibility in assessment procedures, while holding on to high expectations for all, according to the selected program. Perceived self-efficacy of teachers, special teachers and parents is positive. Ability diversity is valued as an asset for the student with a disability and for his peers. Teachers, support teachers and students cooperate in the planning of a school career. More support is organised for students with Down's syndrome, which results in a problem solving process that operates either as an eye opener for the whole school, or as an escape from regular school procedures, risking to become more isolated. diversity support, different paradigms exist between external support teams and school staff. External support teachers insist on introducing their own procedures. Co-teaching is not supported mainly because adolescent students prefer peer support over adult support in class. At the same time, collaboration with support teams is appreciated by teachers when accommodations and modifications are provided or foreseen. Although more flexible support and assessment procedures are installed for all, modifying the curriculum remains scarce, unless schools include students with more severe learning problems. Here the tradition of tracking seems to limit a broader ability diversity. Finally, self-determination of students is supported in class, but fails to be incorporated in meetings, unless students have reached the age of eighteen.

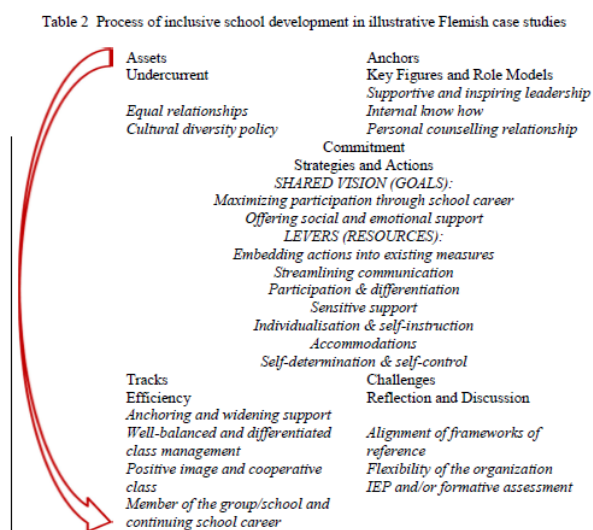
## Conclusions

In the context of a tracking system of secondary schools, inclusive policy and practices are developed, based on an undercurrent stream of positive attitudes towards diversity and positive teacher-student relationships. A strong team of anchors models, facilitates and sustains procedures to cope with diversity in class and across school settings. By increasing the number of students with a disability, schools improve self-efficacy and problem-solving processes. However, collaborative practice in class is not established, individual education plans and self-determination are only moderately introduced. More inclusive strategies and interventions are needed to challenge the grouping structures and paradigm differences, and to value the voice of the student as a partner in planning.

**Table 1: Participants: school and student characteristics**

School population	Type of secondary school or curricular stream	Total N of students who receive support of a visiting special teacher	Students involved in the research interviews and observations
4 schools < 400 students	Middle schools offering general secondary education and vocational SE	< 10 students	2 students with a physical disability, 2 students with visual impairment, 3 students with ASD, 1 student with Down's syndrome and 1 student with emotional and behavioural problems across four schools
4 schools 400-800 students	General SE, Art, Technical, Vocational SE	10-20 students	1 student with a physical disability, 1 student with visual impairment, 5 students with ASD, 1 student with Down's syndrome across four schools and four curricular streams
4 schools > 800 students	General SE, Technical and vocational SE	> 20 students	2 students with a physical disability, 1 deaf student, 5 students with ASD across four schools and three curricular streams

**Table 2 Process of inclusive school development in illustrative Flemish case studies**



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## **Oral reading fluency: identification of students at risk of presenting Specific Learning Disabilities in reading**

Rosa Filipa Ferreira de Mendonça  
University of Minho, CIEd  
[rosamendonca@ymail.com](mailto:rosamendonca@ymail.com)

Ana Paula loução Martins  
University of Minho, CIEd  
[apmartins@ie.uminho.pt](mailto:apmartins@ie.uminho.pt)

### **Abstract**

This poster is intended to present the results of a study that had the purpose of describe the use of curriculum-based measurement - oral reading fluency (Deno, 1985), in the identification of students at risk of presenting Specific Learning Disabilities (SLD) in reading. The participants of the study, 146 students of the third grade were monitored at two points during the school year (2012-2013). Those students whose result was below or in the 20th percentile were considered at risk such as proposed by Deno (2003). The results of the study show that: 1) On average, the results of students in the first application was 85.21 (SD=28.41) words correct per minute (wcpm), in the second application was 97.46 (SD=30.07) wcpm, the difference between the two applications was 12.25 (SD=9.57) wcpm and weekly growth was 0.49 (SD=0.38) wcpm; 2) Are at risk to develop SLD in reading, after the second application, 29 students (11 boys and 18 girls); 3) There are no statistically significant differences between boys and girls regarding the average of the results obtained in both applications as well as in weekly growth; 4) Most girls are at risk of presenting SLD in reading, in account the value of the risk of th e total sample; 5) The difference in results between classes are statistically significant; 6) In two classes more than 30% of students are at risk of presenting SLD in reading, taking into account the value of risk sample; 7) 103 (70.55 %) students did not reach the goal of 110 wcpm.

**Keywords:** Fluency, Reading, Specific Learning Disabilities in reading, Curriculum - based measurement- oral reading fluency, Students at risk, Curricular Goals

### **Introduction**

Reading fluency is defined as the ability to read a text quickly, accurately and with appropriate expression (National Institute of Child Health and Human Development, 2000). Fluency plays an important role in the context of reading. Is essential for a proficient reading and is one of the crucial factors for reading comprehension (National Institute of Child Health and Human Development, 2000; Snow, Burns, & Griffin, 1998). The Committee on the Prevention of Reading Difficulties in Young Children (Snow et al., 1998) recommends frequent assessment and measurement of fluency in classrooms, followed by effective interventions for students who have difficulties. Curriculum-based measurement - oral reading fluency (CBM-R) is a very useful tool for schools and teachers monitor students' progress in reading skills. Furthermore serves to

identify students at risk of presenting Specific Learning Disabilities (SLD) in reading, define the type of support, evaluate interventions, establish standards and growth rates of reading fluency, compare the performance of students and schools. Several studies have confirmed that CBM-R is an easy, fast, economic procedure and its validity and reliability (Deno, 2003; Fuchs, Fuchs, Hosp, & Jenkins, 2001; Reschly, Busch, Betts, Deno, & Long, 2009; Wayman, Wallace, Wiley, Tichá, & Espin, 2007). This study aimed to describe the use of CBM-R (Deno, 1985), in the identification of students at risk of presenting SLD in reading. The study had the following goals: a) Test the use of CBM-R; b) Characterize students' performance in reading fluency; c) Identify students at risk of experiencing SLD in reading; d) Analyze students' performance based on the independent variables gender and class; e) Identify students at risk of not achieving the performance descriptor for the oral reading of texts set by curriculum goals in the discipline of Portuguese; f) Knowing the reliability of the results.

## **Method**

This is a quantitative study that seeks to understand the impact of independent variables gender and class in the results of the probes of CBM-R.

### **Participants**

146 students of third grade, 74 boys and 72 girls, from seven classes from five schools of a group of schools in the municipality of Braga, Portugal, participated in this study. The schools were located in an urban area. Study participants aged was ranged between eight and ten years, 85.62% of the students had eight years.

### **Measures**

For data collection three probes of CBM-R were developed. The passages of each probe were selected from Portuguese Language school books of the third grade, different from those used in the schools that participated in this research. A student and an administration copy for each passage were created. Each probe contained between 214 a 422 words and the font size used was 16 points. The CBM-R probes were administered individually. The students had to read aloud each passage for one minute. The score for each probe was the number of words read correctly during that minute (Deno, Lembke, & Anderson, 2002; Fuchs & Fuchs, 2007). For each application the students had to read three passages, i.e., three probes. The median scores of the probes was the result obtained for each student in each application. The administration instructions and scoring rules of the probes followed the standard procedures of CBM-R (see Deno et al., 2002; Fuchs & Fuchs, 2007) and for this purpose were developed two lists, one with the administration script and other with the scoring rules.

### **Procedures**

This study was conducted in a school context. It was necessary the permission from the direction of the group of schools, from the teachers and the authorization from the parents of the students for data collection. CBM-R data were collected two times during the school year of 2012 -2013. First application occurred in November 2012 and the second application in May 2013 and followed standard procedures for CBM-R. The probes were administered individually to each student out of the classroom, in another classroom or in schools cabinet, in a quiet and comfortable environment for the student in his school hours and preferably in the morning, to avoid situations of high fatigue and tiredness.



## **Results and discussion**

On average, in the first application the students read 85.21 (SD=28.419) words correct per minute (wcpm), in the second they read 97.46 (SD=30.07), with weekly growth of 0.49 (SD=0.38). Statistically significant differences were observed between the first and second application. Fuchs and Fuchs (2007) proposed 100 words read correct per minute for third grade in the US. On average, the students were very close to reaching this benchmark. The mean obtained by students in the second application was slightly lower than the results obtained by Yeo, Fearrington, and Christ (2011), which was 106.37 (SD =41.50), and Nese et al.(2012), which was 107.48 (SD = 39.24) and much lower than the study of Christ, Silberglitt, and Cormier (2010), which was 125 (SD = 40). Weekly growth was lower than those presented by international research. In fact, in the study by Fuchs, Fuchs, Hamlett, Walz, e Germann (1993) growth was one wcpm, Deno, Fuchs, Marston, e Shin (2001) was 1.18 wcpm, in Graney, Missall, Martínez, e Bergstrom (2009) was 0.75 wcpm, in Christ et al.(2010) was 1.18 wcpm and in Nese et al.(2012) was 0.95 wcpm. According to Deno et al. (2002) the weekly increase of 0.49 wcpm is a modest growth.

Are at risk of SLD in reading those students below the percentile 20 in CBM-R (Deno, 2003). In this study, the risk value, percentile 20, in the first application was 58.40 wcpm and in the second application was 74.40 wcpm. 29 students are in risk of SLD, 11 boys and 18 girls. On average, students at risk obtained in the first application 46.59 (SD = 9.60) wcpm and in the second application 56.38 (SD= 12.92) wcpm, whereas students not at risk reached in first application 94.79 (SD = 22.84) wcpm and in second application 107.64 (SD = 23.73) wcpm. Students at risk results were about 50% below the number of words read per minute compared to those obtained by colleagues who are not at risk. In Jenkins, Fuchs, van den Broek, Espin, and Deno (2003) students with good reading skills were able to read in context three times more correct words per minute than students with SLD in reading. In the second application, the weekly growth for students not at risk was on mean 0.54 (SD=0.39) wcpm, while for students at risk was on average 0.29 (SD=0.29) wcpm, i.e., students who are not at risk had twice weekly growth compared with students at risk. These differences were statistically significant.

Taking into account the dependent variable gender, the results of reading fluency were the following. The boys achieved in first application, on average, 87.49 (SD = 27.20) wcpm and in the second application achieved 99.85 (SD = 27.96) wcpm, the girls in the first application achieved, on average, 82.87 (SD = 29.62) wcpm and in the second application achieved 95.00 (SD = 32.10) wcpm. The boys were able to read about 5 more words than girls, but these differences are not statistically significant. Boys and girls had a weekly growth very similar, on average, 0.49 (SD=0.37) wcpm for boys and 0.48 (SD=0.39) wcpm for girls. These results are consistent with results from international studies who claim that there is no differences through the year in weekly growth for boys and girls in the third grade (Nese et al., 2012; Yeo et al., 2011), but unlike this study Nese et al. (2012) obtained better results in the group of girls.

Taking into account the dependent variable class, the differences in results of reading fluency between classes were statically significant. On average, in the first application class A obtained 72.50 (SD=28.45), class B obtained 85.17 (SD=25.61), class C obtained 94.29 (SD=31.31), class D obtained 96.57 (SD=28.46), class E obtained 85.87 (SD=22.15), class F obtained 72.30 (SD=21.35) and class G obtained 88.85 (SD=31.50). In the second application, on mean, class A obtained 84.18 (SD=30.72), class B obtained 100.71 (SD=29.62), class C obtained 108.00 (SD=34.50), class D obtained 106.19 (SD=23.81), class E obtained

96.13 (SD=20.14), class F obtained 83.15 (SD=26.83) and class G obtained 101.65 (SD=32.55). On average, the weekly growth for the class A was 0.47 (SD=0.35), for the class B was 0.62 (SD=0.32), for the class C was 0.55 (SD=0.38), for the class D was 0.38 (SD=0.36), for the class E was 0.41 (SD=0.38), for the class F was 0.43 (SD=0.33), for the class G was 0.51 (SD=0.52).

In relation to students at risk of developing SLD in reading, after the second application, and taking into account the value of the risk of the sample, it was found that the percentage of students at risk in the class A was 31.81%, in class B was 16.66%, in the class C was 20.83% in class D was 9.52% in class E was 6.66%, the class F was 35.00% and the class G was 15%. It was verified that in groups A and F over 30% of students do not respond positively to the instruction provided in the classroom.

In Portugal, the Ministry of Education proposed as curriculum goals in the discipline of Portuguese for the third grade reading a text with a minimum of 110 wcpm (Buescu, Morais, Rocha, & Magalhães, 2012). In this study, of the 146 participants, 103 (70.55%) have not achieved the goal, 49 boys and 54 girls. No class got that half of their students reached the 110 wcpm.

In order to verify the reliability of the results, the method of internal consistency of the items was used by employing the Cronbach's alpha. The value of Cronbach's alpha for the first application was 0.981 and for of the second application was 0.978 which indicates a good internal consistency (Leech, Barrett, & Morgan, 2005).

### **Conclusion**

In Portugal is not known the existence of schools that use CBM-R for monitoring reading fluency (Deno, 1985) and use that approach to identify students at risk of SLD in reading. This study intended to show how a tool such as CBM-R can be used for early identification of students at risk of developing SLD in reading, as well to monitoring student progress in reading skills. In educational practice, CBM-R is a very useful tool for teachers and schools verify the performance of their students in reading, to early identify students at risk and is also useful for teachers to assess whether the students achieved the performance descriptors proposed by curriculum goals.

In future research it is recommended to perform at least three applications during the year and monitor students at risk once or twice a week, as referred by Christ et al.(2010) and Deno et al.(2002); analyze the practices for the development of oral reading fluency used inside and outside the classroom; examine whether socio-cultural and economic factors influence the results obtained by the students (Reschly, Busch, Betts, Deno, & Long, 2009); extend the study to the entire municipality of Braga and to other regions of Portugal and also to other grades; using a representative sample of the Portuguese population to establish a benchmark for the Portuguese population and growth rates of fluency, by school year.

### **Acknowledges**

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## **Using A Typical Hearing Peer as A Communication Model to Teach Grammatical Form to Preschoolers with Hearing Loss**

Sharon Raver-Lampman  
Old Dominion University  
[sraverla@odu.edu](mailto:sraverla@odu.edu)

### **Abstract**

Young children with severe hearing loss miss early opportunities for interactions that rely on acoustic information that can make their development of language and social skills more challenging (DeLuzio & Girolarnetto, 2011). This pilot study evaluate a the effectiveness of using teacher direct instruction and a peer language model with typical hearing to increase the accuracy of verbal responses to action why-questions involving pictures with three preschool-aged children with severe hearing loss. A multiple baseline design revealed that all participants learned to correctly answer the target question and used their targeted grammmatical structure during training, that 2 of the 3 were able to generalize these skills to untrained pictures, and that all participants maintained the skills for 2-8 weeks following training. Implications for teaching young children in inclusion and self-contained settings are discussed.

**Keywords:** hearing loss, communication, peer model, social skills, inclusion;

### **Introduction**

Despite noted gains in overall word usage (Fagan & Pisoni, 2010), children with hearing loss continue to fall behind their peers in utilizing certain pragmatic and communication skills. These outcomes occur even following amplification and/or cochlear implantation (DeLuzio & Girolarnetto, 2011). One area of known communication deficit is the ability to understand and formulate wh-questions (Friedmann, & Szterman, 2011).

There is a need for intervention strategies that teach how to answer wh-questions and use challenging grammatical forms. Research has shown that children with typical development can be trained to be useful models for school-aged classmates with special needs (Kuhn et al., 2008). However, no studies have examined the use of typical peers as communication models for young children who are deaf.

The purpose of this study was to examine if the use of a peer with typical hearing and teacher direct instruction (e.g., verbal prompting, verbal modeling, recasting, praise, directing children to recreate target actions shown in pictures with toys) were effective in: (1) increasing correct responses to the wh- question, "What is he/she doing in this picture?" and the use of child-specific grammatical structures during a structured play situation; (2) increasing the use of novel vocabulary during intervention, maintenance, and generalization sessions as determined by each participant's communication age; and (3) generalizing and maintaining new skills for at least two weeks after training.

### **Method**

Participants: Four children, three girls and one boy, ages 44-59 months, participated in this investigation. Two of the girls and the boy had bilateral severe-to-profound sensorineural hearing loss and had received cochlear implants or used digital hearing aids. One girl, with typical hearing, served as a peer language model for the three children who were deaf. The children with hearing loss attended a public school oral approach preschool classroom; the peer communication model attended a community preschool program housed in the same building that served as an inclusion site for the children with hearing loss.

Experimental Design and Procedures: A multiple baseline-design, with one generalization and at least two maintenance probes (Kennedy, 2005), was used to evaluate the effects of the intervention. The frequency of three dependent variables were measured in a probe at the end of intervention session for each participant: 1) correct response to the wh-question "what is he/she doing?" when a picture was presented, 2) correct use of target individualized grammatical structures, and 3) the use of novel and appropriate vocabulary when presented with the picture stimuli. The independent variable was a structured play session between a child with a hearing loss and a peer communication model with typical hearing in which the teacher used direct instruction while presenting pictures that each child with a hearing loss had been unable to correctly identify on a pretest.

In training, the teacher asked the peer communication model to say what was happening in a picture and then asked the child with a hearing loss; then both children were asked to recreate the action in the picture with toys. Five pictures were shown in randomized order each session, with the adult asking "What is he/she doing in this picture?" The children were given one minute to complete the picture identification and recreate the action shown in the picture using toys placed on the table. The teacher wore a timer in her pocket which vibrated every 60 seconds. After one minute, the picture and toys were returned to a box and the next picture and toys were presented. The last minute of training was used for a final probe which was given only to the participant with a hearing loss. Each participant had a target grammatical structure which was identified for them by the speech-language pathologist that provided speech services to the children. The participants had to use this form to be rated as a correct response during the probe.

## **Results & Discussion**

Results revealed that all participants learned to correctly answer the target action wh question and used their individualized targeted grammatical structure during training, that 2 of the 3 were able to generalize these skills to untrained pictures, and that all participants maintained the skills for 2-8 weeks following training. The criterion for mastery was 100% for 3 consecutive training sessions (See Figure 1). All participants varied the vocabulary used with their grammatical structures during intervention. Child 2 produced the most variety, followed by Child 1 and Child 3.

Teacher and Paraeducator Social Validity. At the conclusion of the study, the teacher and the two paraeducators in the classroom rated their satisfaction with the training by completing a 16 question survey which used a 5-point scale (5-strongly agree; 4-agree; 3-do not agree or disagree; 2-disagree; 1-strongly disagree). The mean rating was 4.0. The respondents reported that they believed that the intervention was worth the additional time ("agree"), that the training improved the children's self-confidence ("agree"), and that the research goals were relevant ("strongly agree"). They all noted that the short duration of the training sessions was an advantage.

Treatment Fidelity. Treatment fidelity data were completed on 77% of all baseline,

interventions, generalization and maintenance sessions. The mean overall procedural treatment fidelity for all participants was 98% (range=89-100%).

**Interrater Reliability.** Interrater observer agreement percentages were calculated on 100% of the sessions for all participants. Two Special Education graduate students were trained prior to the study until they achieved at least 90% agreement on the dependent variables for 2 consecutive sessions using videotapes of the participants in play at a table with a playmate with typical hearing. Overall, the mean point-by-point interrater reliability for Child 1 was 92%, Child 2 was 89%, and for Child 3 was 94%.

### **Conclusions**

This study found that structuring a "play-communication session," using toys for recreation of actions shown in pictures could be engaging for both children, and was an effective way to teach target, individualized grammatical structures to children with hearing loss. The children with hearing loss learned their individualized grammatical forms and used them with fluency with picture stimuli and in conversation with the peer communication model. The positive temperament of the peer model and the short training time (6 minutes) appeared to be beneficial features which enhanced the effectiveness of the training.

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## **Mathematics Learning Disabilities: A study on the perspectives of elementary teachers**

Sónia Costa,  
Universidade do Minho, IE  
[ssilvacosta@gmail.com](mailto:ssilvacosta@gmail.com)

António Fonseca,  
Universidade do Minho, IE

José Ribeiro  
Universidade do Minho, IE

Liliana Lemos  
Universidade do Minho, IE

### **Abstract**

Mathematics Learning Disabilities (MLD) are difficulties that arise specifically in mathematics but, as with any other type of Learning Disability (LD), it relates to the way the individual processes information (Correia, 2008). With the purpose of describing the elementary teachers' perspectives about these difficulties and taking in consideration the quantitative research assumptions and literature review, it was developed one questionnaire to fill out online, with 29 questions divided into three parts: identification, knowledge of the subject and training in mathematics. We obtained the participation of 258 teachers from across Portugal. The evaluation of accuracy was obtained by calculating the internal consistency reliability (Cronbach's  $\alpha = .73$ ), a descriptive and inferential analysis was also conducted through the use of parametric tests. The results highlight that a large proportion of teachers don't have a clear idea about the topic, an high percentage of respondents believe that MLD are the result of the students' lack of study, while approximately half of respondents are unaware that it is included in Special Education Needs.

**Keywords:** Learning Disabilities, Mathematics Learning Disabilities, questionnaire, teachers perspectives.

### **Introduction**

Mathematics Learning Disabilities (MLD) can result from deficits in the ability to represent or process information in one or all of the many mathematical domains (arithmetic, geometry, algebra...) or in one or a set of individual competencies within each domain (Geary, 2004). MLD are difficulties which manifest specifically in the field of Mathematics, but as it happens with other types of Learning Disabilities (LD), they have a neurological origin and are lifelong, they manifest themselves through the discrepancy between the intellectual potential and academic achievements and thus, are not a result of an inadequate teaching process, neither do they arise from any other Special Educational Need (SEN) nor environmental, cultural or economic disadvantage (Cunha, 2011).

In the literature that discusses MLD, many different terms are used with the same meaning. Hence, the designation Dyscalculia is considered reductive, while Mathematical Learning Problem is thought to be too broad; therefore the preference for the term Mathematics Learning Disabilities (Cunha, 2011). The lack of diagnostic instruments reflects a lack of consensus as to what defines MLD and what constitutes its core deficits (Murphy, Mazzocco, Hanich & Early, 2007).

Research has been focusing on two areas that characterize MLD: information processing and language (Belles, 2006; Cunha 2011; Fletcher, Lyon, Fuchs & Barnes, 2007; Geary, 2004; Miller & Mercer, 1997). With regard to the information processing, MLD may manifest in deficits in working memory, in visuospatial ability, in functions of the central executive, in attention, in auditory processing and in motor functions. In relation to language, difficulties in mathematical modeling and problem solving may occur, as well as confusion between mathematical terms.

The present study focuses on MLD, in the context of the LD, and in the description of the elementary school teachers' perspectives about this problematic.

## **Method**

### *Sample*

A total of 258 elementary school teachers, of both genders, participated in this study, with ages between 20 and 65 years old. The sample mainly consists of female teachers (85%). The prevalent age group is that ranging between 31 and 40 (45%), 25% were between 41 and 50 years old, 17% were between the ages of 51 and 65 and, in the remaining 14%, the younger age group (20-30 years old).

All Portuguese districts, except Castelo Branco, are represented in this sample; however, the district of Braga is dominant. In relation to academic qualifications, 0.8% of the teachers comprised in the study have a bachelor's degree while the majority (70%) are graduated teachers, 18% are postgraduated and 9% have a masters' degree. A total of 43% people involved in the study have been working as teachers from 5 to 15 years, 32% for more than 20 years, 13% have been working for less than 5 years and 12% from 15 to 20 years. As to the current teaching role, three quarters of the sample are class teachers, 9%

are socio-educational support teachers, 3% are special education teachers and the remaining 4% have others educational functions. About 74% of the inquired declared that they have never taken part of any kind of training regarding MLD.

### *Procedure*

After a review of the literature on the subject, a questionnaire containing 29 questions was developed, which was divided into three parts: Identification, Knowledge about MLD and Training in Mathematics. The 18 statements concerning the knowledge about MLD were assessed on a 5-point Likert scale ranging from "1- I totally disagree" to "5-I totally agree".

### *Procedure*

This questionnaire was elaborated on *Google Drive* so as to be filled in and submitted online; it was publicized among elementary school teachers and the answers were obtained in a period of three weeks. Subsequent processing and data analysis were performed with the Statistical Package for Social Sciences (SPSS), version 21. Internal consistency and reliability analysis were tested using the Cronbach's alpha. For descriptive and inferential statistic, two parametric tests (Student T-Test and One Way ANOVA) were applied, level of significance  $\alpha=.05$  (95%).



**Results and discussion:**

Cronbach's alpha reliability coefficient for the questionnaire was .73, thus addressing the homogeneity of the included questions. The descriptive analysis results' (Table 1) discloses the percentage of answers for each of the levels in each item.

**Table 1- Descriptive Analysis**

	I totally disagree	I disagree	I neither agree nor disagree	I agree	I totally agree
a) All students who are unsuccessful in maths have MLD.	14.3%	<b>63.6%</b>	8.1%	12.8%	1.2%
b) MLD are lifelong.	20.2%	<b>63.6%</b>	7.7%	5.0%	3.5%
c) MLD have a neurobiological origin.	5.4%	37.2%	<b>44.2%</b>	9.7%	3.5%
d) MLD may manifest themselves in any age and any school grade.	1.2%	8.9%	9.3%	<b>69.4%</b>	11.2%
e) MLD are universal; i.e., they occur in every culture or nation in the world.	1.2%	5.0%	5.8%	<b>58.9%</b>	29.1%

The results of the inferential statistics showed statistically significant differences regarding gender in the entry “MLD are universal; i.e., they occur in every culture or nation in the world” ( $t(256.47)=4.222, p=.041, M_{female}=4.21, SD_{female}=.935, M_{male}=4.08, SD_{male}=.781$ ). Considering the variable length of service, the results of the inferential analysis indicate statistically significant differences in the items “MLD are the result of a poor socio-economic environment.”  $F(3,254)=1.683, p=.031, M=3.53$  e  $SD=1.022$  for service length between 5 and 15 years and  $M=3.70$  and  $SD=.902$  for more than 20 years and “MLD are included in Special Education Needs.”  $F(3,254)=2.741, p=.018, M=2.94$  e  $SD=.983$  for service length less than 5 years and  $M=2.44$  e  $SD=1.045$  for service length more than 20 years.

What concerns the variable academic qualifications, statistically significant differences were found in four entries. “MLD are included in Special Education Needs.” Where  $F(3,254)=3.849, p=.002, M=1.71$  e  $SD=.756$  for bachelor degrees and  $M=3.00$  and  $SD=1.103$  for graduated teachers/post-graduation degrees. “MLD have a neurobiological origin.”  $F(3,254)=2.049, p=.015, M=2.62$  e  $SD=.827$  (graduated teachers) and  $M=2.96$  and  $SD=.884$  (graduated teachers/post-graduation degrees). “MLD are the result of the student’s lack of study.”  $F(3,254)=2.258, p=.014, M=2.29$  and  $SD=.756$ , bachelor degree  $M=2.29$  and  $SD=.756$ , graduated teachers/post-graduation degrees  $M=3.23, SD=.923$ . “MLD are lifelong.” With  $F(3,254)=2.173, p=.029, M=2.36$  and  $SD=1.092$  (graduated teachers/post-graduation degrees) and  $M=1.88$  and  $SD=0.947$  (master degree). Cronbach's alpha exceeded the threshold value established in the existing literature (Almeida & Freire, 2010), reflecting appropriate internal consistency. A global analysis ascertains that, although the majority of the surveyed teachers admitted that they have had some contact with this problematic, there is still some unawareness regarding this matter, for example, a large part of the surveyed are unacquainted with the neurobiological origin of MLD and that they manifest throughout the life of an

individual. With this study, we also verified that a large part of the teachers do not have a clear idea about the topic and may therefore face difficulties when interacting with students with MLD and, more specifically, when outlining adequate strategies related to their real necessities.

### **Conclusion:**

Being a teacher is facing the challenge of educating children with different skills and necessities. A teacher has the power to influence the life project of a child, collaborating in its construction or, on the other hand, limiting his/her expectations. Consequently, it is vital to understand the differences between students so that the teacher may act accordingly. Therefore, and given the results of this questionnaire, we consider essential that teachers develop their professional skills in LD and, more specifically, in MLD, through investments in specific training in this area. We also advocate the creation of work groups to boost investigation in this area, as well as the promotion of teachers seminars, so that these topics may be discussed and analyzed by specialists, as has been done in other countries.

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## **The special class and schooling intellectual disabilities in a state public school**

Sônia Maria Rodrigues Simioni  
Universidade Federal de São Carlos – UFSCAR  
[soniasimioni@uol.com.br](mailto:soniasimioni@uol.com.br)

,Maria Amelia Almeida  
Universidade Federal de São Carlos – UFSCAR  
[ameliama@terra.com.br](mailto:ameliama@terra.com.br)

### **Abstract**

Studies have been showing that school inclusion is the most effective way to provide learning experiences for students with intellectual disabilities, because a democratic and inclusive space constitutes an important environment for exchanging experiences, interactions between the students, curricular adaptations that best suit the individual needs of each one. However, in the Brazilian public education system there is not an accompanying policy for the systematic monitoring of inclusive education quality yet. On the other hand, the literature has been pointing out an exclusionary inclusion, that is to say, disable students are at school but very little has been done in terms of the schooling. The used method was the qualitative investigation. Thus, the objective of this study was to follow a special class composed of six students with intellectual disabilities enrolled in a public regular school for one semester. The State of São Paulo law (Brazil) allows the formation of these classes models when there are no conditions of the students with severe intellectual disabilities to attend regular school. The observed class were composed of six students with a specialist teacher. During the observations, it was verified that all the students would have conditions of attending the common class. One student, that was 12 years, found himself literate in the production of small texts and a student with Down Syndrome, same age, showed ignorance of the alphabet letters and had no notions of laterality. The last student was attended by the Specialized Schooling Service (AEE), in the reverse period, at a philanthropic institution of Special Education. The other students were in the initial process of reading and writing. The average stay in the special class was around three years. The results indicated the need of a reevaluation of the permanence of this service model and also demonstrated that, regardless of the space that the students with intellectual disabilities is attending, they have the right to learn in an effective way. Therefore, public politics are necessary to implement, evaluate and supervise effective actions.

Keywords: Special Class. Intellectual Disability. Public School.

### **Introduction**

School inclusion should be the one exalting the differences that see the student and what he shows, that recognizes his life and culture history. And this recognition makes his culture/history to be embedded in the school environment developing a meaningful curriculum. (Mattos, 2012)

And that through stimulation promotes inclusive practices guided through the students education from a pedagogical work focused on the commitment of building

opportunities for all. (Mattos, 2012)

In approaching school inclusion refers to school exclusion that contrary to include this excludes, restricts and limits the student cognitive and social development as it does not include the exchange of different knowledge levels present in a common class.

In this sense we can illustrate the special class issue, which, since the inclusive school advent, from the 90s, this mode ceases to be implemented due to not contributing to school life from diversity.

"The real danger is that these groups become the only safe harbor for persons defined as "different" and thus, remove the society responsibility to make the community larger, accessible and welcoming" (Stainback, Stainback, East, Shevin, 2008, p.412).

Studies, such move demonstrating that the effective way for schooling of students with intellectual disabilities is through school inclusion. Where this audience of special education interacts with other students at school and in this interaction provides a learning environment from diversity, giving everyone a teaching process through exchanges, partnerships, collective coexistence, respect for the individual pace and solidarity.

Inclusive environments favor the emergence of values related to tolerance, companionship and the possibility of seeing others as similar in his difference, and so the society will be on those values, creating conditions for everyone to live in a fair and equitable way.

The construction of this equality will happen through a cyclic process between society and school and school and society. Both interweave seeking positive strategies of interaction between people favoring mutual respect, a contextualized learning and recognition by students that developed and practiced at school is directly related to their lives.

This study is part of first author doctoral study called "Reading and Writing Program and literacy of students with intellectual disabilities". Having started collecting data in March, 2013 and at the same period the researcher became aware of a special class existence in a public school, where she was already collecting data in regular class..

With this identification the researchers decided to follow the teaching dynamics and the students' characteristics from this class. The observation happened during one semester. Thus the aim of this study was to verify the relevance of this segregated space as students with intellectual disabilities schooling alternative, demonstrating beforehand what has been propagated by the specialized literature about the ineffectiveness of this class template.

And further characterize the students profile as well as their reading and writing performance level since the justification, from the Education Department of São Paulo State, to maintain that kind of space on its network is to meet students with disabilities who have severe impairments, precluding the inclusion in regular class, according to resolutions SE 11:31, 2008.

São Paulo (State) (2008) that "Provides for the students with special educational needs education at schools from the state education system and gives related provisions" justifies the existence of this model to meet students with severe handicaps and therefore unable to attend regular class.

Still, in Article 11, 1st paragraph limits that this model must be deployed only to students whose knowledge level is equivalent to Cycle I, in exceptionality and transience character.

## **Method**

The method was guided by qualitative research, because according to Bogdan and

Biklen (1994), the defining characteristics of qualitative research are:

1. In qualitative research the data direct source is the natural environment constituting the research the main instrument. 2. Qualitative research is descriptive. 3. Qualitative researchers are more interested in the process than simply by the results or products. 4. Qualitative researchers tend to analyze their data inductively. 5. The meaning is of vital importance in the qualitative approach (p.47).

Initially the research protocol was approved by the Human Ethics Committee from the Federal University of São Carlos, number CAAE08635812.0.0000.5504.

Participants: six students with intellectual disabilities, whose age ranged from 10 to 15 years old.

Location: state public school, located in a midsize city of São Paulo state, which had students from 1st to 5th grade in regular classroom and having a special classroom and a multifunction feature room for the students with intellectual disabilities.

Instruments for data collection: Field Diary and diagnostic survey evaluation.

### **Results and discussion**

The table below shows the characteristics of the students and their reading and writing system knowledge level:

**Table 1: Characteristics and knowledge level in the students reading and writing system**

Student	Gender	Age	Type of disability	Time in special classroom	Level – writing system
A1	Male	12	ID (anoxia)	4 years	Alphabetic
A2	Female	12	Down Syndrome	3 years	Pre-syllabic
A3	Female	10	Multiple-ID/F	3 years	Pre-syllabic
A4	Male	11	ID	3 years	Pre-syllabic
A5	Male	11	ID	3 years	Pre-syllabic
A6	Male	15	Down Syndrome	1 year	

Down Syndrome 1 year Except A6, was possible to verify the reading and writing hypothesis of all the other students. A1 has proficiency in reading and already produces small texts, although his level is already in alphabetical remains in the classroom performing previous level activities, which commits his academic advancement.

In April, 30 2013 two assessments were applied and A1 was successful in both. The first consisted of dictated words. In the word PENCIL omitted the letter I; in the word NOTEBOOK omitted TE and the in word CHALK, exchanged by C by S and K by Q. In the text dictation was able to write although without segmentation, changing or omitting a few letters.

A2 did not assimilate that writing consists of letters and words during the evaluation when he was asked to read what he had written, remembered two words and uttered twice each of the four words in the dictation.

It is noteworthy that A2 in addition to attend the special class, in contrast period attends a special education charity institution where the specialist support is offered. However

does not present notions of laterality, although he has speech autonomy and conducts educational games. In an activity using the mobile alphabet recognized the letter A. In the letter E responded with help, however associated this letter with the word ELEPHANT therefore had previously assembled a puzzle with the picture of this animal. It points to a possible way to work as image resource in order to guide and advance the literacy process.

A3 recognizes that writing consists of letters. It was asked to him to write four words and a sentence. In the sentence "THE CHALK IS WHITE" he wrote "OTEI" and the in the words PENCIL "ATE"; NOTEBOOK "TEO"; PENCIL "ANCE"; CHALK "NAV"

A6 has already committed speech and does not perform activities, according to the expert teacher does not recognize the letters and presents difficulty in interacting with classmates. According to the teacher's record and the school office this student started in this classroom in 2013, transferred from a private Catholic school, where he always attended the special class of this institution.

Both A4 and A5 resemble in their academic performance with A3. And except for A1, none of the others was able to write the first name or full name in the evaluation sheet. When requesting A3 for writing the name he grabbed a card in his backpack which had his name and copied it on the evaluation sheet. When we asked he said it was his mother who made the card with his name when he needed to write it.

In general it was observed that the activities used in the special classroom were designed to literate, and according to Gontijo in his article (2013) "Literacy in the initial cycle of nine-year basic education: reflections on the Education Ministry proposals" it is necessary that the teacher proposes reading and interpreting texts activities without restricting only in the letters, words or sentences decoding.

On the literacy issue still emphasizes the need for proposed activities that fosters motivation and curiosity from the students, since from the observations records, by the researcher, most students had conditions to advance in their schooling process.

Although some have shown impairment in speech, all assimilated the requests and activities proposals by the teacher, being able to ask for help from colleagues or even requests to the teacher for clarification when necessary.

## **Conclusion**

From the results, it is believed that all the students from the special classroom could be inserted in common classroom. And the regular classroom teacher, in turn, will develop academic activities adapted in individual level to attend the needs, and thus to advance in their schooling, and also can take advantage of their legal rights which is live in an inclusive school environment.

## **Acknowledgements**

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## **The Orthography Learning Process of one Student with Cerebral Palsy**

Stella Maris Cortez Bacha

Universidade Federal de Mato Grosso do Sul – UFMS - Brazil

[sbacha@terra.com.br](mailto:sbacha@terra.com.br)

Alexandra Ayach Anache

Universidade Federal de Mato Grosso do Sul – UFMS - Brazil

[alexandra.anache@gmail.com](mailto:alexandra.anache@gmail.com)

### **Abstract**

Our study analyzed the orthography/spelling learning process of one student with cerebral palsy (CP), attending regular high school. The specific objectives were: to know the schooling and the rehabilitation processes of the student; to analyze his reading and writing activities and, prominently, in the writing activities, to analyze the various aspects involved, as the visual presentation, the calligraphy, the grammar (with emphasis on spelling) and the text production. We proposed a qualitative research with a single case study of only one student of the third year of HS studying in a regular private school, 17 years old, with moderate CP, diplegic spastic type and ataxic component; handwriting; locomotion with walking stick; good cognitive level. The study was supported by the theoretical-methodological framework of historical materialism, sustained by cultural-historical perspective. With the nineteen sources of information it was possible to analyze his spelling learning process more broadly, linking it to other aspects of reading, writing, oral language and others related. In all analyses we identified some aspects, more, and less, related to the CP and to the learning process at school.

**Keywords:** cerebral palsy, spelling, orthography, writing, high school.

### **Introduction**

We usually study about and work with students with cerebral palsy (CP) and we deepen our knowledge about their reading and writing, particularly the orthography/spelling and the high school (HS) level, in the doctorate course.

According to Morais (2000, 2007), the orthography standard is a social convention, necessary to overcome the limitations of the alphabetical notation and must be treated, itself, as an object of study, but as it is a standard, the school has to teach it systematically. If the school neglects this task, it will contribute to the maintenance of social differences, because it helps to preserve the distinction between good and bad users of writing language.

But to learn the orthography rule is not only a matter of memory, it is necessary to understand the varied nature of the orthography mistakes (Morais, 2000, 2007). Moreover, it is necessary to know and to respect the possibilities of the student with CP related to his neurological condition and his educational environment, particularly the academic one, about the teaching and learning of reading and writing.

The aim of our research was to analyze the orthography/spelling learning process of one student with CP attending regular HS. The specific objectives were: to know the



schooling and the rehabilitation process of the student with CP who was attending the HS; to analyze his reading and writing activities and, prominently, in the writing activities, to analyze the various aspects involved, as the visual presentation, the calligraphy, the grammar (with emphasis on orthography) and the text production; to know how the writing performance influences the student's life, and from all the knowledge built, to propose some solutions (even partial), either for the probable difficulties or differences in writing (orthography), or for the significance in his life, in order to contribute to his progress.

We did not find similar study, the orthography of students of the HS with CP, neither in the Capes (2012), the database of the researches of the Brazilian Postgraduate, nor in the Scielo (2012) publications, which reinforced the importance and the validity of our proposal.

### **Method**

Our research was supported by the theoretical-methodological framework of historical materialism, sustained by cultural-historical perspective, mainly in the Luria (1981, 1987), Vigotski (1982, 1991, 1995, 1996, 1997, 2000, 2004), Vigotski and Luria (1993) and Vigotski, Luria and Leontiev (2006) studies, because their conceptions allow to understand the man in his totality, in a dialectical relationship. However, we dialogued with authors of other theoretical and methodological approaches, using their specific contributions and even techniques, aimed to our study, under the historical-cultural perspective.

We proposed a qualitative research with a single case study, as an ethnographic sort, transversal; we studied one student of the third year of HS studying in a regular private school in the downtown area of Campo Grande-MS-Brazil, 17 years old, with moderate CP, diplegic spastic type and ataxic component; handwriting; locomotion with walking stick; good cognitive level.

As instruments, we used semi-structured interviews with the student, his mother, three professionals of the school and two of the rehabilitation team; written evaluation of the student with five 'main activities', as proposed by Zorzi (1998), of the higher level (three dictations: words, sentences, text; two compositions). And two 'complementary activities': dictation of pseudowords (Zorzi, 2009) and another dictation of a text for the evaluation of the evidence of dysgraphia (Lorenzini, 1993).

The criteria for the correction of the 'main activities' were specially prepared and involved the analysis of the spent time, the motor and visual aspects, the calligraphy, the grammar (orthography and punctuation) and the text production (elaboration).

To support the written evaluation, we used the evaluation of reading, oral language and other speech-languages aspects related (voice, fluency, orofacial myology, psychosocial and cognitive aspects); we complemented the construction of the information with the analysis of documents (written records, report cards, school supplies, medical reports and retrospective information of the speech-language therapy, conducted by the first author of the study, for 14 years). Our research was approved by the Ethics Committee of the UFMS N° 0054.0.049.000-11.

### **Results and discussion**

The analyses of the built information were organized in four thematic axes. The first focused on 'The surroundings of the pathology': construction of the diagnosis, factors involved in the decision-making for the rehabilitation process, importance of the diagnosis in the process of rehabilitation and education, diverse reality about the knowledge of the diagnosis and the positioning on the disability.

The second was about 'The schooling process with the support of the rehabilitation team: insertion, the work of the rehabilitation team and the challenges (adaptations)', which were presented at each grade level.

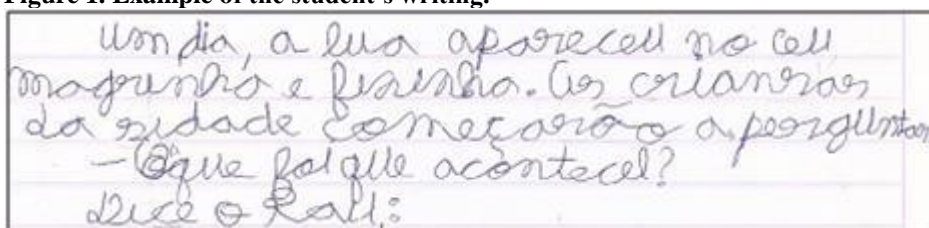
The third analyzed the 'Implications of the disability in the professional choice', addressing the expectations of the educational and professional future of the student studied.

The fourth involved the specificity of our work, 'The learning process of the orthography', with analyzes of the activities performed by the student, relating them to the other sources of information, covering: performance and learning in reading, in writing, and the process of the learning orthography - synthesis and perspectives -.

It was possible to analyze and understand the process of learning the orthography of the student studied more broadly, linking it to the other aspects of reading, writing, oral language and others related. In all analyzes it was possible to identify aspects more and less, related to the pathology, as well as, more and less, related to the school learning process. Among all the problems in writing, the orthography mistakes, regarding the use of letters, staged the gaps in the formal learning of the ability and could characterize the student as a bad user of the written language. The 'main activities' were sufficient for the analysis of the written proposal.

Below it is shown an example of the student's written activity and some illustrative tables:

**Figure 1. Example of the student's writing.**



Note: Original text, in Portuguese of Brazil:

'Um dia, a lua apareceu no céu, magrinha e fininha. As crianças da cidade começaram a perguntar: \_ O que foi que aconteceu? Disse o Raul: [...]'

**Table 1: Total of words written by the student, with and without orthography mistakes, regarding to the use of letters, in numbers and percentages in the 'main activities'**

Total of words written by the student, with and without orthography mistakes, regarding to the use of letters, in numbers and percentages in the 'main activities'

Main activities	1		2		3		4		5		Total	
	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%
words with mistakes	19	48,7	20	18,3	21	21,4	8	11,8	16	25,8	84	22,3
words without mistakes	20	51,3	89	81,7	77	78,6	60	88,2	46	74,2	292	77,7
Total of words	39	100	109	100	98	100	68	100	62	100	376	100

1- Dictation of words; 2- Dictation of sentences; 3-Text dictation; 4- Composition 1; 5- Composition 2.  
 Source: analysis of the 'main activities' of the student studied.

Organization: the authors.

Table 2

Classification of the student's orthography mistakes, in the 'main activities', in numbers and percentages: use of letters, according to Zorzi (1998, 2009) proposal

Main activities	1		2		3		4		5		Total	
Type of mistakes	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%
1. Multiple representations	17	77,3	12	60,0	9	42,9	3	37,5	7	41,2	48	54,5
2. Orality	3	13,6	0	0	4	19,0	3	37,5	1	5,9	11	12,5
3. Omission of letters	1	4,5	1	5,0	1	4,8	1	12,5	1	5,9	5	5,7
4. Junction-separation	0	0	4	20,0	3	14,3	1	12,5	1	5,9	9	10,2
5. Confusion am x ao	0	0	1	5,0	1	4,8	0	0	0	0	2	2,3
6. Generalization	1	4,5	0	0	3	14,3	0	0	2	11,8	6	6,8
7. Voiced-unvoiced changes	0	0	0	0	0	0	0	0	0	0	0	0
8. Addition of letters	0	0	0	0	0	0	0	0	0	0	0	0
9. Similar letters	0	0	1	5,0	0	0	0	0	3	17,6	4	4,5
10. Inversions	0	0	0	0	0	0	0	0	0	0	0	0
11. Other mistakes	0	0	1	5,0	0	0	0	0	2	11,8	3	3,4
Total	22	100	20	100	21	100	8	100	17	100	88	100

1- Dictation of words; 2- Dictation of sentences; 3-Text dictation; 4- Composition 1; 5- Composition 2.

Colors: blue= phonological process; red= orthographic process; green= visual process.

Source: analysis of the 'main activities' of the student studied.

Organization: the authors.

## Conclusions

From the 19 information sources, we found arguments to support our thesis that, to understand the difficulty in using the cultural norms of the language, in the orthographic writing, it is necessary to consider the specificity of the student, including his pathology, CP, with organic and functional implications, as well as his learning process of reading and writing, in the processes of schooling and rehabilitation.

We organized the aspects that stood out in the analysis of our results into five categories:

1 - The theoretical and methodological framework: a cultural-historical approach enabled us to understand the process of learning the spelling of the student by considering various aspects, such as the vision of man, the health-disease process, the vision of the individual with disabilities and the active understanding of this, the relationship between the motor act and the mental processes for cases of CP, the concepts of voluntary attention and memory, as well as tiredness, fatigue and exhaustion against repetitive exercises, learning and development. In relation to the learning of the written language, we used the concepts of meaning and sense of writing, as well as the mediated evaluation, foresight; dialectical educational vision, with critical content and significant process, respecting what is individual;

2- The knowledge of the pathology: we defend the explanation, clarification and understanding of the diagnosis in order to respect the individual and not to limit or exclude him; this knowledge enables the demystification of pathology and predictability;

3- The role of the teacher/school: the teachers or the school team of students with special educational needs do not need to be an expert in the pathology; to assist them we suggest the teamwork with the Health Professionals. Their work may contribute to the permanence of all students in the school, to adapt and to maintain the quality of teaching, including curriculum adaptations, which involved methodological adjustments, with attention to the use of time in class, considering the institutional time.

In our case study, we believe that 'significant' curricular adaptations deserve special attention, which was not done, in order to promote accessibility also on the amount of content, due to the time, motor tiredness/fatigue and linguistic complexity;

4- The role of the rehabilitation team: these professionals can contribute to the 'specialized' mediations, which are for an indefinite period, but they are not invariable or indistinct. It is necessary to maintain the regularity of the therapeutic interventions, with planning and clear objectives, shared with the individual, their families and school team, and also with commitment to the student's progress in school, to seek compensation. In the Speech-Language intervention, the performances in voice and orofacial myology, in our study, contributed to the learning of other skills, and indirectly, of the academic ones, and were important to the student development;

5- The teaching methodology of the Portuguese language: the 'use of the language' should guide the teaching and the learning of reading and writing, considering the reflective teaching, contextualized, interactive, collaborative, which must be done from the linguistic knowledge brought by the students, and intentional. It is important to create the need and motivation for this learning. We have seen that the practice of reading and writing in school, in the case studied, was what assured the use or not, of these skills; in other words, the school environment was crucial in this respect.

When considering all these aspects, we noted the need for those involved in the teaching-learning process of the student, understand that he had developing skills and that the learning must be continued by the schooling, independently of the teaching level, and by the intervention in rehabilitation, because there are no limits to the cultural incorporation.

We emphasize that is necessary to value the diversity and to invest in the progress of the student, with teamwork, collective, and with individual responsibility.

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Title: SpecificCollege?School

## **Can Students with Specific Learning Disabilities be Successful in College? High School Teachers Attitudes and Beliefs.**

Sydney A Bueno  
Claremont Graduate University  
[sydney.bueno@cgu.edu](mailto:sydney.bueno@cgu.edu)

### **Abstract**

Students with learning disabilities are attending college at a growing rate. Studies show that more students with learning disabilities would like to attend college than actually go. According to the Pivotal Moments theory, teachers play a key role in helping students on their path to academic success. This study surveys a small group of high school teachers to measure their confidence level in working with students with disabilities. It also attempts to measure the teacher's belief whether students with disabilities can be successful in college. The results show that the majority of the teachers surveyed do feel confident in their ability to work with students with learning disabilities. The results also show that the teachers talk about college admission requirements in their classrooms and believe that students with disabilities can be successful in college.

### **Introduction:**

Education is not the "great equalizer." Instead of giving everyone the opportunity to rise in socio-economic status, educational institutions and teachers are often seen as gatekeepers or sorters, reproducing socio-economic status (Espinoza, 2011; Bourdieu, 1973). To rise in socio-economic status, students need to reach their full academic potential and become gainfully employed. According to Cortiella (2011), the education-income relationship is apparent when looking at the incomes for high school and college graduates. In 2010, the median income of a high school graduate was \$26,505 compared to \$43,143 for a bachelor's degree. If teachers are the gatekeepers that can help students achieve, then the key is in the relationship teachers have with their students.

The significance of this topic lies in the lack of research including students with learning disabilities. Now more than ever students with Specific Learning Disability (SLD) are attending college. However, they are not attending at a proportionally equivalent rate. According to the National High School Center (Bangser, 2008), the number of students with disabilities attending postsecondary schools has increased, and yet it is still only about half that of their non-disabled peers. Most of these students are attending community college.

Inclusion is the practice of educating students with disabilities in the general education classroom with the supports needed (Lalvani, 2013). According to The State of LD (Cortiella, 2011), between 2000 and 2008, students with SLD who spent more than 80% of their time in general education classes rose from 40% to 62%. Only students with speech or language impairments had higher percentages of time in general education.

Teacher education and training has a lot to do with their attitudes toward students with

SLD. Educational success of inclusion depends upon many factors, including the disability of the student as well as the expertise and the willingness of the teacher to attend to the needs of the student. Cook, Cameron and Tankersley (2007) found that teacher attitudes toward students correspond with the quantity and quality of interactions and support that teachers provide to those students. Without this support, students with SLD will continue to fall short of their academic potential. With that being said, there is no one way to implement an inclusion program and therefore, not all students are getting the same rigor, treatment and support that they need to succeed.

The framework, on which this research is based, stems from the Pivotal Moments theory of Roberta Espinoza. This theory derives from the social sciences, specifically in the cultural and social capital theories. A quick overview of the theories of social and cultural capital tell us that people gain the knowledge they need to become successful from others who are in a higher position, in order to move up the social ladder, i.e. from working class to middle class. The people in higher positions need to be willing participants in the relationship. Many students who have college-educated parents and already belong to the middle/upper class will stay there and continue to thrive (Bourdieu, 1973). So the question becomes, how do we move the students from poor and working class families? How do we help them attain the education level of most middle and upper class people?

There are three main components to creating Pivotal Moments: trust, mentoring, and advocacy. Trust is the first component, because without it, students may not use the knowledge transmitted to them. There needs to be a high level of trust between institutional agents and students. This trust allows the educators to transmit the necessary knowledge and allows the student to understand the importance and use of the knowledge given (Espinoza, 2011). When a relationship is formed, students begin to acquire the knowledge and help seeking skills needed to succeed academically through high school and college. According to Espinoza (2011), low income students need support and guidance as early as possible in school. This is because first generation students generally spend less time in high school talking to teachers or counselors about their educational aspirations than their peers with college-educated parents. The next component is transmitting necessary knowledge. "The transmission of knowledge is the most critical component of an effective Pivotal Moment intervention" (Espinoza, 2011, p165). Without the transmission of knowledge, the pivotal moment is lost.

This part of the intervention is where students learn the necessary steps to get into college, identify and access the resources available to them, and begin to create a database of support systems, which will assist them in being successful.

The last step, advocacy, is where teachers will begin helping students by being intentional and systematic in their approach. Pivotal Moments teachers understand unique social and economic obstacles that certain students face. They are conscious of the role they play and they make sure they are well versed in the knowledge and skills the students need, i.e. academic and internship opportunities, support services and college admissions, etc. (Espinoza, 2012).

## **Methods**

The questions used to guide the research are:

1. What are teacher's attitudes on working with students with Specific Learning Disabilities?
2. How comfortable are teachers in working with students with Specific Learning Disability? Do they feel they have had enough professional development?
3. Do teachers feel that students with Specific Learning Disability can be successful in

college?

This study looks specifically at students with SLD because these students are graduating high school at a higher rate than other categories of disability and they are attending postsecondary institutions at a higher rate. As a matter of fact, students with SLD represent half of all postsecondary students with disabilities (Cowan, 2006).

The teachers surveyed work at a small public high school in a suburb of Los Angeles. There are 53 teachers on staff. All of the teachers are highly qualified. Thirty-five surveys were placed in teacher's boxes. Attached to the front of the survey was a letter containing information about the survey, the consent form, and the directions on how to complete the survey, the deadline, and how to return the completed survey. A week later, a reminder email was sent to the 35 teachers. One week later, a second survey was placed in the teacher's boxes. Twenty three surveys were returned, which is a return rate of 66%. Some factors that may have influenced the rate of return include the time of year that the surveys went out and the lack of personal connection to the survey. The surveys went out in the spring, which is a busy time for teachers. End of semester grades were due, followed by Spring Break and then California State testing preparation. Also, these teachers had no personal gain from completing the survey. The survey attempted to determine a teacher's comfort level when working with students with SLD and their opinion on whether students with SLD can successfully go to college. There were also questions on their teaching philosophy and some demographic questions. There were four basic categories of questions: teaching philosophy, working with SLD students, success in college attitude, and demographics. The majority of my survey questions used a Likert scale. The Likert scale items were measured as 1= strongly disagree, 2= disagree, 3= agree, 4= strongly agree.

### **Results and Discussion**

The results indicated that for the most part, the teachers surveyed are exhibiting the kind of behaviors we would want to see in a Pivotal Moments teacher. General Education teachers made up most of the respondents, at 87%. Seventy-nine percent of the teachers surveyed felt confident in working with students with SLD. Seventy-three percent of the teachers agreed or strongly agreed with the statement "I meet with as many of my students as I can to get to know them." Another good indicator that these teachers are creating Pivotal Moments is the question "I discuss college admission requirements in my class," which 82% agreed or strongly agreed. One more indicator of a Pivotal Moments teacher is the question "I believe that student with SLD can be successful in college," for which 100% of the teachers agreed or strongly agreed with that question.

There were only a few correlations that had significant findings. The Pearson r correlations indicated that the more a teacher preferred not to work with students with SLD, the more they felt that they did not have enough professional development. We would expect a finding like this, which tells us that these teachers need more professional development to become more confident in their ability to work with students with SLD. Two Pearson r correlations indicated there are a few teachers that do not yet have the Pivotal Moments attitude. One of the correlations, between the variables "I teach the material and it is up to the student to learn" and "Students with SLD cannot be successful in college," told us that the more teachers felt that it was up to the student to learn the information presented, the more they felt that students with SLD couldn't be successful in college. Teachers who do not feel it is their responsibility to help student understand the information, may have a narrow idea of who can and cannot succeed in higher education. It is an attitude like this that we want to eliminate with more education about students with SLD coupled with the Pivotal Moments theory.



Lastly, the Pearson correlation between the questions “I discuss college admission requirements in my class” and “I teach the material and it is up to the student to learn it,” told us that the more teachers believe that it is up to the students to learn the materials the less they discuss college admission requirements in their class. In order to help put students with SLD on the trajectory to college, it is important for professional development to be provided on the Pivotal Moments theory. Training teachers on the the three main components of Pivotal Moments and the importance of these steps is necessary for the transmission of college knowledge from teacher to student. With this knowledge, teachers can begin to support students with specific learning disabilities and encourage them to reach their full potential.

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## **Adapting Efficient Response to Intervention (RtI) Measures for International Application**

Trisha D. Franklin  
University of Tennessee,  
[tfrankl5@utk.edu](mailto:tfrankl5@utk.edu)

R. Steve McCallum  
University of Tennessee  
[mccallum@utk.edu](mailto:mccallum@utk.edu)

Sherry M. Bell,  
University of Tennessee,  
[sbell1@utk.edu](mailto:sbell1@utk.edu)

Sandra M. Silva,  
Centro Desenvolvimento Infantil-Diferencas,  
[sandrasilva@diferencas.net](mailto:sandrasilva@diferencas.net)

### **Abstract**

Conference participants will learn about how: (a) psychometrically strong multi-faceted group-administered math probes (Monitoring Instructional Responsiveness: Mathematics MIR:M; Hopkins, McCallum, Bell, & Hilton-Prilhart, 2011) were developed in the U.S. for use in a Response to Intervention (RtI) context-- and can be adapted for international use; (b) one sample of students from Portugal compared to a U.S. sample from the same grade (the mean from the Portuguese students was significantly higher ( $t(150) = -5.84, p < 0.001$ ); and (c) to use MIR:M to identify and progress monitor at risk students in Portugal and in schools around the globe. Finally, an example of the MIR:M probes is shared, as well as a companion probe designed to provide a brief assessment of reading, the MIR:R.

**Keywords:** Mathematics; Monitoring Instructional Responsiveness: Math, MIR:M; Response to Intervention; International Application of MIR:M

### **Introduction**

Traditional mathematics curriculum-based measures (M-CBM) have relied on computation and other single-task probes to screen and track students' mathematics progress. Typically, these measures contain considerable measurement error even though they assess only one facet of mathematics (computation), i.e., they are limited by monooperational bias. Consequently, in this study we describe the development and of a MCBM, Monitoring Instructional Responsiveness: Mathematics (MIR:M; Hopkins, McCallum, Bell, & Hilton-Prilhart, 2011), which incorporates elements of traditional MCBM, in addition to problem-solving elements to create a multi-dimensional ecologically valid assessment. In addition, we describe use of the MIR:M for a small sample of Portuguese students. Performance of these students on math calculation, reasoning and total scores are shown. The mean scores of these students were compared to the mean scores of students from the same grade (2nd) from the U.S. In this

presentation, we describe steps showing DISES participants how such instruments can be adapted for international use. As examples, we show probes from the third grade from the MIR:R and a companion probe designed to provide a multi-faceted assessment of reading in threeminutes, the MIR:R.

### **Methods**

The MIR:M is group administered by classroom teachers using scripted directions, and takes approximately three minutes to administer. Fourteen probes of equal difficulty were developed and used to initially identify at-risk students, then monitor their progress during the academic year. Each probe consists of several item types, which assess either math calculation or reasoning: Quantity Discrimination (Randomly assigned numerical values to the left and right of three vertically arranged quantity discrimination symbols), Number-Sentence Quantity Discrimination (Horizontally presented number sentences, immediately followed by a quantity discrimination task, solved by the examinee), Number Pattern (Five ordered numbers, presented horizontally and examinees complete the pattern by inserting one or two missing numbers), Shape Pattern (Identification of one missing shape from a shape pattern of varying length, using squares, triangles, circles, pentagons, and hexagons), Math Facts and Computation. Items within these subscales are combined to operationalize the following scores: Calculation, Reasoning, and Total.

The MIR: M was developed using data collected from three pilot studies, which informed development of items, directions, and pacing. Data from the fourth and final study were obtained from first through fifth-grade classrooms in one school district in the southeastern United States (Tennessee): over 1700 participants contributed data. Reliability estimates and score distributions are encouraging (i.e., adequate to good reliability; .70 to .90) given the brief nature of the probes. Results of various studies using MIR:M have been published (e.g., McCallum, R.S., Bell, S.M., Coles, J., Miller, K. C., Hopkins, M., & Hilton-Prillhart, A., 2013).). Directions for the final version were translated into Portuguese and it was administered to a sample of second grade students; their mean score was compared to a sample of second grade students from the U.S. via an independent samples t test.

### **Results and discussion**

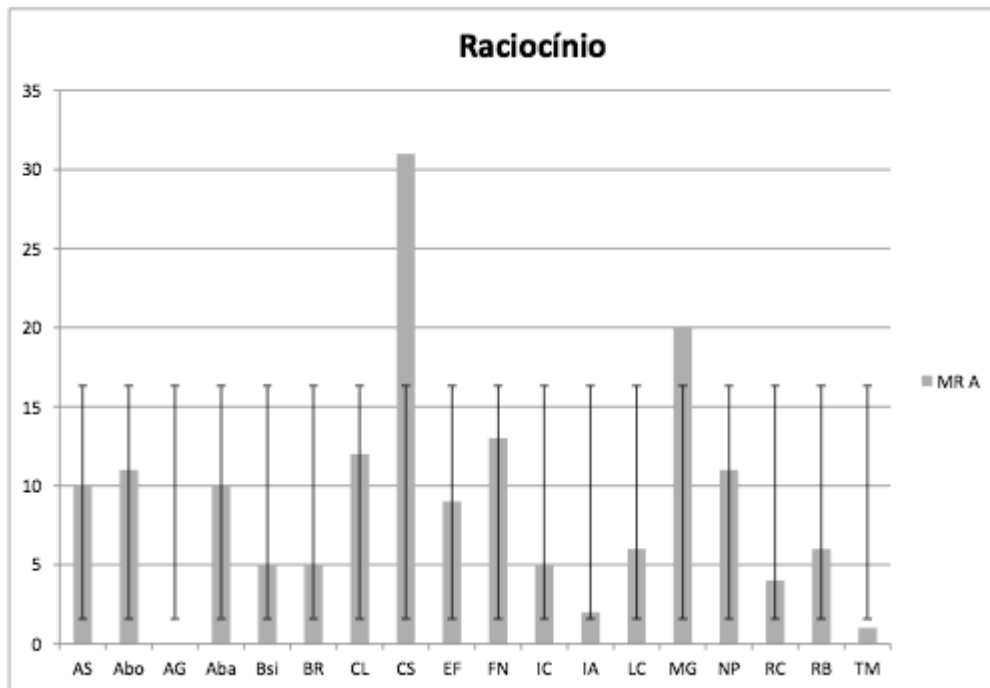
This study demonstrates that the MIR:M has overall adequate to good reliability (.70 to .90) and validity when compared to previous M-CBM research and current commercially available M-CBM assessments (r values typically around .40- .50). t tests of means between a Portuguese sample (N=17) and a US sample (N=135) yielded a significantly higher mean for the Portugal students (M=28.47, SD=11.07) than US students (M=15.64, SD=8.18),  $t(150) = -5.84, p < 0.001$ . This mean difference comparison is not particularly meaningful given that the two samples differ on a variety of variables, i.e., they were not matched, and the Portuguese sample contained two or three outliers (scores from unusually gifted students in Math), as is apparent from the graphs in Figure 1 which shows Calculation, Reasoning, and Total scores. Data from classroom administration of the MIR:R can be used to identify students who are at-risk in math using the Response to Intervention model. Response to Intervention (RtI), codified into law in the United States 2004 in the Individuals with Disabilities Education Act, is an alternative to the ability-achievement discrepancy model for identifying students who are at-risk academically. RtI documents response to evidence-based instruction early and routinely to identify those who need more intensive instruction. Typically, the students who scores in the bottom 10 to 20 percent (of the

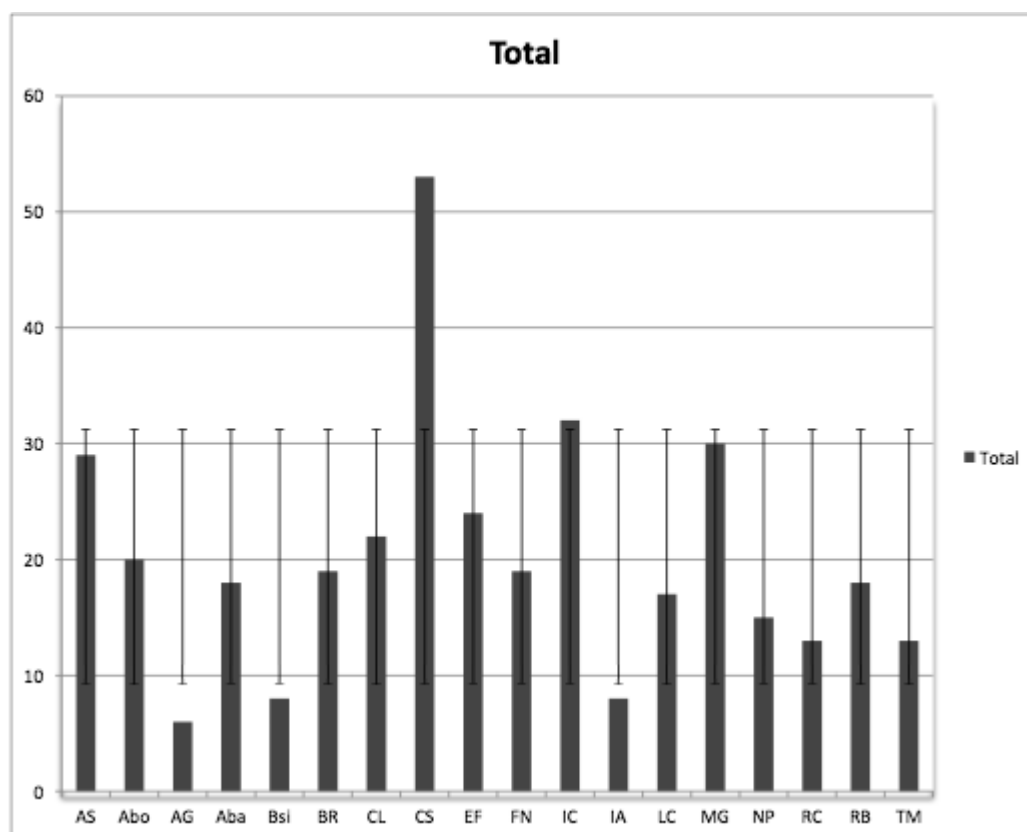
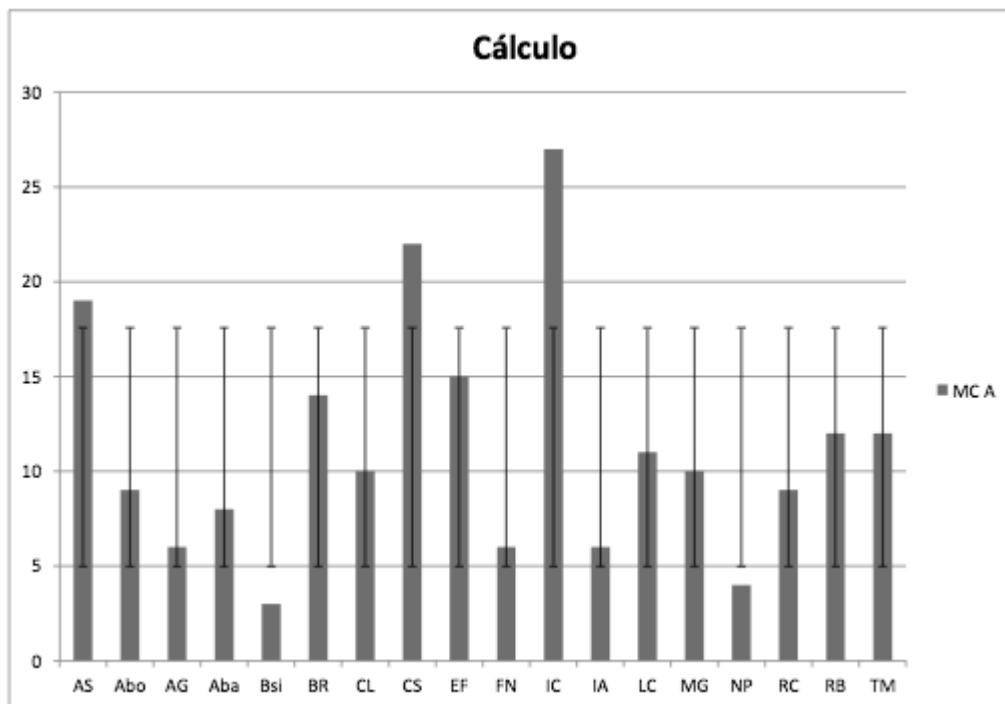
class or school) are targeted for additional instructional help using scientifically validated strategies. RtI requires assessment of all students and is time consuming and expensive. Further, many commercially published probes are “mono-operational,” i.e., they assess only one dimension of math, e.g., calculation. The MAP:M fills a need for psychometrically strong and inexpensive multi-faceted group-administered measure, and its brief format makes it efficient.

**Conclusions**

Because participants will learn how the MIR:R was adapted and used in both the U.S. and Portugal within an RtI format, they can take this information back to schools in their respective counties. Examples of probes are shown as are scores from a Portuguese sample. Because of their brief (three-minute), efficient structure, they may be helpful in determining at-risk status of students in any culture and school environment. Finally, we show participants probes that were developed for reading as well (MIR:R), which assess both fluency and comprehension in a group format within three minutes. MIR:M and MIR:R can be used within a Response to Intervention framework to identify and progress monitor students who are at-risk and because they are multi-faceted they have the potential to offer a glimpse into needed instructional strategies. Reliability and validity of each measure are adequate to good, especially in comparison to most commercially available CBM probes.

**Figure 1: Scores of Portuguese students on MIR:M Calculation, Reasoning, Total**





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(2013). A model for screening twice-exceptional students (gifted with learning disabilities) within a response to intervention (RTI) Model. *Gifted Child Quarterly*, 57(4), 209-222. DOI: 10.1177/0016986213500070. Originally published online August 9, 2013. The online version can be found at: <http://gcq.sagepub.com/content/57/4/209>.

## **Inclusion in Youth and Adult Education**

Vanda L. Cunha  
Unicid , Sao Paulo - Brazil;  
[vandareggiani@superig.com.br](mailto:vandareggiani@superig.com.br)

Bryann Breches,  
Unicid , Sao Paulo - Brazil;

Edileine V. Machado,  
Núcleo de Estudos e Pesquisa sobre Inclusão Social – NEPIS, Brasil,

### **Abstract**

This research (in progress) addresses the topic inclusion in Youth and Adults with disabilities (YAE). It aims to identify, explore and highlight possible barriers and highlight likely paths that may soothe difficulties surrounding the life of the student with disabilities in adult education. Experiences by the researcher in YAE, which included students with disabilities, have shown that these students' process of inclusion does not only refer to the adapted materials, but also to other barriers that are part of their daily routine, as the architectural issue, public transportation and accessibility in pedestrian zones. Furthermore, it also addresses issues related to the individual's inter-subjectivity and discrimination, which is almost inevitable, considering the little or no knowledge existing about their conditions by citizens, as well as the lack of specific training for Education professionals. As a methodological procedure a research on state of the art literature from the 1990's has been adopted. Among the works collected to date, it can be seen that it seems that the system meets inclusion barriers. However, society must decide to be responsible for preventing biases and exclusions, as well as the elimination of existing ones. The letter of the law says that students with special educational needs must be enrolled and attending mainstream classes. But in reality, this is not always the case due to lack of both, knowledge and specific training of the teacher, or even by the family's fear and insecurity.

**Keywords:** Public Policy Education - Inclusion of disabled people in YAE – Inclusive Education

### **Introduction**

This research aims particularly to draw a survey on state of the art research and work which had already been carried out in Brazil from the 1990's to the present day, regarding the inclusion of learners in adult education. The reason for conducting this research is due to the fact that the 1990's was marked by an onset of a global process of changes in public policies to ensure the right to education of social groups at a disadvantage and ongoing risk of exclusion.

Based on material collected by Ferreira (2008, 2009 ); Contini (2008 ) , Silva, Melo (2012 ) and others, a study will be developed - by identifying The ones already existing and what it is still necessary to obtain, so that students with disabilities do not feel citizens only in theory and laws , but also having all their rights being put into practice. Since the Brazilian Constitution of 1988, school education is recognized as a right for

all, regardless of age, physical and mental health, gender and race, and also as the State's and family's responsibility. (BRAZIL, 1988, art. 205).

The study is justified and relevant because in Brazil, despite legal texts currently recognizing education of Youth and Adults (YAE) with disabilities as a right and also a significant expansion in enrollment by this population, it is known that the amount of attended students is minimal when considering all those who have been previously excluded from the educational process. To make matters worse, many of these students enrolled in public schools suffer from a lack of resources and policies to meet their needs and ensure quality education, as granted by the constitution, and that they have the right to obtain, by means of education, the necessary means to acquire knowledge, establish meanings, share wisdom and experiences, reframing the world and build a new reality (DENARI, 2004).

The YAE is featured in educational policies in Latin America since the mid-twentieth century (Rivero, 2000). But when approaching youth and adults with disabilities in school education, this topic has academic relevance for contributing to the field of education, since there are few studies existing on the subject. It presents social relevance by referring to the context of the public policy of inclusive education for all, and personal relevance for solving issues that the author has raised during his years of professional experience in finding ways for effective school inclusion of young people and adults with disabilities. According to Ferreira (2008, 2009), youth and adults with disabilities currently represent large portion of the illiterates in the world, because they haven't had opportunities of access to education at proper age. In economically wealthy countries, most handicap people are institutionalized; In economically poor countries, they're hidden, invisible at school and in various social spaces. In both cases they are deprived from opportunities of formal learning and human development.

According to MACHADO (2011): Educational inclusion, as proposed by public education policies, has intended to support new demands and educational skills, and interpersonal relationships, seek acceptance, understanding and good fellowship among all subjects. The inclusion implies transformation and acceptance of oneself to later reach others. It may involve special education, teaching young people and adults and the very relations between students and teachers. Inclusion means accepting others as they are, respecting their uniquenesses, getting involved with other subjects as a group, so that together we can reach a collective goal, aiming welfare for all. To do so, it is necessary an appropriate, inclusive, welcoming environment, where everyone feels free to act (p. 34).

YAE is understood as educational modality corresponding to youngsters and adults' education, in which that clientele gasps for specialized education and having their needs met.

In addition, there are also intersubjective inclusion issues, which are particular, regarding each pupil yet to be included, since they share human body structure: body, soul and spirit. But they also have dreams, wishes and personal, unique feelings. According to Ales Bello (2006, p 37): Everyone has a general, universal structure. What makes us different from each other is that not necessarily will we use all the structures at once and the same way. In the case of inclusion, this is very important because considering that we all have the same structure, and that we will usually only notice the differences, considering that a handicap student may have a mental and spiritual life may completely change the way an educator sees and relates to people with disabilities because it allows them to move from "myself-and-the-others" to "we."

When developing public policy inclusion the same may occur when educators take into account the concrete reality of the subjects to be included. Therefore, picturing policies



in large chunks is a big mistake, since every human being, despite sharing the same structure, presents singularities. According to Ales Bello (2006, 37), Husserl concludes that we have a body, based on analysis of acts recorded by us, ie, the bodily sensations that we store. Being aware of our bodily limits and embodiment is preliminary to all our acts now, it is what gives us the constitution of the being that spots ourselves in space. Article 58 of the Law of Guidelines and Bases of National Education from December 20th, 1996 ( LDBEN 9.394/96 ) defines Special Education as : Article 58.

It is understood by special education for the purposes of this Act, the type of education offered preferably in regular school system for students with disabilities, pervasive developmental disorders and high skills, or overcrowding . (BRAZIL , 1996). The LDBEN 9.394/96 also states that the Special Education will happen, "preferably " in regular schools and then in other institutions. We have noticed placing the term "preferred" in the same article that describes educational modality. Denari (2010) points out: The difficulty that the text of LDBEN 9394/96 features is that it leads us to think that special education is a synonym of elementary education. Thereby the chances of extending its services to high school and college levels, as if there were no Special Needs Students in these levels. Another finding yet regarding that law deals with the service's location: preferably in ordinary classes in regular education . As Minto (2000, p. 9) fittingly points out, "preferably may be the term for the breach in the Article's compliance, because those who prioritize have legally arbitrated the door of exception" (p. 32).

The reading of the Final Paper of National Education Conference (CONAE) was significantly important, since pertinent issues concerning the inclusion of pupils with special educational needs in adult education could be found: The outcome of this stimulating process of mobilization and debate about Brazilian education is consolidated in this Final Document which presents guidelines, goals and measures for national education policy under the perspective of inclusion, equality and diversity, which constitutes a landmark for Brazilian education in a contemporary world. (CONAE, 2010, p.7)

Moreover, such discussion was considered important once the inclusion of learners with special educational needs in YAE is an issue that must be constantly analyzed.

## **Conclusion**

Among the studies found, the FERREIRA reveals that YAE & Disability must urgently take part in public policy agenda, especially for attending people who are part of extremely vulnerable social groups. Likewise, it reveals the need to think about training education professionals able to work in adult education, to encourage and develop research on the subject, since literature in this specific area is scarce, involving in this process government and social representatives who take the task of thinking and building a policy that meets current social demand. It is essential to investigate, promote national and international successful experiences with regard to the inclusion of learners in adult education with disabilities so that they can provide insight to a debate based on concrete facts about the Brazilian reality, its challenges and future possibilities.

The research by Contini (2008, p. 20) shows that the YAE needs to be a space of identity construction and not replacement of schooling. Students with disabilities in YAE seek the possibility of growth and acquisition of knowledge, skills and competencies that make them autonomous, independent and able to join the work market.

In Silva and Melo (2012), it is also highlighted the need for investing in initial and continuous training of teachers.

Among the researches listed so far, it was verified that all indicates that the system meets inclusion barriers. However, it concerns the whole society to solve it, because they are responsible for preventing prejudice and exclusion, as well as the elimination of those already existing. The letter of the law says that students with special educational needs must be enrolled and attending mainstream classes. However, in reality this does not always happen, either for lack of knowledge and training of teachers on the subject, or even fear and insecurity of the student's families. Another fact to consider is that the family must be upheld by the school, so they do not feel insecure and consequently turn out to be standing in the way of the process of education of their own disabled children. (CARVALHO, 2006). Therefore, the school needs to develop an integral process where teachers and family members need to be partners in order to provide better results under different approaches.

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## **Inclusive Postsecondary Education Transition Planning for Youth/ Adolescents with High-incidence Disabilities**

Emerald R. Collins  
Midwestern State University  
[emerald.collins@mwsu.edu](mailto:emerald.collins@mwsu.edu)

Latoya L. Dean  
Garland Independent School District  
[lldean@garlandisd.net](mailto:lldean@garlandisd.net)

### **Abstract**

The current study examined the impact of academic, social, and psychological factors on youth with high-incidence disabilities (n = 897) as they endeavored to make successful postsecondary education transitions. Limitations prevent many youth who would otherwise attend college regardless of disability type from attending; therefore, predictive ecological factors and strategies for successful college transition are identified. Individual transition education plans (ITEPs) along with specific international best practices for culturally responsive transition planning are explored.

**Keywords:** transition, postsecondary education, high-incidence disabilities

### **Introduction**

The transition from secondary to postsecondary education is an important stage as youth not only move from high school to college, perhaps more importantly, from adolescence to young adulthood. Questions about college preparation, entrance exams, the application process, program options, and expenses begin to inundate aspiring undergraduate minds. For youth with high-incidence disabilities myriad issues regarding (a) special education eligibility at the postsecondary level, (b) needed supports, (c) assistive technology, (d) deficits in self-determination, and (e) more become major barriers to transitioning to college (Sitlington, Nuebert, & Clark, 2010; Vander Stoep, Davis, & Collins, 2000). The current study identified significant predictors of successful postsecondary transitions for youth with high-incidence disabilities. Relevancy of this study is established by the examination of ecological constructs which provides a basis for improving individualized transition education plans (ITEP) during secondary schooling. Likewise, evidence of findings provides support for targeted culturally responsive practices that can be utilized by professionals, caretakers, and students internationally.

### **Method**

The examination of postsecondary education factors were identified through the ecological framework as posed by Bronfenbrenner (2005). The goal of the ecological perspective is to improve the cohesive functioning of a youths' ecosystem (Bronfenbrenner, 2005; Cantrell, Cantrell, Valore, Jones, & Fecser, 1999; Hobbs, 1982; Morse & Smith, 1980; Rhodes, 1967). Barriers do not reside in the adolescent exclusively; rather, they are developed by conflicts between and among the adolescent, parents and family, schools, communities, and additional socio-cultural influences.

The United States Department of Education (USDE, 2004) conducted a longitudinal study, the Education Longitudinal Study of 2012 (ELS:02) of high school 10th graders. Data were collected over a 10 year period beginning in 2002 and ending in 2012 and was utilized for this study (visit <http://www.us.ed.gov> for more information). The sample size of  $n= 897$  students with high-incidence disabilities was identified. Measures of central tendency were calculated for several academic, social, and psychological categorical variables (i.e., school expectations, postsecondary plans, mothers' desires, fathers' desires, friends' desires, and favorite teachers' desires) and continuous independent variables (i.e., grade point averages [GPAs] and math test standardized scores). Chi-square tests determined relationships among categorical variables. Correlations between continuous variables were analyzed. Concomitantly, logistic regression modeling was used to predict postsecondary enrollment (i.e., successful postsecondary education transitions) while using significant independent variables (Raudenbush & Bryk, 2002). Two hypothesis guided the research model: (a) Psychological factors indicating healthy optimistic educational perspectives result in greater probability of successful postsecondary education transitions for youth with high-incidence disabilities, and (b) social factors indicating educational aspirations and support from family, peer, and community stakeholders result in greater probability of successful postsecondary education transitions for youth with high-incidence disabilities.

## **Results**

When considering overall postsecondary enrollment, findings revealed 283 students (31.5%) enrolled in a postsecondary educational institution, whereas, 433 students (48.3%) did not and information from 181 students (20.2%) for this variable was not available. Social factors indicate a significant relationship exists between postsecondary enrollment and school expectations ( $\chi^2 = 63.58$ ,  $p < .001$ , Cramer's  $V = .358$ ). There was also a significant relationship between postsecondary enrollment and postsecondary plans ( $\chi^2 = 97.10$ ,  $p < .001$ , Cramer's  $V = .426$ ). A greater proportion of students who enrolled in postsecondary institutions had previous plans to go to college immediately after high school (81.9%) compared to students who did not enroll in postsecondary institutions (39.9%). Moreover, a significant relationship between postsecondary enrollment and each of the following variables: mothers' desires ( $\chi^2 = 47.58$ ,  $p < .001$ , Cramer's  $V = .308$ ) and fathers' desires ( $\chi^2 = 26.12$ ,  $p < .001$ , Cramer's  $V = .239$ ). A greater proportion of students who enrolled in postsecondary institutions had previously expressed that their mothers desired them to go to college (71.5%) compared to students who did not enroll in postsecondary institutions (40.8%). A greater proportion of students who enrolled in postsecondary institutions had previously expressed that their fathers desired them to go to college (62.8%) compared to students who did not enroll in postsecondary institutions (38.9%).

A logistic regression predicting postsecondary enrollment was analyzed in three successive blocks. The academic variables (i.e., GPA, math test standardized score) were entered into the model in Block 1, creating a statistically significant model ( $\chi^2 = 29.66$ ,  $p < .001$ , Nagelkerke  $R^2 = .164$ ). Math test standardized score was the only significant predictor in this block ( $p < .001$ , OR = 1.102), in which higher scores on the test increased the odds of future enrollment in college.

The psychological factors that were added to the model in Block 2 created another significant model ( $\chi^2 = 47.84$ ,  $p < .001$ , Nagelkerke  $R^2 = .387$ ). The significant predictors in this block were math test standardized score ( $p = .002$ , OR = 1.078), school expectations of high school or less ( $p = .036$ , OR = .229), and postsecondary

plans ( $p < .001$ , OR = 4.958). School expectations to finish high school or less, significantly reduced the students' odds of future enrollment in postsecondary institutions, but postsecondary plans to attend college immediately after high school increased students' odds of future enrollment in postsecondary institutions.

Social factors were added to the model in Block 3, causing an insignificant increase in the model prediction ( $\chi^2 = 7.313$ ,  $p = .120$ , Nagelkerke  $R^2 = .417$ ). Mothers' desires was the only significant predictor among the newly added variables ( $p = .027$ , OR = 3.250), increasing the odds of postsecondary enrollment for the students.

### **Discussion**

The findings in this study points to practices that may improve the postsecondary outcomes of those with high incidence disabilities. With these practices in mind we made several suggestions to those wanting to impact these outcomes. Work diligently to improve the social factors that impede post-secondary transition in your country. Look at your country's policies regarding people with disabilities. Has legislation passed in your country that protects the rights of people with disabilities? If so, are these laws enforced? Knowing this will help you decide if you need to increase awareness, educate the public, reduce stigma and stereotypes and advocate for people with disabilities to be included into the population.

Examine your education system and its policies and procedures and start writing ITEPs very early. Important information to consider include (a) timeframe for the completion of compulsory education, (b) when and if students are tracked into vocational versus academic tracks, and (c) does a child with a disability have the opportunity to matriculate throughout the system. Design transition plans that encompass plans for college attendance or future employment based on if the student is tracked or when they are expected to leave school.

Formulation of these plans may need to occur in the primary years so that students can have adequate preparation time.

Create a system to link existing services. If services do not exist, advocate for the creation of programs and services so that the students' post-secondary needs can be met. Moreover, support and educate parents especially mothers. Explain to them the rights of people with disabilities and specifically their adolescent's rights. Parental involvement is of uttermost importance because they are on the frontline and can specify what services their adolescent's needs and can advocate for these services (Pleet, Wandry, & Gursch, 2004). Finally, people with disabilities need to be taught how to advocate for themselves. Teach youth and adults with disabilities self-determination skills which can improve their post-secondary school outcomes (Carter, Trainor, Sun, & Owens, 2009).

### **Conclusion**

The current study examined the impact of academic, social, and psychological factors on youth with high-incidence disabilities ( $n = 897$ ) as they attempted to successfully transitions to post-secondary education. Results indicated students whose standardized math score were higher, ITEPs indicated plans to go to college and mother desired for them to attend college were more likely to attend. Recommendations included teaching self-determination skills, advocating for disability rights and services, involving parents especially mothers and writing ITEPs as early as the primary years.

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## **Special Education Service in Multifunctional Resource Classrooms in Brazil**

Eduardo José Manzini  
Unesp de Marília, Brazil  
[manzini@marilia.unesp.br](mailto:manzini@marilia.unesp.br)

### **Abstract**

This paper focuses on the Special Education Service in Multifunctional Resource Classrooms in Brazil. These rooms are composed with several assistive technology resources and devices. The aim was to describe this new type of service. This is a case study in a countryside town in the state of São Paulo, Brazil. All thirteen teachers responsible for the operation of Multifunctional Resource Rooms participated in the study. Data were collected through a focus group in six sessions. A previous guide was used to trigger the discussions. The group was composed by the teachers, the moderator, and three doctoral students in education. The verbal interactions that emerged were recorded and transcribed. A thematic analysis was used to classify the information, which resulted in nine categories. The results indicated that: 1) the student's referral to special education service in Multifunctional Resource Rooms had been arranged from a list of students prepared by the sector responsible for special education; 2) the diagnosis of students for special education was not conclusive at all times; 3) the student's educational assessment for the service was performed by the special education teachers, but the instrument was not common; 4) the data revealed that there is no Assistive Technology transference to regular classrooms. The data showed that the teachers are looking for a model of special education service for the city, evidenced by the joint planning and systematization of a common assessment tool for all students with disabilities.

**Keywords:** Special Education, Special Education Service, Inclusion Service

### **Introduction**

The Special Education Service (SES) has been proposed by the current policy of special education as a service that should occur in Multifunctional Resource classrooms. Although the law provides an operationalization for this type of service, in practice this service does not always take place as indicated by the legislation.

There can be many causes for this mismatch between policy for special educational services and the effective and actual practice within the school. One of these causes can refer to the way principals and teachers understand this type of care, i.e., what the conception that the executors have about this service is and how to organize it, which is the function of the principals.

Therefore, performing a case study on how the operation of special education services occur in a certain town can generate new knowledge and information to be compared with other locations.

The present study aimed at describing, from the perspective of teachers, how Special Education Service was organized in Multifunctional Resource Classrooms.

## **Method**

Thirteen teachers participated in the research through a focus group that met for six times.

The meetings lasted approximately one hour and thirty minutes each.

In addition to the teachers and moderator, three research assistants participated in the group. The research assistants were doctoral students in the field of education. The contribution of the doctoral students was to write down controversial issues, the sequence in which the verbal interaction occurred - which helped at transcribing - and assist with the data discussion.

All statements, the teachers' and moderator's, were transcribed with grammatical adjustments in the texts and categorized. The transcriptions were presented to the teachers through Power Point, in each new encounter. At that moment, the data were discussed again and / or expanded by the focus group.

The final analysis was carried out from the initial discussions and additions were made in each meeting. These data were again categorized and subjected to thematic analysis. To Bardin (2011), thematic analysis consists of a framework of analysis that suggests large clippings on a subject.

With this procedure nine themes were composed: 1) Referring the student to Special Education Service (SES); 2) Diagnosis; 3) Pedagogical assessment of the student to Special Education Service; 4) Instruments and/or assessment procedures; 5) Contact with the regular classroom teachers; 6) Contact with parents; 7) Planning; 8) Difficulties; 9) Role of Special Education Service Teacher.

## **Results and Discussion**

In this section, the nine themes identified and categorized will be presented.

The referral of students with disabilities to the Special Education Service has always been a controversial issue. In the specific case of our town, a survey on the population to be served had already been carried out before the participant teachers were hired. According to this survey, most students had intellectual disability. Then, teachers were hired through a public announcement for special education teachers to work in this area. After the hiring, the teachers themselves recruited the students with disabilities in schools with the help of the regular teachers and coordinators.

The diagnosis has always been widely discussed in the area of Special Education.

However, with the new policy, the diagnosis became an instrument without legal value for admission of disabled students in Special Education Service. The admission is decided by the school managers and special education teachers. In addition, many students do not have a medical report or conclusive diagnosis on the disability.

The educational assessment, according to data from the focus group would have two goals: 1) to be an element to refer the Special Educational Services or 2) to be a guide to build a plan for the service itself. However, a construction of an Individualized Education Program (IEP) was not always reported. It is observed that the teaching service was organized in the same way to all students: 50 minutes of individualized service. Thus, at the end of 50 minutes, the service is finished regardless of the activity or the need of the student or teacher. This seems to be a medical model of care, with an appointment and limited time. Why could not a session last shorter or longer?

Instruments and/or assessment procedures

Coupled with the issue of student assessment is: how to assess, its instruments and procedures. The data indicated that there was, until the moment of data collection, a standard procedure for all teachers. Despite they all had training in intellectual disabilities, no instrument was used to assess this population. Interestingly, after the



focus group discussion on this issue, the group on its own initiative began to study procedures and texts on assessment.

Contact with the regular classroom teachers

The need for contact between the Multifunctional Resource Classroom teacher and the regular classroom teacher is cited in several studies on the topic (Manzini, 2012). It is also pointed out by official documents (Brazil, 2009). According to the focus group, this contact is made through meetings, e-mails and during the pedagogical planning.

The operational guidelines for Special Education Services (SES) require that the Multifunctional Resource Classroom teachers must first establish liaison with regular classroom teachers and then provide the services, learning resources, and strategies to promote student participation in school activities. The need to transfer Assistive Technology from the Multifunctional Resource Classroom to the regular classroom is explicit in this guideline.

Contact with parents

The first contact between the Multifunctional Resource Classroom teacher and the parents of children with disabilities was to explain the new service that the school was starting. Next, the parents indicated whether they consented that the child attended the classroom or not. The parents who accepted the service signed a written Informed Consent.

The Multifunctional Resource Classroom Teachers had fortnightly meetings with the sector of the City Hall which was responsible for the area of special education. At these meetings, the implementation of the project in schools and the role of the special education teacher were discussed. It was established that the content of the service should not "redo the same regular class content" that was offered by the regular classroom teacher. This discourse also appears in the federal government official documents.

Planning

At the time data collection was carried out, there was not a planning for Special Education Services yet. The special education teachers were starting this discussion.

The special education teachers together with the staff of the Municipal Department of Education followed the operational guidelines which determines: one of the functions of the special education teacher is "to develop and implement the plan of Special Education Services (SES), to assess the functionality and applicability of learning and accessibility resources" (Brazil, 2009, p. 3).

Difficulties

The most reported difficulties was related to the absences of students from the service; the dissatisfaction of parents with respect to the 50-minute service, which in their opinion is too short; the difference in students' age using the special education service, which broadens the pedagogical content to be assigned; and the difficulty in preparing the Individualized Education Program.

Role of Special Education Service Teacher

One of the discussed topics was related to the role of the Multifunctional Resource Classroom teacher. The public announcement included the hiring of special education teachers to students with intellectual disabilities. However, in practice, the teachers were faced with a wide range of types of disabilities, which caused an initial fear.

Another aspect addressed by the teachers was the area of interest. They were interested and specialized to work with students with intellectual disabilities, but the actual situation forced them to work with students with other disabilities too.

## **Conclusions**

The data showed that:

- 1) Referring the student to the Multifunctional Resource Classrooms (MRC) was initially accomplished by the sector responsible for special education in the city which prepared and presented a list of students. Subsequently, the recruitment of other students with disabilities was conducted in schools by the MRC teachers;
- 2) The diagnosis or assessment of students with disabilities was often incomplete, and the responsible sector of the city used the term Significant Curricular Adaptation or Minor- Significant Curricular Adaptation when there was not a conclusive diagnosis;
- 3) The pedagogical assessment of the student for the MRC was carried out by the special education teachers, but the instruments or assessment procedures were not standardized for all the teachers. In the months that followed, the teachers tried to build an instrument together;
- 4) The contact with the regular classroom teacher was occasional, and there was no evidence on Assistive Technology transference to the regular classrooms;
- 5) The contact with parents occurred initially to inform about the new type of service that the school was offering. This activity with parents consisted of informal visits, and interviews at school without specific instruments;
- 6) The Individualized Education Program was prepared in conjunction with all the SES teachers, required a great collective effort. However, no connection was noted relating the classroom activities to the SES plan;
- 7) The difficulties reported the absence of students from the service, the low participation of parents in the SES, and the turnover of students with disabilities caused by SES dropout;
- 8) The discussion on the role of SES teacher indicated that the documents that legislate on the subject are unrealistic and unfeasible, mainly due to the diversity of students, different ages, grades, and especially because the teachers' formation was focused on intellectual disabilities, despite they all had participated in distance graduate course on SES.

It was concluded that teachers are in search of a SES model for the city, evidenced in the collaborative work to plan and build a standardized assessment, i.e., a common pedagogical instrument to be used with the students with disabilities. This search generates anguish and uncertainty that are shared in the fortnightly meetings.

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## **Features used for students with blindness in educational concepts**

Vanessa Cristina Paulino  
Federal University of São Carlos - UFSCar  
[vanessakju@gmail.com](mailto:vanessakju@gmail.com)

Maria da Piedade Resende da Costa  
Federal University of São Carlos - UFSCar

### **Abstract**

Consistent to the particular learning of children with congenital blindness this study aimed to analyze the features employed by three students (A, B and C) in the definition of school concepts. The participant A used the characteristics linked to the Function (27), the B related Action (50) and the participant C to Function (64). The results offered trends and preferences of the students, important for the development of educational plans.

**Keywords:** Special Education. Congenital blindness. Inclusion. Appropriation of Concepts. Language.

### **Introduction**

Children obtain information through various senses: touch, sight, smell, taste, and kinesthetic sense, which, Luria (1979) defined as basic sources of world knowledge. The vision is indicated as one of the most important for the child to acquire rich information and in less time (Cantavella & Leonhardt , 1999, Piñero , I & Díaz , 2003), as well as a determinant for integral motor and cognitive development (Oliveira & Marques 2004). Thus, the child with visual impairment loss will not only present in this development, but also in others who have some connection with the vision, like language (Ochaita & Rose, 1995, p. 183).

Therefore, the children with blindness, according to Ortega (2003), by the time of language acquisition, repeated speech of the speaker steadily, without however knowing its meaning. Also during this period, you can use some phrases stereotypically. Moreover, you can ask questions related to visual aspects in an attempt to establish connection with the communication partner. This can be considered the beginning of one of the major problems of the language of children with blindness, the verbiage (Ortega , 2003), which is understood as the use by people with blindness, definitions, visual attributes described by sighted people and not of features based on their own perceptual experiences (Cutsforth , 1969).

Thus, educators and parents play a key to the development of children with blindness paper, however, Cutsforth (1969 ) reported that teachers often crave your student with blindness have reference to the experience of others .

Concerning these notes are aimed in this report, part of a research master's analyze the features employed by students with congenital blindness in the definition of concepts covered in class.

## **Method**

Considering the investigative character and objectives of this study, we opted for conducting an interpretive research, from a case study.

### Participants

Three students with congenital blindness enrolled in elementary school, from 1st to 5th grade, to be identified as A, B and C.

### Venue Search

Data collection took place in the classroom of an elementary school, of a large city in São Paulo state, Brazil.

### Instruments

For data collection was built the Protocol Observation of Pedagogical Activities, which enabled the recording of the activities proposed by the teacher. A semi-structured interview script for conceptual Student Assessment, aiming to deepen the perception of the students, the concepts covered in class and for data analysis, coherent objectives of this research was further elaborated Built Table Detailing of Concepts.

### Data Collection

The research consisted of observations during four consecutive school days, in the classrooms in which they were enrolled students with disabilities selected for the study.

### Data Analysis

Data from Interviews for conceptual Student Assessment were fully transcribed and then categorized. Relevant excerpts of the speeches, along with data for Monitoring Activities and Teaching Strategies Protocol, were tabulated, which constituted the framework of concepts that included Detailing: predominant characteristics identified in excerpts of the interviews, which sense / access attributes prevailed, and learning contexts: daily life and /or school, which contributed to the formation of the concept. In this report will be presented only the results for the predominant features of the frame, namely: Action, Comparison, Composition, Deduction, Distance, Physical Function, Location, Not applicable, Sensation and Size.

## **Results and discussion**

Will be presented and discussed by students: A, B and C, the results from the predominant features of the frame Detailing the concepts, which were analyzed with reference in the literature, per participant.

### Participant A

The period in which observations were made in the class tuition participant's room there were 15 activities. Of these , 68 concepts were identified , which , after the categorization and analysis of the interviews resulted in 126 features employed by the student , with : function, physical , action, feeling , compare , location , composition, size , deduction and not inform .

It was able to identify the prevalence of related function (27) information as well as physical characteristics (24), concepts or part thereof, which indicates the importance of people with blindness to know the functions and physical characteristics of concepts covered in class, especially if linked their perceptual experiences.

The Participant A referred to the action of related concepts or some of these features in 23 cases, including demonstrating the use of five concepts through motor movements, which can be understood that they were tied to their perceptual experience of objects: top, rope, bowling, bear (teddy) and window.

When questioned about certain concepts, the Participant A mentioned the feeling (13) arising out of these, which denotes the value of their own experiences and feelings in relation to abstract concepts covered at the expense of other verbal information. The location (nine), the composition (seven) and size (five) used by the participant were associated in certain situations with inaccessible for direct perception concepts, but only possible by means of verbal description, which is necessary for certain learning.

The deduction was used by the participant A as the main feature in four situations. Some of the questioned words were not fully accessible to the student, but they contributed to the associate by: phonology, category and practical experience with other concepts and infer meaning to those words. In addition, the student has not reported information regarding the word asked four times.

#### Participant B

During the observations in the classroom of participant B 14 activities were observed, of which 64 concepts were identified. After categorizing and analyzing these concepts yielded the 132 features, these being: action, composition, function, physical, feeling, compare, location, size, deduction, and not away inform.

The most characteristic designated by participant B is related to the action (50) of concepts or part thereof, being most related to your own living situations. In this case, as in the study by Nunes (2004), the categories used by people with blindness to define 15 concepts were related to behavior /examples.

Participant B made reference to his feelings about the concept or part of it during nine times, allowing to infer that she appreciated their impressions and experiences. Moreover, in three cases the participant B deduced the meaning of important concepts, which highlights his attempt at giving meaning to the questioned words on the basis of references to it (Leme, 2002).

#### Participant C

During the four observations that were made in the classroom, 11 were the proposed activities, which resulted in 104 concepts and the allocation of 233 features, these being: function, composition, physical, action, location, size, feel, comparison and does not inform.

The results show that the characteristic function (64) was the most frequently employed by participant C, as well as by participant A, demonstrating the relevance of this kind of information for blind children. In this situation the characteristic function was largely related to verbal descriptions of the content, which reinforces the need for children with blindness known functions of the concepts that permeate their repertoire, but from its benchmark, the contextualized manner and not just mechanical.

In only 13 contexts participant C was based on their feelings of the concepts covered. As was found that in only nine times the participant C appealed to the comparison of the concept approached with another, despite this being an alternative to approach the unapproachable concept of a perceptual experience. Among the concepts uninformed (four) by the participant C, are: surface of the earth, zebra, hippo and ostrich, all very accessible by direct perception of people with blindness, likely to be seized by the verbal description and the relationship with other concepts of these people repertoire.

### Conclusions

The results indicated that among the characteristics used to assign meaning to concepts that were discussed in class, there was, among the participants, a trend of responses relating to the function, action, physical aspects and composition of concepts. Then accentuated the importance of teachers of students with blindness consider this tendency as a grant for planning activities. It is noteworthy, too, that the pedagogical mediations

promoted should be meaningful and appropriate to the learning opportunities of students with blindness, in order to avoid the prevalence based on solid features not accessible to students answers .

Although it is not possible to generalize the results for all children with blindness, since it only covered a sample of this population, this study provided relevant information for both parents and for educators, regarding some of the routes and preferences of the child with blindness in concept formation process.

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## **A Survey Study of Chinese Pre-service Teachers' Self-efficacy and Attitude to Inclusive Education**

Yajing Feng  
Beijing Normal University, China  
[66215472@qq.com](mailto:66215472@qq.com)

Mian Wang  
Beijing Normal University, China & University of California, United States  
[mwang@education.ucsb.edu](mailto:mwang@education.ucsb.edu)

### **Abstract**

This study surveyed a total of 914 Chinese pre-service teachers about their self-efficacy, attitude and concerns to inclusive education. MANOVA was used to examine group differences of Chinese teachers with respect to such demographic variables as: gender, major, training experience, personal experience with disability. Results show that there are significant differences on self-efficacy and attitude between Chinese pre-service teachers with different gender, majors and interest level of special education training. Implications for policy and practice for improving China's teacher education programs and teacher educators were discussed.

**Keywords** Inclusive education, pre-service teacher preparation, teacher efficacy, teacher attitude

### **Introduction**

Inclusion of children with disabilities in regular schools and classrooms is now a worldwide trend that has been growing in popularity during the last three decades. Several developed countries (e.g., USA, UK, Canada and Australia) have legislation or policies that emphasize an inclusive education model of teaching students with diverse learning needs in regular classrooms. Similarly, many developing countries including China have now formulated policies that support the broader principles of inclusive education to educate students with special needs (Kuyini and Desai, 2007; Wu-Tien, Ashman and Yong-Wook, 2008). While inclusion is implemented in schools, changes in the needs of students at classroom level over this period of time have made it necessary for universities to change their teacher education practices in terms of training teachers for inclusive education (Nougaret, Scruggs and Mastropieri, 2005). Some teacher registration bodies in the Western countries (e.g., New South Wales and Queensland in Australia) have made it a mandatory requirement for all teachers to complete a subject in special or inclusive education (Subban and Sharma, 2006), or have made outcomes related to inclusion mandatory in teacher preparation programs (see Alberta Education, 1997).

Teacher education programs now have a major responsibility to ensure that new teacher candidates are well prepared to include all students into mainstream classrooms regardless of individual difference (Winter, 2006). One way to determine if pre-service teachers are ready for this challenge is to examine their perceived self-efficacy about implementing inclusive education practices. There are also a great number of studies aiming at measuring pre-service teachers' attitude towards inclusive education because

it is also a factor which will exert a significant influence on their performance in working with children with disabilities (Gao & Mager, 2011).

Therefore, the research questions of this study were: 1) what is the current status of pre-service teachers' self-efficacy and attitude towards inclusive education in four-year teacher education programs in China? 2) Do Chinese pre-service teachers with different characteristics in gender, major, training experience, personal experience with individuals with disabilities and interest level of special education training differ from each other on their self efficacy and attitude to inclusive education?

## **Method**

### **Participants**

A total of 943 teachers from 3 different and representative 4-year teacher preparation programs in China participated in this study and returned their completed surveys. After the data screening, we decided to exclude 29 cases with significant number of missing values, and thus the data of 914 participants (96.9%) were used for further statistical analysis. To take regional differences into consideration, those three teacher education programs were selected from the Eastern, Central and Western part of China respectively. Pre-service teachers of different majors and year in the teacher education programs were consideration for the recruitment of study in order to obtain a more representative sample. Table 1 shows the demographics of study participants. Among the participants, 31.7% were from the Eastern region, 41.4% from the Central region and 26.9% from the Western region. Out of 914 preservice teacher participants, 74.1% were female.

### **Survey Instruments**

The Teacher Efficacy for Inclusive Practices scale (TEIP) and Sentiments, Attitudes and Concerns about Inclusive Education scale (SACIE) were translated into Chinese and used to collect data for the current study. The two measurement instruments used in this study have good reliability and validity and have been used in many studies internationally (Loreman et al., 2007; Sharma et al., 2011).

The TEIP was developed in 2011 by Sharma, Loreman and Forlin (Sharma et al., 2011). It is a 6-point Likert scale containing 18 items. All items for teaching efficacy (TE) are divided into three factors: efficacy in using inclusive instruction (II), efficacy in collaboration (C) and efficacy in dealing with disruptive behaviors (DDB). The alpha coefficient for the total scale was 0.89. Alpha coefficients for the three factors ranged from 0.85 to 0.93. Reliability analysis for the total scale as well as factors for each country suggested that the scale provides a reliable measure of pre-service teacher perceptions of self-efficacy for inclusion across different countries.

The SACIE was developed from several related scales by Loreman, Earle, Sharma and Forlin in 2007 (Loreman et al., 2007). It is available for use in order to identify the perceptions of pre-service teachers in preparation for teaching in inclusive classrooms. It is rated on a 4-point Likert scale with 19 items in total, which are divided into three subscales: Sentiments, Attitude, and Concerns. Looking into the scale items and taking the research question into consideration, only the Attitude subscale was used when collecting data for this study.

### **Data Analysis**

Multivariate analysis of variances (MANOVA) was conducted to examine mean differences of Chinese pre-service teachers on the dependent variables of self efficacy and attitude, using demographic variables mentioned above as independent variables.



Post hoc tests (Scheffe's) were run to detect differences among subgroups.

## **Results**

Table 2 reports the mean scores and standard deviations of all subscales of two surveys. Because the TEIP is rated on a 5-point Likert scale, the highest score of TEIP is 5. The means of overall teaching efficacy in inclusive education of preservice teachers are around 4, suggesting that the participants have relatively high self efficacy of implementing inclusive education in classrooms, but efficacy in dealing with disruptive behaviors is the lowest. In addition, the mean scores of attitude indicate a slightly positive attitude of participants toward including children with disabilities in general classrooms. In summary, the mean scores demonstrate that although preservice teachers feel that they could perform well in inclusive settings, they still concern about some issues brought by inclusion. The results of multivariate analysis of variance (MANOVA) reveal that: 1) there is a gender effect on self efficacy of inclusive education where male pre-service teachers have significantly higher level of self-efficacy than female teachers; 2) Major affects pre-service teachers' self efficacy of inclusive education. The pre-service teachers in special education teacher preparation programs have the highest self-efficacy level; the study participants from other education related majors than special education (e.g., early childhood education, and education administration) show significantly lower level of self-efficacy and more negative attitude to inclusive education as compared to those from other majors (e.g., special education, liberal arts and sciences); 3) pre-service teachers who have higher interest level for special education training have significantly higher level of self-efficacy and positive attitude towards inclusive education than those who just see special education training as dispensable (see Tables 3-5).

However, no significant difference was found between pre-service teachers who were in different years of teacher programs on TE and Attitude. Also surprisingly, other factors such as received professional training on special education, personal experience with disability, and knowing the term Inclusive Education failed to yield significant influence on preservice teachers' level of teaching efficacy and attitude towards inclusive education (see Tables 6-9).

## **Discussion and Implications**

The present study attempted to identify factors that may have a significant influence on pre-service teachers' efficacy and attitude towards inclusive education. MANOVA findings reveal significant difference among pre-service teachers by gender, different majors and interest levels for special education training. In particular, male pre-service teachers have higher self efficacy of working with students with disabilities than their female peers. The pre-service teachers from majors within education other than special education have significantly lower teacher efficacy among all pre-service teachers and also tend to hold a more negative attitude to including students with disabilities in general classrooms. The attitude of pre-service teachers in other liberal arts majors except for education towards inclusive education is more positive than those in science significantly. In addition, pre-service teachers with highest level of interest in special education training reported significantly higher scores both in teacher efficacy and attitude. However, other demographic variables such as year in teacher education programs, received special education training, personal experience with people with disabilities among relatives or acquaintances, knowing the term of inclusive education show non-significant associations with the scores on teacher efficacy and attitude. Some of these could be explained by lack or inefficient of special education training provided

to pre-service general education teachers in China now. In other words, actually the scope of training they received does not influence their teacher efficacy and attitude at all. Also, with the increase of time in teacher education program, their efficacy and attitude towards inclusive education remain roughly the same because their pre-service programs hardly contain courses or other kinds of professional training relevant to special education and children with disabilities.

The findings of this study have important implications to both researchers and practitioners in China since some of the issues addressed in the study have not been given enough attention and have yet affected teachers' professional development and quality of teacher preparation programs. Thus understanding of teacher education issues can finally contribute to the benefits of all children with special needs. There are some important implications for practice based on the findings of this study. For example, female pre-service teachers should be given more attention in discovering how to improve their teaching efficacy in inclusive settings since in the reality the majority of special education teachers in China are female. In addition, pre-service teachers from all majors in teacher education colleges should be required to take some special education courses. Such policies of mandatory special education training for all pre-service teachers should become the priority of teacher education reform in China and other developing countries as well. Furthermore, given that higher level of self-efficacy of preservice teachers is correlated to stronger interest in special education training, motivating pre-service teachers in teacher preparation programs for gaining more interest in special education issues seem to be important and useful to helping them build their self-efficacy. However, there are still other possible influencing factors of preservice teachers' self-efficacy and attitude towards inclusive education. For instance, it is commonly expected that whether preservice teachers have received professional training in special education or inclusive education would impact their self-efficacy and attitude towards inclusive education according to previous studies. But the results of this study failed to provide supporting evidence to confirm it which makes further exploration and inquiry necessary. In addition, more factors such as teachers' attributes, school environment, and perceived social support that may influence preservice teachers' self-efficacy and attitude towards inclusive education should be examined in order to improve and reform current teacher preparation programs to better meet the demands brought by increasingly diverse students in today's schools.

Inclusive education is no longer a regional matter, and it is indeed a worldwide educational issue. As an open and comprehensive system, inclusive education has an ultimate goal of safeguarding the rights of children with disabilities and benefiting all children and families. Undoubtedly, high quality teacher preparation and performance promoted in inclusive education will definitely lead to better education to all children including those with special educational needs and their families. Also, teacher preparation is an initial and yet essential part of teachers' professional development, and many challenges faced by teacher educators and policy makers are universal around the world.

### **Conclusion**

This exploratory survey study inform us that Chinese preservice teachers in general have relatively high self efficacy of and positive attitude to implementing inclusive education. Factors such as: gender, college subject major, and interest in special education training seem to affect Chinese preservice teachers' self efficacy and attitude towards inclusive education.

Although a lot of issues identified in this study are based on Chinese context, many of

them might be relevant to teacher education for inclusive education in other countries or even worldwide.

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## **How pre service teachers in special education experience their professional identity**

Bella Gavish

Levinsky College of Education, Tel-Aviv, Israel

[Bella.gavish@gmail.com](mailto:Bella.gavish@gmail.com)

Sari Bar-On

Levinsky College of Education, Tel-Aviv, Israel

[baron.sari@gmail.com](mailto:baron.sari@gmail.com)

### **Abstract**

This article presents the findings of a study examining how pre service teachers in special education experience their professional identity. The research findings indicate that pre service teachers perceive their professional identity as operating in four main spheres: people with special needs – "Parallel world"; the circle of those engaged in special education – "Altruists who change the world"; the field of special education – "Extreme difficulty, mystery and closeness"; the role of the teacher in special education – "Complete care of students and parents." There are two foundations common to all these spheres: the fantastical, abstract, extreme foundation; and the preserving, protecting foundation. In the view of the trainees, the four spheres of special education, with their two common foundations, will support the discovery and rehabilitation of the teacher's Self, injured as a result of the wrongs of the past. They will empower the teacher's Self, but within safe and familiar boundaries. The trainees' perceptions present a great challenge to special education training programs, which are required today to prepare trainees for a situation that requires openness, complexity and flexibility, working in broad learning environments, an in-depth organizational understanding, skill in cooperating with other staff, and the ability to lead work teams.

**Keywords:** special education teachers, pre service teachers, teacher training

### **Introduction**

The teacher's professional identity is described in the literature as a multi-faceted and dynamic structure, including constant interaction between the teacher and his or her environment, and representing a key component in structuring the totality of his work (Van den berg, 2002). The roots of professional identity lie in the beliefs about teaching acquired in a person's early life experiences, in his educational experience as a child, and in a vision of the social reality and the needs of the learners (Lortie, 1975; Hattingh & de Kock, 2008). These include a perception of teaching mainly in terms of reciprocal relations with the students, characterized by good fellowship, mutual respect, honest intentions, and common areas of interest (Vonk, 1995). These beliefs are rigid and "durable" in the face of changes in the training process. They are used to solve problems when starting out in teaching, and create unrealistic expectations that are shattered on embarking on teaching, in light of the complex and difficult reality (Hagger & McIntyre, 2000).

Teachers in special education are a group that is involved today in enormous change and is required to recreate its professional identity. The inclusion of children with special needs in the general classroom over the past 30 years has expanded the teacher's tasks, added dimensions that did not exist previously, and made them complex and demanding. Teachers in special education now work in a variety of learning environments, ranging from self-contained academic classes or resource rooms to more open learning environments in the school. They are required to achieve more ambitious targets, to answer the increasing range of differences in culture, language, learning styles, differences and skills, to hold a richer repertoire of strategies, to teach varied knowledge content to different age ranges, and to cooperate with a diverse collection of professionals (Eizenman, Pleet, Wandry, & McGinley, 2011; Hoover & Patton, 2008; Lamar-Dukes & Dukes, 2005; Symeonidou & Phitka, 2009; Yourk-Barr, Sommerness, Duke, & Ghere, 2005).

In light of the complex role of the special education teacher, and in light of the important place of the beliefs of students coming into the training programs in shaping their professional identity, there is a notable lack of research examining these issues among special education students. This is the subject addressed by the present article. The aim is to present the findings of a research examining how pre service teachers in special education who are about to embark on their professional training experience their professional identity.

### **Method**

The study was carried out as a qualitative research, in a constructivist spirit, in order to learn in depth about the phenomenon under examination by asking the people experiencing it (Hutchinson, 1988; Guba & Lincoln, 1998). The study participants were 98 special education trainees about to start their professional training at one of the large teacher training colleges in the center of the Israel. The research instrument was an open questionnaire comprising five questions: Why do you think people choose the profession of special education? Why did you choose to work in special education? What are the roles that you think the special education teacher fills? What training do you think you need to receive in order to be a special education teacher? What are your expectations of special education teacher training? The participants filled out a questionnaire on the first day of their college studies in the "Introduction to Special Education" course. They were asked to answer the questions in writing, in detail and in depth.

The data were analyzed by the qualitative method, according to the principles of the "grounded theory" method (Strauss & Corbin, 1990), in five stages: the first stage was identifying and defining initial categories, the analysis unit being the statement. In the second stage, each category was defined in a more detailed way, such as to indicate more accurately the unique content found within the theme.

The third stage involved refining the distinctions and shaping the final system of categories. In this stage, we reinforced the internal validity of the findings by enhancing the quantity of data belonging to each category, and ensuring that the structures do indeed exist in the situation in question, and by having them read by two outside judges. In the fourth stage, we looked for connections between the categories and identified the core category. In the fifth stage, we constructed the grounded theory (Gibton, 2001).

## **Results**

The findings of the research depict a unique world-view that is closely connected to the teacher's past and his innermost personality. The findings show a wounded Self hoping for discovery, rehabilitation and empowerment. This is the core category. This discovery, rehabilitation and empowerment may be realized in special education, which is seen as a fantastical, spiritual and extreme world, on the one hand, but is also closed, conservative, and with safe boundaries. The fantastical element and the security are the structural foundations of each of the four components of the profession, representing four categories: people with special needs – "Parallel world"; the circle of those engaged in special education – "Altruists who change the world"; the field of special education – "Extreme difficulty, mystery and closeness"; the roles of the teacher in special education – "Complete care of parents and students". Between the Self looking for "healing" and these aspects of the profession of special education, there is a constant movement of the fantasy and the preservation.

### **The Self – discovery, healing and empowerment**

The research participants noted that special education as a profession is chosen in order to compensate for past experiences – injustices of society and the education system, such as disregard and neglect, done to them or to those close to them because of their special needs. Past injustices are described in a hazy and furtive manner. They form a motive that is intimate and not apparent to others; only the teacher himself knows "why he or she has come to this profession." The problematic feelings caused as a result are described as "deprivation," "helplessness," "fear," "endless disappointment." Both the experiences themselves and the form of the compensation for them are unexplained, and are almost abstract; it is not clear in what way working in special education will compensate for years of mistakes and injustice.

"There are people who choose to study the profession because they had difficulties when they were young and the teachers did not know how to cope with them and help them."

"... They know someone, a friend or acquaintance, with a particular disability, they are more familiar with the difficulties of adjustment, with their way of thinking. Someone who sees the system's inability to provide an appropriate answer, and as a result the person has fallen between the cracks, and the life of this dear friend has been affected over the years, even after being in this system. You know the family's fear, the expectation of the relatives, and the endless disappointment because of this disability."

In practice, the trainee teachers have already "tasted" the potential of special education as a tool for empowering the Self. They talk about their personal early experience with special education, and the discovery of their own abilities in working with people with special needs, the enormous satisfaction it offers, and their desire to repeat these experiences in the future. The stories usually include the same extreme, fantastical components: the student volunteered in the past to work with a person or group of people experiencing great difficulty and rejection, with many behavioral, social and learning difficulties, coming from a tough family background. The student succeeds in being accepted by them, and also to accept and include them. He feels comfortable in their company, without fear, he does not flinch from them, and has a very special relationship with them. In some cases, he leads them to exceptional learning achievements. The student achieves his success through creative, unusual and non-standard methods, producing enormous gratitude and a sense of considerable satisfaction. The fantastical foundation is manifested in the use of extreme words: "having the greatest difficulty," "enormous improvement," "indescribable happiness," "tremendously grateful," "really... includes them," "satisfaction... flooding through me."

Alongside the fantastical components is the conservative foundation, manifested in a natural ability to work with people with special needs, the existence of inherent and consistent qualities of empathy, acceptance and openness that enable such great successes even in the absence of any training.

"Ever since I was a child I have had experience with children who do not have special needs (at least outwardly), and I connect well with them, include them, get them. From there I began to take an interest in special education, because it involves taking things up a level."

"When I was in the Scouts, I came across the inclusion of children with hearing disabilities in a regular scout troop... and when I got to know them one-on-one I saw how much they enjoyed themselves, and how grateful they were for the opportunity to join in and contribute... During my army service I was able to help a lot of soldiers with a poor socio-economic background, and their gratitude gave me great satisfaction. I understood that this difficult work is very worthwhile and satisfying in the end."

The Self is present in full force in the expectations of the trainees that the training course will reinforce their choice of profession – strengthen their love of the profession and enhance their passion for it, their energy and motivation to study and engage in it. Furthermore – the trainee teachers expect their training to validate their view of special education, and expect to find a fit between the content of the training course and their prior position with regard to the roles of the special education teacher. In other words, the trainee teachers have the expectation that their training will not only prepare them to be good special education teachers, but also to be good teachers according to the criteria by which they themselves assess teachers, according to the way they imagine special education teachers: caring, warm and attentive, loving their students and giving themselves to them wholly. They influence their students, are part of their lives, sometimes even their whole world. They have high aspirations for their students, endless belief in their abilities, and do not let them get away with anything. The special education teacher is very determined, and prepared to undergo lengthy processes in order to achieve results that may not always be immediately apparent, but are of enormous significance.

"I expect support for my choices."

"My expectations of the training course are first, that it will make me enjoy studying the profession even more, that it will fill me with the strength and desire to aim high with my students; and secondly, that it will give me all the tools I need to be a good teacher, a caring and attentive teacher, who can promote her students to the maximum, in the best possible way. That I will know how to be professional and also loving; that I will always remember that the sky is the limit."

People with special needs – "Parallel world"

People with special needs are described as being dichotomously different to people without special needs. On the one hand, they are described as the toughest population group, and on the other hand, as a loving and pure group. Self-empowerment will be by means of the sense of ability to work with such a difficult group, while the preserving foundation is manifested in the acceptance of unconditional love and the return to a safe world.

A difficult population group

People with special needs are described as special people, different "in every sense" from people who do not have special needs – weak and sensitive, having difficulty and representing a challenge, rejected by an education system that lacks professional

knowledge, and by society that judges them based on its prejudices. They are a source of shame for their parents, who find it hard to deal with them. It is the student who will help these people in the future. The student will undertake responsibility in the place where society has failed.

"Our society does not like children with problems, such as children who are retarded or have learning disabilities. Many teachers ignore them and their needs, they are left at home and not sent to school, and this is not because their parents don't love them but because they don't know how to handle them, and are embarrassed to have a child like this. These children are not treated and do not receive what they deserve, both because of the language and because their parents object. I decided to study special education in order to help these children and improve our society. I think that it is wrong to neglect these children because of superstition or because we don't know how to help them."

#### A loving, pure population

People with special needs also have another aspect: this is an "amazing" group, innocent and sensitive, with constant *joie de vivre*, endless giving, and a pure, boundless love. People with special needs are not judgmental towards others, and accept people as they are. Their world is so different from the world of other people that it is called a "parallel world." Working with them will bring the teacher back to lost pastures – to authentic human warmth, in which he or she will be loved and accepted because of who he or she is.

"This population symbolizes things that are gradually dying out – innocence, endless love, unconditional love, sensitivity, and constant *joie de vivre*. The profession opens up a window for us onto the "parallel world," and the encounter with them helps us to preserve these endangered things, gradually and with sensitivity, and the worlds meet, and each one takes the other into his world."

#### The circle of those engaged in special education – "altruists who change the world"

Students describe their involvement in special education as belonging to a select circle of people with lofty qualities, a fierce need to give and to change the world, and the inherent ability to put this into practice. These perceptions empower the student by allowing him or her to belong to an exceptional affiliation group, while at the same time remaining within safe boundaries: his or her affiliation with this group is natural, and in fact, is his or her mission, not requiring any upsetting of the existing order.

#### Giving

People who choose to help others as a profession are described in terms of empowerment: they have "a great heart," "a love of mankind," and "a fierce desire" to help "without limit." This is giving that comes from a "pure and real" place, out of passion, attraction, life ambition, "love of mankind," "compassion," "altruism," and an inner pull towards people in difficulty. Furthermore, this giving is almost entirely caring and emotional. It includes giving love and warmth, support, direction, leading, and is described in abstract, spiritual terms. Giving is total and absolute, and this has three meanings: first, teachers give everything they have in them, they devote their life to their students and leave nothing for themselves; giving is the essence of their aspirations. Secondly, giving encompasses the entire world of the recipient. It "paves the path of life," gives "a different life," and has the power to change the person's expected path in life. Thirdly, the teacher alone is the giver, and by his or her act of giving, leaves no room for others. Without him or her— people with special needs will be left "without an answer." In fact, his help is given in cases where success appears impossible and in places where others have failed.



"Sometimes it is simply the passion for the profession of help and treatment. There are people who are attracted out of compassion for special populations, and people chose the profession in order to realize their ambition to help."

"The profession is very closely identified with giving to others and altruism... the desire to give people with disabilities the opportunity of "a different life," better than they could expect."

### Change

People in special education change society, which lacks values such as inherent love, in which people lack the desire to learn, lack respect for others, are contemptuous and hurtful towards each other. It is a society that has failed to integrate children with special needs, and in practice, has given up on them. Its attitude towards teachers is inappropriate, hurtful, and detracts from their status. The student – by belonging to the select group – will heal this failing society and save it from itself. Special education teachers are described as caring people with an environmental and social awareness, people who take the initiative, have enormous ability to influence, and have set themselves the goal of paving the appropriate way for people with special needs into the community, society, the country, and the world as a whole. By choosing the field of special education, they hope to create a better world, a more fitting life, and an ethical and safe future for "the future generation." The person choosing special education wants to "generate" decisive changes in the "foundation stones of education," in the "critical moments of the child's development," "leaving his mark" behind him. The change, like the giving, is described as an abstract, spiritual concept: its value is such that a small change has the power to change an entire life.

"The desire to influence and generate some kind of change in the appearance of society... the population that they work with is children and young people at the stage of acquiring knowledge and developing, and this is a critical stage at which the educators meet them and have the opportunity to have some kind of influence on their lives, and perhaps to improve something in their lives, and to teach them knowledge and values that will accompany them in the future. People who choose this profession know that the children of today are the future of tomorrow, and in order for us to have a better future we need to invest today in a better basis and to give young people values and knowledge... I think that people choosing this profession are people who want to influence society and the communities they live in, and to influence the country they live in, and even the world."

"Some of them feel that it is necessary to generate change in education as a whole, and therefore take up this profession... I want to give the next generation the values with which I was brought up: love of the country, fellowship, personal example, leadership, and giving to others."

### The choice, the mission

Alongside the fantastical descriptions of special education teachers, there is also the protective, secure foundation, which is that the qualities and outstanding abilities have existed "forever," from birth. The students' lives have contained "early hints" of their future, in the form of qualities such as knowledge, motivation, desire, and patience. These qualities were just waiting for the right time, to be used for those in need of them more than anything else. The inherent existence of the ethical values of learning and courtesy is what makes it possible for those working in special education to change the world. Furthermore, these are almost intrinsic qualities that are passed on. The person is born with a set of moral values that suit work in special education and that wait for the moment of need to be realized. Belonging to the group of people involved in special education thus does not require dramatic changes, but mainly the utilization of character traits for the purpose for which they are intended.

"I have within me the knowledge that with the necessary know-how, the unlimited motivation, and the fierce desire to be there for every step of the process, it will be possible to achieve everything."

I 'take advantage' of my considerable patience in order to help, teach, improve and promote every child, and give my entire self over to this group.

These early hints of choice are sometimes accompanied by a path in life that leads to the profession of special education. The teacher has the obligation to help, and this knowledge has always existed within him or her. Below we find almost prophetic motifs indicating that the student, in fact, does not choose the field of special education, but is chosen by it. His path in life is entirely directed to the fulfillment of his or her mission.

"I feel that because I grew up with a silver spoon in my mouth... it is my obligation to help people who were not born and brought up as I was, to achieve a slightly better life or routine."

"It is my mission to educate and to change, the entire path of my life proves this to me, all my successes and the little changes I have made. I see myself as an educator in the fullest sense of the word.

The field of special education – extreme difficulty, mystery and closedness  
The field of special education is described as taking place in the most difficult and mysterious personal and professional space. At the same time, it is a very closed and isolating field. The student will be empowered through training to cope with a tough world, while security lies in the boundaries it guarantees to those engaging in it.

#### Extreme difficulty

The enormous challenge of special education lies in the considerable attention that is required of those engaging in it, the effort that is demanded, and the lengthy processes required in order to achieve results that are not always clear and obvious, and sometimes do not exist at all. Special education is education "in the toughest places," in places where others are not capable of going. Students believe that in their work they will come up against "a painful reality," "tough sights," inability to anticipate the future, exceptional and unanticipated incidents with a psychological significance, such as outbursts by students during the lessons.

"I think that I will find a great deal of satisfaction in special education, because working in this field is harder, more challenging, the results are not directly visible, and there is a lengthy process with the child where in the end, if you succeed, the satisfaction is enormous."

"Going into this field is going into the unknown."

"I know that what I see will be tough at first, and so it is necessary to have the longest and most diverse practical experience possible."

#### Mystery and closeness

The field of special education is perceived as being hazy, shrouded in mist and mystery, a field in which you never know "what tomorrow will bring," a field that is almost mystical, and that is chosen because of these qualities. This is a closed world, known only to those involved in it, and the trainee teachers are looking for a "glimpse" into it, a "taste" of it, and to "open a window" into it.

"The field is very interesting, because it is difficult to explain. People choose this field because it is a little bit unknown, they are trying to understand what exactly takes place there, why it happens. They want to understand what it is made of, they feel a certain curiosity."

"I find that not knowing what tomorrow will bring is fascinating. "

#### The role of special education teacher – complete care of students and parents

The special education teacher is described as someone who is "more than a teacher" and even "more than an educator." What he does is not just teach lessons; he does not teach subjects such as Bible study or arithmetic. His role is far more significant than the role of education and regular teaching.

"In my opinion, the special education teacher should be more than an educator." "This is not a regular teacher teaching Bible or arithmetic."

In the view of the special education trainees, the role of the special education teacher is related to just two "role holders": (a) students; (b) parents. We did not find any other professionals apart from the teacher – either in school or outside it.

#### The student

Special education teachers serve as a role model and example for their students, they mediate between the student and the world, deal emotionally with students, diagnose their difficulties and find solutions, inculcate life skills, values and ethics, and teach theoretical material – mainly arithmetic and reading – "at a basic level" and "as far as possible." The empowering foundation is manifested in the absolute place of the teacher in the child's life, filling the student's entire being, and in fact, enabling his life. The preserving foundation is manifested in the closed and fenced-in nature of this world.

#### The teacher serves as a model and example for his students

"The special education teacher is a role model for his students. His role is to be a "model and example for the child or the person with special needs, and serve – through his personality – as an example of appropriate values and behavior in society. The teacher has enormous influence over the child: he is endowed with "inner strengths" that change the child's personality and development, and even shape them."

"The role of the teacher is to serve as a model and example. His words, his actions, his inner strengths have a great effect on the student's personality and development."

"The role of the special education teacher is to be a model and example for the child / adult with special needs. In this way he will know, through the teacher and with the teacher's help, what is the best and most appropriate way to behave. In fact, the special education teacher serves as a role model for the person with special needs."

#### The teacher mediates between the child and the world, and "real life"

The special education teacher is the mediator between the child and the world of people without special needs. The students make an almost dichotomous distinction between the world of the child with special needs and "real life," "the outside world," "ordinary society," "the world," "the normal world," "the real world," "the rest of the world," and "real life," in their words. Sometimes the parents are also in the outside world. The teacher, who serves as an "emissary," a "bridge," a "thread," is the only connection between the child and the world, he or she is the "key to communication" between the child and real life. Sometimes the teacher is the first person in the ordinary world with whom the child has contact; without him or her, the child would remain in a closed and cut-off world.

"The special education teacher is the child's intermediary with ordinary society, with the outside world."

"He is their key to communication, and sometimes can also serve as an intermediary between them and the rest of the world."

#### The teacher as a therapist for his students

Although the special education teacher teaches, "teaching in special education is mainly therapy." In addition, regular therapy is the foundation that enables learning. As a therapist, the teacher ensures his student's emotional well-being. He is sensitive and empathetic to his students, handles their difficulties, connects with them, listens to them, is intimately familiar with their personalities, supports them and strengthens them. The special education teacher believes in the children, empowers them, strengthens and encourages them, and gives them a feeling of self-confidence and a sense of self-efficacy. The teacher provides a willing ear for his students, and is a partner in their experiences.

"He is also kind of therapist, because teaching in special education is largely therapy. There are many elements of learning, but in order to enable learning there must be regular therapy, naturally depending on the degree of disability."

"The role of the teacher is to support the child, to provide him with a willing ear when needed. Not to give the child the feeling that he is different, because after all he or she is like everyone else."

#### The teacher diagnoses the child's difficulties and finds solutions

Another role of the special education teacher is to diagnose the child's needs and behaviors, and identify his or her difficulties and his or her talents. The teacher must uncover the source of the student's problems and get to know them in depth, study previous diagnoses, and check how correct they are. In this way, the teacher will be able to create an individual program for the student, and a study framework that is "special to him."

.. First of all, to try and understand the source of the problem so as to help the child find ways of coping and teach him to tools that will make it easier for him in the future, in his studies and in life."

.. To understand the student's disability and work with him according to a program that has been specifically adapted for the child."

#### The teacher teaches life skills, values, and ethics

The teacher's role is to teach the child's life skills that will enable him or her to be independent, integrate in society, and live a full and satisfying life. The teacher also has to teach norms of accepted behavior, and appropriate ethics and values.

"To teach him to cope with basic needs of everyday life, preparing the child for the most independent life possible, and the transition to adult life in the future."

"First and foremost, the teacher serves as the student's mentor with regard to ethics and values."

#### The teacher teaches theoretical material at a basic level

The teacher has to teach specific "theoretical material," mainly arithmetic and reading, and only to the extent that it is possible. Teaching these subjects in special education is described in a very hesitant and doubtful manner. The teacher is not supposed to make things difficult for the students, not to be a source of stress, he or she must be restrained and exact, interesting and effective. The teacher's aim is to enable the students to fulfill

their abilities, and this is a difficult aim to achieve. This is because students with special needs lack the ability to learn regular academic content and have low level cognitive abilities.

"Basic knowledge of arithmetic, Hebrew (reading)... In each field, to bring the child to his maximum, which is a difficult task in and of itself."

"The special education teacher's role is to teach theoretical material as far as is possible."

#### The parents

The parents of children with special needs, as the trainees see it, do not discern their child's disabilities and therefore have too high expectations of them. In cases where they do see the disability, they take it very hard, exacerbating their distress and leading to breakdown. Parents are seen as helpless and lacking the ability to cope. They see the disability in a subjective way, and are "emotionally involved," and therefore the decisions that they take with regard to their children are instinctive, and not "the result of thought." Parents want to help their children, but by virtue of their parenthood are unable to do so – they do not know what to do and how to behave; sometimes they are not even capable of connecting with their children. Unlike the parent, the teacher is objective, and therefore succeeds in understanding that the child has disabilities, and where the parents "do not know and simply expect of the child," the teacher "discerns that there is something a little different from the norm," and succeeds in choosing the best treatment program for him". The empowering foundation is the high position of the teacher, above the parents, while the preserving foundation is expressed in the description of the teacher as an objective therapist, moderate and reassuring, who knows what to do at times of distress, as a guide who acts rationally and with composure, and knows how to make a considered choice of the appropriate program. This is by contrast with the uneasy parent, who acts instinctively, on the basis of distress and immediate urges.

"There are enough cases in which the child's parents are not prepared to accept the fact that their child has handicaps or disabilities, and do not know how to cope with this fact in particular, or the treatment required in general.... On the other hand, the teacher sees the child through objective eyes, and so is able to choose the most appropriate and effective treatment program for the child."

"The parent of a child who is developmentally delayed or has a disability sees him differently to the way the teacher sees him. The parent sees that the child has a certain handicap, but sees him with subjectivity, because he is emotionally involved. He wants to treat his child in the way that seems best to him, but for the most part takes his decision based on emotion and instinct, rather than thought."

#### Sometimes the teacher serves as a substitute for the child's natural parents

"In my opinion, the special education teacher is a kind of parent. The special education teacher spends even more time with the child during the day than his family does.

"The students spend half of their life at school, so the teacher also plays the part of mother/father."

The teacher is a mentor and therapist for the parents. As a mentor, the teacher instructs and guides the family, gives them the information they need, and teaches them to believe in the child. The teacher teaches them how to help the child's development, and gives them tools to cope with the child's situation. As a therapist, the teacher is aware of the parents' suffering and difficulties, and so he or she contains them, provides them with a willing ear, and is patient and sensitive towards them. The teacher encourages and consoles, and gives them hope. The teacher is a "sensitive" and "tolerant" person, and treats the parents in a "proper and considerate" way. The parents need guidance in order to ensure that they do in fact understand the child's handicap, follow the teacher's instructions at home, and help the child to make

progress.

"The special education teacher serves as a kind of therapist, a willing ear for the parents. The educator is the person to whom the parents come for information about their child at school, and in special education greater sensitivity and patience is needed towards the parents, because their lives are already harder as they raise their child. It is necessary to know how to work with them in a proper and considerate manner."

"The teacher should be in constant contact with the child's parents to ensure that the same treatment and progress continue when the child is not in the school framework, and that the parents understand his limitations and do not demand more of him than he is capable of."

## **Conclusion**

Pre service teachers see themselves as belonging to an elite group of people who view their mission as giving to others and changing the world. This is a closed group of people, with inherent qualities, who have in fact been intended for the position for many years before coming to it. The special education teacher deals with people with enormous difficulties, in a field requiring mental strength, a mysterious field that is known only to those involved in it. The teacher is only in contact with students and their parents. He is, in fact, the entire world of the students and serves as their bridge "to the ordinary world."

The fantastical components are manifested in the enhanced abilities of the selected group of special education teachers, in their absolute place in the lives of their students, and in their involvement in an exalted, spiritual world in which more is concealed than is revealed. The preserving components are manifested in the professional closedness, the determinism involved in the choice and the mission of those involved in it. Healing of the Self is found in the perception that they can create a new world: when the teacher comes to the world of special education, he or she recreates it to suit the teacher and his or her students. It will be an almost primordial world, to which the teacher will restore things that have "disappeared from the world," such as "ethics," "values," "courtesy," and especially, fair treatment for people with special needs. This will be a unique, closed world with no connection to the world that is parallel to it. The teacher is the exclusive soloist in this world: the teacher acts alone on behalf of the students, without partners – and without areas of knowledge that go beyond those dealing directly with the teacher and the students, lacking learning environments, a community, and organizational systems. In fact, the teacher does not need partners: the teacher is "everything" for the students. The teacher is intended for the students – chosen for them – and the students are intended for the teacher. The connection between them is one of parenthood, sometimes of dependence: the teacher devotes his or her life to the students and gives them "a different life," but also promotes his or her own objectives. Moreover, since the people going into special education are warm and loving, and "because children with special needs need a great deal of warmth and love, they complement each other." The Self of the student is thus intertwined with the Self of the teacher, and the two together fill an entire world.

The choice of special education is made in advance, and the person knows his or her mission many years before becoming a teacher. There are no deliberations over the choice, no conflicts are described, and no other professions are considered when taking the decision with regard to the study track. The talents of the special education teacher are inborn and embedded in his or her personality, and belong only to a defined group of people. The students feel that they know their future role, and that they come with clear and solid knowledge. The main role of the training is to reaffirm and augment existing characteristics. The deterministic character of the world of special education is manifested in the dichotomous and simplistic perception that divides the world into

"good" versus "bad," "parents" versus "teachers," professionals versus those who are not professional, general teachers versus special education teachers, and so on.

The pre service teachers come into the training programs with clear and coherent positions with regard to the teacher's world, and expect them to be confirmed and strengthened. The perceptions of the special education pre service teachers of their professional identity presents a great challenge for special education training programs. These are required today to prepare special education teachers for a very different reality to that which they anticipate, a reality in which what will actually be required of them is openness, complexity, and flexibility. Special education teachers work in broad learning environments – which also include children without special needs, other professionals, parents, and members of the community. They have to relate to the general environment of the child, and the broader circles of life, they need broad and innovative disciplinary knowledge, and must have an in- depth organizational understanding, the ability to cooperate in a team, and also the ability to lead work teams (Brownell, Sindelar, Kiely & Danielson, 2010). Teacher education has to meet the trainee teacher's need for empowerment, but at the same time has to shape his or her position towards openness, flexibility, and trust in others.

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## **“Disproportionality: Looking through an Alternate Lens”**

Mary Ann Smorra, Ed.D.;  
Georgian Court University, Lakewood, NJ, USA  
[Smorra@georgian.edu](mailto:Smorra@georgian.edu)

Lindiwe Magaya, Ph.D.;  
Georgian Court University, Lakewood, NJ, USA

Dale Marshall, M.A.  
Georgian Court University, Lakewood, NJ, USA

### **Abstract**

Although special education has made significant strides in its policy, research and practice over the years, the debate on the disproportionate representation of minority students in special education has continued. According to Oswald, Coutinho, Best, and Singh (1999), disproportionate representation is the extent to which a given ethnic, socioeconomic, linguistic, or gender group is likely to be placed in a specific disability category. In considering the issue of disproportionality within an ethnicity context, this study examined the archival data from district-level state test results of 3rd and 4th grade students in language arts literacy (LAL) and math in relationship to additional placement, classification, gender, ethnicity and SES information. The findings emphasize the underrepresentation of Caucasian students in special education programs. Therefore, the findings approach over representation from a less commonly used perspective in order to understand and determine an equitable course of action in identifying students for special education services.

**Keywords:** Disproportionality, Over representation, Underrepresentation, Ethnicity, Poverty

### **Introduction**

Disproportionality. Although special education has made significant strides in service delivery, the disproportionate representation of minority students in special education has persisted over time. A variety of definitions and causes of disproportionality pervade the literature. According to Oswald, Countinho, Best, and Singh (1999), disproportionate representation is the extent to which a given ethnic, socioeconomic, linguistic, or gender group is likely to be placed in a specific disability category. Disproportionality is also defined as the representation of a specific population in a given setting that exceeds the expectations of representation for that particular group. Moreover, the representation of the group is substantially different from the accounting of others in the same category (Skiba et al., 2008).

Students from diverse racial, cultural, linguistic, and economically disadvantaged backgrounds are overrepresented in special education services. Many factors have been found to contribute to this dilemma. Variables considered by Hosp and Reschly (2004) cite demographic and economic characteristics of children and/ or the given school

districts as comprising two main categories. However, they also point out educators have little jurisdiction over these variables. Noted is the absence of variables specifically connected to special education eligibility. Turning attention to the classroom is an extension to factors over which educators, through their efforts, do have control.

Over representation and Underrepresentation. The literature on disproportionality has focused on the identification patterns for African American students, and, with less frequency, Latino, Asian and Native American students (Sullivan, 2011). However, Skiba, et al. (2005) point out disproportionality, also known as minority over representation, does not solely affect minority students; it distributes itself across ethnic groups, including Caucasian students.

Skiba et al. (2008) notes that concerns have historically pointed to over representation in special education placements. However, underrepresentation occurs in specific categories as well, such as in general education or gifted education placements. Additionally, disproportionality appears in relationship to variables that change with locale and population distribution. Given the complex measurement of disproportionality, two points are highlighted for consideration. “In measuring disproportionality, one may assess (a) the extent to which a group is over- or underrepresented in a category compared to its proportion in the broader population (composition index) or (b) the extent to which a group is found eligible for service at a rate differing from that of other groups (risk index and risk ratio)” (Skiba et al., 2008, p. 266). In assessing placement, overrepresentation or underrepresentation in a specific category, in contrast with the general population, is an important consideration (Skiba et al., 2008).

Overrepresentation and underrepresentation can be seen through a different lens when considering special education placement services. These services include an inclusive general education classroom where pullout resource room or in-class support services are provided; or the services might pertain to a self-contained setting. Underrepresentation may apply to those students who qualify for special education services, yet do not receive them. Although attention is provided for MR, ED and GT placements, Hosp and Reschly (2002) suggest implications for further research in assessing the eligibility for LD placement. Given eligibility rates are similar for African Americans and Caucasians, the researchers suggest delving into the processes to refer assess, classify, and place students in order to provide further clarification and understanding of disproportionality.

Skiba et al. (2005) note that overrepresentation in certain disability categories of minority students contrasts to corresponding underrepresentation in the same area for Caucasian students. Hence, disproportionality is a two-fold dilemma. The overrepresented group may view themselves as positive recipients of special education services or as objects of discrimination, and oppression. Meanwhile, the underrepresented may in fact view themselves as being disadvantaged and in need of services, or as being superior. Examining the situation of those students underrepresented would help provide a basis on which to determine factors that may help those who are overrepresented. This would help create programs that would assist students who are disadvantaged and currently perceived as not being able to succeed.

### **Purpose of Study**

The purpose of the present study was two-fold: (1) to examine overrepresentation of students from diverse and disadvantaged backgrounds, and (2) to determine factors that may lead to underrepresentation of Caucasian students.

### Method

**Subjects.** The study sample was comprised 3rd and 4th grade students. Archival data was comprised of district-level state test results. Students who have been classified within-district in the last two years had their norms compared with those of their general education peers. The variables included grade level, placement, classification, identification district, ethnicity, LAL (language arts literacy) and math proficiency and SES.

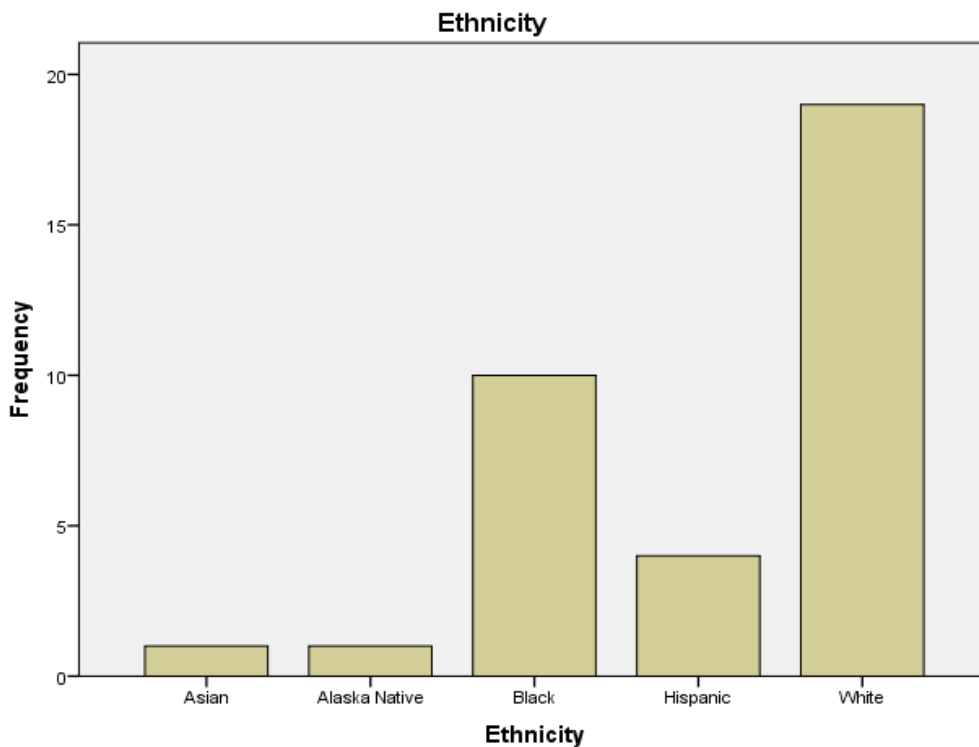
### Measures

This study used state testing archival data, aggregated at the district level. Third and fourth grade New Jersey Assessment of Skills and Knowledge (NJ ASK) results from the 2009 –2010 and the 2010 – 2011 school years were used.

### Procedures

The archival data was analyzed with the NJASK Language Arts Literacy (LAL) and Math (M) results indicating partially proficient (1), proficient (2), and above proficient (3). The overall student population in the district was identified according to the federal Department of Education. The resultant categories were coded as White (1), Black (2), Hispanic(3), Other which included Asian Pacific Islander , Asian/Hawaiian Native , Native American/Aleutian/Eskimo, Other Pacific Islander (4) , and No Information (6). Classification was coded as None - no classification (1), SLD (2), OHI and low incidence (Visual Impairment) (3), and Autism (4). See figure below. A cross tabulation was used to analyze the aforementioned variables.

**Figure 1. Student ethnicity of selected sample of initially identified students**



### Results and Discussion

In focusing on Caucasians and African Americans, whose scores show partial proficiency in the LAL and Math tests, it was found that these students were not classified, and currently are not receiving special education services. Among the Caucasian students who tested as partially proficient in LAL, 60.7% were not classified. Among the African American students who tested as partially proficient in LAL, 67.4% were not classified. Similarly, in the math area, results for students who tested partially proficient follow. The percentage of Caucasian students not classified was 47.9%. The percentage of African American students not classified was 57.1%.

As noted in the review of the literature, an overrepresentation of students from diverse backgrounds into special education continues to be a major concern. The findings in this study refer to the underrepresentation of Caucasian students in special education placement. Concurrently, an underrepresentation of African American students in special education programs is found as well. A question is posed as to the services offered these students in the general or inclusive classroom. In order to provide appropriate and effective special education services, it is vital to be aware of factors that affect bias, and impede the interpretation of data and the classification process. The overrepresentation and underrepresentation of students from varying backgrounds into special education has been, and continues to be, a major concern.

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## **Structured Teaching Units: their relevance in the inclusion of pupils with ASD**

Sandra Daniela Ferreira Barbosa  
University of Minho, CIEd, Portugal  
[barbosdaniela@gmail.com](mailto:barbosdaniela@gmail.com)

Ana Paula da Silva Pereira  
University of Minho, CIEd, Portugal  
[appereira@ie.uminho.pt](mailto:appereira@ie.uminho.pt)

### **Abstract**

**Keywords:** Multiple case studies, families, professionals, Autism Spectrum Disorder, ASTU.

### **Introduction**

The intervention with pupils with ASD enables opportunities for learning and development that allow for the qualification of the skills of these pupils, as well as to improve the functioning of their families, empowering them to search and obtain the desired resources contributing to the improvement of their quality of life (Broomhead, 2013). In Portugal, the educational response to pupils with Special Educational Needs (SEN) is based on the Decree-Law 3/2008 of 7th January. This decree establishes the objectives and guiding principles of the support to these pupils which has thus led to significant changes in the area of Special Education and in particular, in the educational response to pupils with ASD.

At the organizational level, this decree establishes the creation of ASTU for the education of pupils with ASD. The support to these pupils is now organized in a differentiated way, sustained in pedagogical differentiation and in a structured teaching model, clearly defined in Article 25 of the Decree-Law 3/2008 of 7<sup>th</sup> January, as "a set of principles and strategies that, based on visual information, promote the organization of space, time, materials and activities" (D. R. [Official StateGazette], 1st series, no. 4, 7th January 2008).

The ASTU provides a more qualified educational response, concentrated on several specialized resources, resulting from partnerships in a single place. These partnerships are achieved through the resource centres for inclusion that integrate professionals from different disciplinary areas, notably from psychology and health, which develop a collaborative work, together with special education teachers, regular education teachers and the families of pupils with ASD (DGIDC, 2008).

The Decree-Law 3/2008 not only establishes specific measures, such as specialized support, the adaptation of educational strategies and the creation of ASTU, but also simultaneously advocates the existence of an inclusive school that promotes universal skills and citizenship.

Taking into account the support made available in the ASTU to pupils with ASD, and the guiding principles of the Decree-Law 3/2008, we have outlined the following as the objectives of this study: (a) understanding the role of the ASTU in the inclusion of a

student with ASD; (b) understanding the conceptual and organizational structure and the operation dynamics of the ASTU; (c) understanding the constitution of the ASTU team and the role played by the professionals who comprise it; (d) analyzing and understanding the level of participation and the expectations of parents about the type of support provided; (e) identifying and understanding the difficulties in the process of inclusion of pupils with ASD in regular education.

## **Method**

The development of a collaborative work between the school and the family optimizes a whole body of work sustained in the child, which leads to their maximum achievement, providing them with a better quality of life (Corsello, 2005; Lee, Louie, Harrington, & Newschaffer, 2008; Reed, Osborne, & Waddington, 2012).

The collaborative perspective is carried out in this study through the use of a qualitative approach, which promotes the cooperation between the researcher and the participants in the research, allowing for the inclusion of the perspectives of the participants regarding the studied reality and, at the same time, being sensitive to the study of the processes that led to certain results (Denzin & Lincoln, 2000).

Taking into account that we opted for a qualitative approach, as well as the purpose set out in this research study, we have considered the use of a multiple or comparative case study (Yin, 2005), since we intend to study three specific realities, in particular, three ASTU in the northern area of the country covered by the Direction of Services of the Northern Region (DSRN).

Based on the goals and criteria of inclusion defined for the study, the ASTU that will be selected should meet the following criteria: provide support to pupils with ASD that attend the 1st cycle of basic education; provide support only to pupils with ASD - excluding all other types of special education needs; and having had special education professionals for at least two years.

Among the participants of this study are parents of three pupils with ASD in the six to ten year age group that have been attending an ASTU for at least one year; three special education teachers with specialized training in special education with experience in the coordination of ASTU and, in supporting pupils with ASD for at least two years; three operational assistants also with experience in supporting pupils with ASD for at least two years; three professionals from other disciplinary areas (such as psychologists and/or therapists) with two years of experience in the ASD area; three representatives from the boards of the three school groups that constitute the ASTU; and one element of the DGIDC with supervising duties at the level of the Portuguese Ministry of Education and Science in the area of the ASTU. Different scripts will be constructed to carry out semi-structured interviews to different participants. The interviews will be audio-recorded. For the validation of scripts, we will perform exploratory interviews to elements that meet the inclusion criteria defined for the participants of the study, although not being part of the study, as well as reflections with researchers working in the field of ASD.

Other sources of data will be used to obtain a more ample and complete description of reality: we will emphasize the observation of the organizational structure and the operation dynamics of the ASTU and, the analysis of legislative documents, individual educational programs and student portfolios.

The data analysis will be performed using the technique of content analysis. According to Bardin (2008) and Landry (2003), the process of content analysis will take place in five steps, including: determination of the objectives of content analysis, pre-analysis, analysis of the material studied, assessment of the reliability of the data, analysis and

interpretation of results. The procedures relating to how we intend to develop the analysis of the material studied are centred on a software application for the management and support of the qualitative data analysis- NVivo.

### **Results and discussion**

In order to demonstrate the validity and credibility of the research, to test the consistency of the data and to understand the complexity of the study, we will use the triangulation technique (Patton, 2002; Stake, 2009).

The use of different instruments for data collection and the use of different an multiple sources allow us to implement the date triangulation technique. The logic of triangulation will be possible when comparing the data collected in the interviews with the data collected in the documents.

### **Conclusions**

With this study, we propose to improve implicit practices in the education of pupils with ASD, contributing in an effective and qualified manner for the inclusion of these pupils. More important, the school should value practices recommended by evidence, adapting resources and methodologies that objectify the quality of the support to pupils with SEN and to their families. The parents and the professionals involved in the process of inclusion of pupils with ASD possess real knowledge, in so far as that they have a better understanding about how a successful inclusion is carried out (Waddington & Reed, 2006). The educational process not only affects the child, but is organized around several intermediaries involving the family, education professionals and the educational community (Reed, Osborne & Waddington, 2012). Thus, on the basis of these different conceptions and evidences, and having as a reference the perception of parents and professionals, we will define the role of the ASTU in the inclusion of pupils with ASD.

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## **Alternative and augmentative communication for students with autism in regular school**

Cátia Crivelenti de Figueiredo Walter  
Universidade do Estado do Rio de Janeiro  
[catiawalter@gmail.com](mailto:catiawalter@gmail.com)

Leila Regina d'Oliveira de Paula Nunes  
Universidade do Estado do Rio de Janeiro

Claudia Miharu Togashi  
Universidade do Estado do Rio de Janeiro

### **Abstract**

The PECS (The Picture Exchange Communication System) was developed for children with autism and severe deficits in oral communication (BONDY; FROST, 1994). A version of this proposed system was published in Brazil and was named Adapted PECS (WALTER, 2000) these adaptations are characterized with modifications in the training phases and in the process of data record progress. The purposes of this study were both to report and to discuss the needs and desires of elementary school teachers who work in the resource rooms offering specialized educational service and participating of the inclusion process of students with autism. The Teachers (35) attended a theoretical-practicum course about the use of Adapted- PECS, an Alternative Communication system that functions by the exchange of pictures, and is specially tailored for students with autism across ten sessions during seven months. By the end of the course, It was found that most teachers had received some information and / or training on the use of AAC but could not make use of it effectively. The results showed that the majority of the teachers' present intention for better communication with their students, expressing, nonetheless, the need for both support from specialized teachers and the active participation of all people involved with the inclusion process. It was also observed that teachers were uncomfortable to use any system or device communicating with pictographic symbols in school life and the Alternative Communication should be introduced first in the resource rooms and later on in the regular classroom, as well.

**Keywords:**autism,inclusion,teachertraining,alternativeand augmentative communication

### **Introduction**

The theoretical and empirical arguments in favor of inclusive education have been presented clearly and repeatedly in the scientific literature, emphasizing the extent of its benefits not only to students with a wide range of disabilities as well as to their teachers. The inclusion and education of people with autism continues to be the great challenge of inclusive education in Brazil. Nowadays there is the growing presence of children and young people with severe communication difficulties and a great number of illiterate students struggling to keep up with the academic content offered by teachers (Pelosi & Nunes, 2009).

The PECS (The Picture Exchange Communication System) was developed for children with autism and severe deficits in oral communication (Bondy & Frost, 1994). The alternative system of communication is to exchange pictures interactively with the goal of communicating a message to another person.

A version of this proposed system was published in Brazil and was named Adapted PECS (WALTER, 2000) these adaptations are characterized with modifications in the training phases and in the process of data record progress. A version of this proposed system was published in Brazil and was named Adapted PECS. These adaptations are characterized with modifications in the training phases and in the process of the data recorded progress. Studies with the Adapted PECS demonstrated changes in the communicative behavior of autistic children, such as expressive vocabulary acquisition through the exchange of pictures, the increase in vocalizations, gestures and motor initiative with a communicative function.

Studies with the adapted PECS and Adapted PECS demonstrated changes in the communicative behavior of autistic children, such as expressive vocabulary acquisition through the exchange of pictures, vocalizations, gestures and motor initiative with a communicative function (Walter, 2009).

The purposes of the study were both to report and to discuss the needs and desires of elementary school teachers who work in the resource rooms offering specialized educational services and the participating of the inclusion process of students with autism.

### **Method**

The project extends in stages, the first designed to train 40 elementary teachers to use the PECS program as an alternative form of communication with students with autism included in the regular school system. The duration of the training course was 7 months. For this purpose we constructed a questionnaire with open questions, prepared specifically to obtain the necessary information as a base line needed for the first stage of the project. The data presented here is preliminary and contributed to the organization and planning of the content taught in the training course, which was structured by questions and concerns present in the practices of teachers in classrooms.

### **Results**

The results showed that the majority of the teachers present, intentions were for a better communication with their students, expressing, nonetheless, the need for both support from specialized teachers and the active participation of all people involved with the inclusion process.

According to the analysis of the responses it was observed that most teachers did not demonstrate knowledge of Adapted PECS program and how it could be applied. It was found that they had received some information and / or training on the use of AAC but not make use of it effectively.

Teachers were uncomfortable to use any system or device communicating with pictographic symbols in school life however; it was observed that teachers presented an interest in the area and considered the use of AAC being extremely important in the regular educational environment.

It was possible to verify that most teachers considered that the special teacher should be responsible to coordinate the AAC program.

Nevertheless when teachers were asked about implementing the AAC program in the classroom, they felt it was beyond their capability. They preferred the especial teachers, other professional or the parents help, to make the AAC materials, communication

boards, pictograms cards and review the student's vocabulary.

The results showed attitudinal changes by teachers after the course and some contributions to the pedagogical practice were observed: they learned to work with AAC, increased knowledge about autism, learned one more tool work students and expanded the pedagogical practice with autistic students. The Strengths observed in this study was the greater appreciation for AAC programs, especially the use of the Adapted PECS program and other AAC resources by the teachers.

### **Conclusion**

The use of AAC systems and programs to promote the communication in school context has brought benefits to the whole school community - students, guardians, parents and school management (Nunes, Azevedo & Freire, 2011; Schirmer, 2011). The PECS-Adapted proved to be an effective alternative communication program to facilitate communication of students with autism in the school environment, even though it has been applied in the resource room (specialized care environment and not the regular classroom).

The data contributed to the organization and planning of the content taught in the training course, which was structured by questions and concerns present in the practices of teachers in the classroom.

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## **Inclusion and Information technology and communication: Use of Assistive Technologies to promote improved learning of students with special educational needs at the Federal Institute of Brasilia - Gamma campus.**

Claudia Luiza Marques  
Federal Institute of Brasilia (IFB)  
[claudia.marques@ifb.edu.br](mailto:claudia.marques@ifb.edu.br)

Amaralina Miranda de Souza  
University of Brasilia (UNB)

### **Abstract**

The presence of students with special educational needs in primary, secondary education and higher education is guaranteed by law, therefore, must be effected through actions that promote their ticket as their stay. The challenge appears in the sense that it also aims at their integration in the labor market. In this context, new technologies indicate avenues for education and indicate the possibility of using their tools in improving the educational process involving people with special educational needs. This study presents the results of research conducted with the aim of identifying whether an imposition of predominantly vocational technology education has structures and spaces in pedagogical projects of technical courses offered with the use of Information and Communication Technologies (ICT), focusing Technologies Assistive (TA), to promote the improvement of learning for pupils with special educational needs. Served as the theoretical foundations: Levy (1997);NÓVOA (2010); MORAN (2008); and Lacerda and Souza (2011) and other researchers that show the importance and necessity of technology as teaching strategies. The research of a case study with a qualitative approach, had the empirical field Gama campus of the Federal Institute of Brasilia. Some results showed that difficulties lie in the Institute, which is defined as inclusive, to effectively provide the technological, pedagogical resources and appropriate access conditions to support the effective inclusion of students with SEN in their courses.

**Keywords:** Inclusion; Information and Communication Technologies; students with special educational needs.

### **Introduction**

It is known that some scholars have demonstrated that new technologies have emerged in order to enhance the knowledge, making it faster and more dynamic. However, it is necessary to identify these technologies, whose use is most appropriate for effectively favoring the teaching and learning of students with disabilities, without being reduced to entertainment, or just another fad without the worry of turning geared to teaching practice the achievement of learning objectives and construction of new knowledge.

Levy (1997) considers the computer and the information network (Internet) as a third process of developing "intellectual technologies", according to him, the first being the transition from orality to writing and use of the second moment of the advent press, greatly streamlining the dissemination of knowledge through print books.

Moran (2000), changes in education depend also officers, directors and engineers that

meet all levels of the educational process, which should always consider the needs, capabilities and contributions of students. Curious and motivated students help teachers become better educators as they become stakeholders and partners of the teacher, seeking a culturally rich environment.

We can, accordingly, citing as an example the use of educational software. These can bring varied and interesting features with shapes and colors that facilitate understanding and promote education through games and cognitive strategies that facilitate learning. There are educational software in various fields of knowledge, which can promote environments and specific situations of learning and expertise. Is cited as an example, the educational software "Hercules and Jiló":

LACERDA; SOUZA (2003) say the software Hercules and Jiló: "is designed to provide support for educational interventions in the field of natural sciences, aimed at students in their diversity in order to learn" (p. 03). However, such software can be further explored in the understanding of mathematical concepts as well as the study of other content in an interdisciplinary way. It is known that the use of educational software can present significant results in the knowledge construction process, providing conditions for cognitive development and targeting the autonomy of people with disabilities.

Accept the challenge to participate in strengthening education through technological competitiveness and new methodological proposals including the disabled person requires knowing what the context in which the technology will be used, which proposals are formulated and mainly implement public policies that support the use of these technologies.

### **Method**

The objective of this research / study was to investigate, through a case study, the Federal Institute of Brasilia, specifically the campus Gama, has physical and pedagogical structures, as well as spaces in educational projects, designed / created to encourage and provide the use of Information and Communication Technologies (ICT), focusing on Assistive Technologies (AT), in technical courses offered, to promote the improvement of the teaching and learning of students with special educational needs process. The research was guided by the methodological foundations of the case study, since the research only focused on one of the campuses of the IFB.

As an instrument of data collection, observation, document analysis and the questionnaire, available in form, via Google docs, which was applied to teachers and students of the institution investigated were used. The information gathered with the use of the electronic form, composed of five open questions and multiple school five questions was answered by 15 teachers and 20 students. This instrument has characteristics that approximate both the semi-structured interview as the multiple-choice quiz. Teachers, to whom the questionnaire was applied, were chosen based on criteria that allowed minimally, the randomness of the sample, such as: stocking on campus range, titration course that teach, knowledge and experience about technologies. The participation of students with disabilities was based on the statement of the Center for the Assistance of Persons with Specific Needs-Napne on campus.

The information provided by questionnaires converged electronically to a report that the work of classification and categorization of the data was performed after completion by respondents. The multiple choice questions collected information about the profile of respondents; kind of experience in the use of technology; thereby confirming the heterogeneity of the sample while supposed in this type of instrument. This form of presentation of information that is, starting from the recurrence analysis of aspects observed in the categorization allowed a better range of responses and extracting what

was most relevant for discussion in this text within the proposed objectives.

### **Discussion of Results**

Through the results of observation and analysis of the questionnaires it was found that the use of ICT is already a reality on campus researched and some teachers have realized significant changes in their teaching. The results showed that the TIC is still a new topic in the educational field, but now part of the everyday practice of some teachers working in classrooms with students with special educational needs. For students surveyed, the technology used can help them, but report that there is a need to adopt a different methodology from teachers, so that they can understand the contents of the classes, ie having effective access to the curriculum. They also report that there are technologies on campus, but many are not used, or when they are, do not do it properly. The results also demonstrated the need for better and larger studies in this area MT, considering the educational needs of students with SEN, the resulting need to adopt new strategies that enhance the learning of these students.

Teachers was asked how the technologies would be used with students with special educational needs. The question brought to the discussion about the lack of knowledge of the devices that the institute has to offer. Students were asked how they perceive the use of technologies in order to foster inclusion in IFB.

The results also highlighted the need to consider the opinions and demands of all stakeholders in the context in which the application of technology is inserted and which were missed by this study. This, however, does not diminish the value of the overall results of the study once the information brought by the subjects involved in research and examined in the light of the analysis of its general context and studied theoretical contributions, brings a clear account of the use of technologies can promote accessibility and consequently make more autonomous people with special needs, ensure their access to education, understood here as unrestricted access information and communication, learning, community participation, using available for your mobility and accessibility, to effectively live as citizens.

### **Conclusion**

The results of this study highlights a new educational reality, where the institution and the teacher need to reflect on their institutional and educational organization, particularly on the methodologies used in the educational process in order to ascertain how these have really promoted education for a quality for all students without distinction. And this perspective promote accessibility of diversity in school. Thus, we can understand that technologies can become important tools in their aid to the teacher in their classes, providing opportunities for different activities, expanding possibilities and supplementing daily practice. Thus, the use of internet, computer labs, educational software, e-books and many other existing technological resources can make the process of teaching and learning are dynamic, enjoyable and effective. From this perspective Nóvoa (2010) points to the digital information and communication technologies (TDIC) as tools that contribute to changes in education and identifies the existence of four shafts to look at the teacher's job: training, professional culture, evaluation and public intervention .

The study also indicated that, although it was recorded the presence of any technologies researched at the institution on campus, they are still not sufficient to serve all who need them in the courses, enrolled yet there is a clear need for studies to knowledge of new technologies and assistive technologies, by teachers, meet the needs demonstrated by persons with disabilities. The studied also pointed to the need for the definition and

implementation of an institutional policy conducive to the implementation of technology to meet the demand of students with disabilities laboratories so that they can respect both styles as different rates of learning, ensuring technological accessibility everyone.

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## **Teacher training for the use of digital technologies**

Danielle Aparecida do Nascimento dos Santos  
Universidade Estadual Paulista - Faculdade de Ciências e Tecnologia  
[danisantos.unesp@gmail.com](mailto:danisantos.unesp@gmail.com)

Elisa Tomoe Moriya Schlünzen  
Universidade Estadual Paulista - Faculdade de Ciências e Tecnologia  
[elisa@fct.unesp.br](mailto:elisa@fct.unesp.br)

Klaus Schlünzen Junior  
Universidade Estadual Paulista - Faculdade de Ciências e Tecnologia  
[klaus@reitoria.unesp.br](mailto:klaus@reitoria.unesp.br)

### **Abstract**

This article describes a doctoral research outlined with the aim of analyzing teacher training focused in the teach of inclusive education fundamentals in a perspective of use of Digital Information and Communication Technologies (TDIC) in a Constructionist , Contextual and Meaningful (CCS) approach. Through a qualitative research approach of intervention type, it was designed, implemented, monitored, developed and evaluated the Articulator Inclusion and Special Education Axle proposed in the semipresential Pedagogy course of Universidade Virtual do Estado de São Paulo and the Universidade Estadual Paulista Júlio de Mesquita

Filho. Theoretical, methodological and practical contributions, that supported the organization of research, were related to questioning of teacher in front of prospects of Inclusion School, Understanding on Curriculum, and use of TDIC in Education. Structured in five (5) blocks of

24 ( twenty four) hours per week , the Axis had as bringing practical activities and studies on aspects of their own experience of the common school, and the use of TDIC . The organization and analysis of data collected through questionnaires, reflective memorial, discussion forums and portfolios indicates the relevance of the role played in that axis of the conceptions of teacher students face Inclusion political and its application in school contexts linked to the use of TDIC in a CCS approach. The data indicate the importance of contextualized training, which assign meanings to theoretical frameworks and articulate the day-to-day practical teacher .

**Keywords:** Teacher Training; Digital Technologies; Inclusion.

### **Introduction**

“Teachers are going through difficult and paradoxical times. Despite criticism and distrust regarding their professional skills, it is required from them almost everything” (NÓVOA, 1995, p. 12).

The statement of one of the most representative authors in education and teacher education today can be taken as an emblem for the past few years about the referential and theoretical constructs and practices on the issue of teacher training. It makes us think that this target of several criticisms, and motto for the development of training



policies profession requires, besides being reconsidered and reflected, having as parameters the existing social, cultural and technological changes in the information age and knowledge.

The new paradigms of teacher education and school bring to the wake of the discussions of the academy, dilemmas such as the use of Digital Information and Communication Technologies (TDIC) in Education and School Inclusion, both axes posing "the carpet" of the school and bring the demand for quality education for all, including people with disabilities, pervasive developmental disorders and high ability / giftedness, considered by the National Policy for Special education in the Perspective of Inclusive Education (BRAZIL, 2007) as the Target Audience Students Special Education (EPAEE).

The Universidade Estadual Paulista "Julio de Mesquita Filho" (UNESP), based on these assumptions, indicates in its Institutional Development Plan's mission and commitment to exercise its social function and promote a "committed professional technological training to quality of life, innovation the sustainable society, social equity, human rights and democratic participation " (UNESP, 2013, p. 01). So, in partnership with the Virtual University of São Paulo (UNIVESP), since 2008 developing the Training Program for Teachers in office to work in early childhood education in the early grades of elementary education and school management unit, through course of Pedagogy.

The first class of the course began in March 2010, offering 1,350 (one thousand three hundred and fifty) vacancies, distributed in 22 (twenty two) campuses of the university and 27 (twenty seven) classes up to 50 students. UNIVESP developed under the program and therefore blended, the course offers basic training, but aimed at practicing teachers in teaching with training in other degrees. Therefore, it is organized in modules / subjects divided into blocks from large areas of training (General Training Curriculum Content and School of Management), for a total of 3,390 (three thousand, three hundred and ninety) hours.

This proposed initial training, in-service, can excel for teachers to become aware and place as the center of their practice learning needs of students who attend, opening spaces for cooperation, dialogue, creativity and critical thinking exercise using TDIC as the resources to support teaching, since the course itself uses such as teaching methodology internet, interactive media, printed materials and educational experiences in regular classes and virtual classes, available in a Virtual Learning Environment (VLE), plus video classes and TV programs coordinated by TV Cultura, ie, from the perspective of Distance Education (DE).

### **Method**

The research project was conducted from 2010 to 2013, where data analysis procedures were aligned with the Axis building elements Articulator Inclusive and Special Education and explanation of AVA productions of students in the shaft, such as: interaction in the Discussion Forums individual productions posted on individual and collective productions Portfolio, posted in Group Portfolio. The focus of the analyzes are the environments of all classes, with outstanding productions related to the themes of this essay, what are the implications of the shaft in their conceptions of technologies, practices and inclusion.

### **Results and discussion**

The analysis on the development strategies of the Axis Articulator Inclusive Education and Special indicate the implications of this initial in-service training, in terms of the major themes process: technologies, practices and inclusion. These themes have promoted major challenges of inclusive school, tending to mobilize teachers and

administrators to review and rebuild their role through new practices from new educational possibilities. Therefore, in addition to approach the educational policies, we present several experiments and focus on the development of Inclusive Education Plans as a key element in teaching exercise for a company committed to building an inclusive school practice.

Thus, the construction of knowledge along the axis, on more than a thousand of these teachers in training, certainly gained much more meaning for students who are included in schools where these professionals work, and they (the teachers), not only by this process of training, but by his own life experience and analysis of their practice, managing to make sense on technology and its potential accessibility and innovation.

The formation of this knowledge and meanings network was conceived as opposed to content-only curricula and ready and finished truths listed in serial curricula. For this, we seek to stimulate pedagogical strategies for the construction and integration of knowledge arising from the curriculum transversality, discovery, inventiveness and autonomy.

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## **Public Policies Education: a study on the inclusive process at the University.**

Edileine Vieira Machado,  
Núcleo de Estudos e Pesquisa sobre Inclusão Social – NEPIS, Brasil  
[nepis@nepis.org](mailto:nepis@nepis.org)

Sérgio Luís Conti  
Núcleo de Estudos e Pesquisa sobre Inclusão Social – NEPIS, Brasil  
[sergioconti@fmu.br](mailto:sergioconti@fmu.br)

Sérgio Venancio da Silva  
Núcleo de Estudos e Pesquisa sobre Inclusão Social – NEPIS, Brasil  
[sergio.venancio@fmu.br](mailto:sergio.venancio@fmu.br)

### **Abstract**

This research aims to present a study on the inclusive process of undergraduates with disabilities in Brazilian private universities. It addresses a piece of the research entitled Educational Public Policies: a study on phenomenologic method to understand inclusive process, funded by FAPESP (Proc. N. 12/50681-1).

The survey follows the assumption that there's a lack of managers and trainers who share a view of men as a being that relates with others. Studies developed by the researcher highlighted that there are institutions which have not reached its inclusion patterns entirely. Only inclusive movements can be seen. However, they can't make do with the inclusive process entirely for lack of adherence of the remaining institution's subjects, and even those who wish to be included. Object: undergraduates with disabilities enrolled at the University. Procedure: field research, of phenomenologic nature. References: ALES BELLO (2006); HUSSERL (2008); STEIN (1999). Considerations: For inclusion in University Education to entirely occur it's needed, despite technical knowledge and political willingness, the voluntary adherence by the subject to be included. It is essential training managers and inclusive educators, able to provide an inclusive environment where all subjects involved in the process feel as main players.

**Keywords:** Public Policy Education - Inclusion in Higher Education - Phenomenological method.

### **Introduction**

This survey aims to present a study on the disabled undergraduates' inclusive process in a private University in the city of São Paulo, Brazil. It regards a piece of the research Public Policies Education: a study on phenomenologic method to understand inclusive process, funded by FAPESP (Proc. N. 12/50681-1).

The survey follows the assumption that there's a lack of managers and trainers who share a view of men as a being that relates with others, for regarding architectural and

accessibility aspects do not grant belonging to a group of classmates or even making disabled undergraduates not feel invisible in several situations in a classroom or in other University facilities.

What can be perceived is that some educational institutions actually promote inclusive movements, but these are far from reaching inclusion entirely, for sheer lack of adherence by the institution's subjects, and at times, even by those aimed to be included. Another common factor among educational institutions is the lack of specialized professionals in this field working alongside, to guide them, regarding inclusion.

In other scenarios, their administrators have barely concerned about making a research among their employees on whether there is someone with knowledge or experience in the field of inclusion, delegating such duty to their closer advisers, seeking to solve the "inclusion issue" quickly, meeting basic requirements of the Ministry of Education regarding accessibility: the building of access ramps, adapted elevators, interpreters of the Brazilian Sign Language.

By acting in such way, administrators and teachers, how can university students-to-be-included share a feeling of belonging?

This survey is aimed to disabled undergraduates, enrolled in private universities in São Paulo, Brazil.

## **Methods**

As methodological procedure there has been adopted: Field research, of phenomenological nature. According to the etymology, phenomenology is the study or science of a phenomenon. This is why this method has been chosen, so as to understand the inclusive process by students with disabilities that is the manifestation of the inclusive phenomenon within the university environment.

Husserl's phenomenology states that one cannot dissociate the sense of being from the phenomenon's sense and it is by using this method of eidetic reduction that one can overcome descriptive psychology. That reduction helps one understand the very nature of the phenomenon and decreases the risk of misleading it with external causes, which means not considering the object as something to be studied, forgetting that this one has its own life and characteristics, and that we, researchers, must be aware and take them into account when studying it, as well as its nuances. In other words, the experiment's data in its total. (Husserl, 2006).

That is the point where choosing this method for the inclusive process study is justified, for believing that every phenomenon consists, otherwise, it wouldn't take place or even exist. This means that we cannot reduce a research into a fact dimension. Every phenomenon has its essence and it is the reason why it is given a name.

The eidetic reduction allows us to understand the meaning of the phenomenon, and why this process stands for, meaningfully in your own life. This method allows the rupture of the natural attitude and get into the phenomenon's essence, by means of perceptions, intuition, and to not let us be mistaken to describe a psychological fact. It also enables connection between "I think" and "the object of thought", the ego cogito cogitatum. The phenomenological reduction allows us to understand the inclusive process in its total, including subjects involved, keeping their old values and meanings, among them, the meaning of their existence. However, their old values and meanings will be "phenomenalized", which provides us to let go of the naïve attitude of seeing them as being "within themselves", despite not making room for metaphysical speculations.

It is believed that, for the inclusion to fully occur, the subject to be included also needs to feel belongingness and become the main player.

Despite the observation performed in locus, for 4 months three disabled undergraduates

were interviewed: two with visual impairment: A female, 25 years old, a male, 36 years old and a deaf graduate student, 21 years old, who needs an interpreter of Brazilian Sign Language, aged 21.

The interview aimed to focus the experience of entering the university and feeling welcome and belonging to that university environment, and as means to conceiving being a main player.

ALES BELLO (2006); HUSSERL (2006); STEIN (1999) provided theoretical support for the present survey's development.

Ales Bello (1998, 2004, 2006), who works dimensions of hiletic and noetic experiences, proposed by phenomenological archeology, has made possible for us to define the phenomenon with scopes of reality which come against us, observed by means of subjective and non subjective experiences, by which we can grasp what is taking place in the most profound relations established between the subject and the environment.

In all three interviews made, one can identify a common essence that describes how the experience of belonging takes place, as a way to conceive themselves as main player subjects: "being able to speak, listen, acknowledging (when it is allowed and asked the disabled graduate to expose what he/she knows and lived) and taking part". Through these acts there will be belonging and also conceiving themselves as main player subjects.

By asking them what they're going through, whether they need any support, let them be heard as persons who study and have life experiences, dreams and wishes, individuals who are figuring out how to attend a party their classmates are engaging the following weekend, who are able to make judgments of reality and value, these are all - according to the interviewees - what they miss the most.

Having that attitude, according to the blind interviewee, the feeling of invisibility, of anonymity she's used to living with, in her daily life, could cease to exist.

– "More than having an elevator with controls in Braille, I yearn to be seen as a person, as a human being, I need them to actually see me."

When Stein (2013) refers to the concept of people – although he's not referring to the inclusion of disabled undergraduates and their feelings of belongingness as main players – he helps us deepen the analysis of the interviewee's statement, quoted above.

The author stated that the awareness of belonging to a people coincides with the beginning of personal responsibility to it, and the need for personal valuation, that is, the meaning assessment and value of human life for a certain popular community.

By applying that definition of concept of people to the interviewee's reality, we can highlight that the awareness of belonging to her own group of university colleagues takes part simultaneously as the beginning of personal responsibility with that group and with the need for personal value.

The understanding of "consciously" living the belonging refers to the blunt fact that a person is within a community, receives training from it and performs certain roles.

Stein (1999) defines a community as a way of social grouping in which individuals are linked by a natural, organic bond. Thus, the main consequence regarding the internal linking of its members is that a subject will accept others as such, and will live as them.

The way by which the subjects will live the community – the university community in that case, with the clear notion of what his/her group is and the bond with it – is also expressed with the knowledge of both, their gratitude and their role, outlining their awareness of belonging.

## **Conclusions**

For effectiveness of inclusion of undergraduates with disabilities in Higher Education it

is necessary, apart from technical knowledge and political willingness, the voluntary adherence of the subject to be included.

The phenomenological method understood as a profound analysis of the relationship between men and the surrounding world, in this case, applied to the understanding of the inclusive process of the undergraduate students who took part in this survey, has enabled an analysis that may be compared to an archaeological excavation, in which the researcher could ask herself about what was actually going on in this relationship among undergraduates to be included and the surrounding world - in that case, the university environment. In that analysis, as it went deepened, it was also necessary an effort to understand the phenomenon that went gradually unveiling through appearances, through acts, gestures, change in voice intonation, silences, not wanting to talk about it; Nevertheless, as the subjects were getting confident enough and feeling more prone and secure, they would resume the talks and express what they were feeling. Training managers and inclusive instructors, able to provide an inclusive environment where all subjects involved in the process can feel as main players in their roles is important, but it is also vital that these managers share the vision of men as a being who relates with others, so that they take into account the subjects to be included, and that these are given the right to “be able to speak up”, “be heard”, “knowledge” and “take part”.

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## **The Inclusion of Blind Students in Primary Schools in Praia: Teachers' Opinion**

Filomeno Tavares

Clarisse Nunes

### **Abstract**

In this article, we characterize the factors that, in the opinion of the teachers, both positively and negatively influence the process of inclusion of blind students in regular schools of integrated basic education, in Praia. Data were collected through questionnaire survey, applied to 41 teachers, who taught in some of those schools, where blind students were included. The results showed that teachers agree with the inclusion of blind students in regular education, although there are still some constraints. Teachers also felt that adequate teacher training and curriculum flexibility influence the inclusion positively. They also mentioned that education policies that disrespect the difference and inadequate resources, influence the process of inclusion negatively.

**Keywords:** Blind Students, Barriers, Inclusion, Perceptions, Teachers.

### **Introduction**

Education of persons with disabilities, including those with severe visual impairment functioning, has undergone significant changes due to new conceptions that extend beyond the structural changes that an individual may present (Nunes, 2012). Given these developments and the principles of equality and fairness, the current educational policy in many countries, calls for the inclusion of all students in regular schools (cf. UNESCO, 1994). It is the case of Cape Verde, a country that has assumed the principles of inclusive education in the Constitution (paragraph a, nº 3, Article 78) and the Law on the Education System (paragraph 4, Article 4). The publication of the draft "An Approach to the Implementation of Integrated Special Education in Cape Verde" in 1993 is another benchmark (Aguiar, 1993).

This movement for inclusion aims to combat discriminatory attitudes and aims to create more open, supportive, welcoming and inclusive societies based on equality of opportunity (Nunes, 2012). It is imperative that the school respects each learner's differences, promotes their overall development and supports social cohesion (Lopes, 2007). It also commits the school to create conditions for all children and young people to have opportunities to access and, achieve academic success, and to ensure full inclusion in the community. Change is systemic (cf. Bairrão, Felgueiras, Fontes, Pereira, & Vilhena, 1998; Rodrigues & Rodrigues-Lima, 2011), assuming at the institutional level of school, other forms of curriculum organization and redesigning the teaching and learning processes (Lopes, 2007).

The ideals of inclusion require changes in attitudes in service to diversity (Correia & Martins, 2000) and professionals with specific skills (cf. Lopes, 2007). In other words, inclusive education requires attitudes supported by appropriate training devices, by the



availability of specific resources and daily practices of collaboration (Correia & Serrano, 2000).

Referring to blind students, it is necessary that conditions are created for them, to be properly educated in mainstream schools. Because the process of teaching and learning is based, mainly, on the reception and interpretation of visual information, education of blind students requires particular attention, such as the existence of specific material/resources and teachers with proper training. It is also worth stressing the importance of collaborative work, which enables the exchange of knowledge and reflection of practice (cf. Maset, 2011; Morgado, 2010; Rodrigues, 2006).

Because the teacher plays a crucial role in the inclusion process of blind students, it is thought to be useful to know the factors influencing the process of inclusion of blind students of Praia (Cape Verde) and identify the difficulties in the same process. In this respect, we define the following study questions: i) What are the perceptions of primary school teachers on the inclusion of blind students in mainstream education? ii) What difficulties primary school teachers are confronted with in the inclusion process of blind students? and iii) Which factors influence positively and negatively the inclusion of blind students of elementary education, in Praia?

## **Method**

This study is part of an interpretative paradigm, as it aims to deepen the knowledge in a particular situation /context (teaching blind students in regular education in Praia). Our concern is not to generalize the results from the study but collect data about this particular context, and interpret it in detail (cf. Bogdan & Biklen, 1994).

### **Participants**

A sample of 41 teachers from two schools of elementary integrated education of Praia containing blind students in their classes (three students in total), corresponding to 89.13% of the teachers involved in the education of these students in regular education in this city in the academic year 2012/13. The majority were female (80.49%) and their ages ranged between 31 and 59 years, with an average age of 41 years and  $\sigma 6.45$ .

Regarding of academic training, 78.05% hold the Pedagogical Institute Certificate, 14.63% holds an undergraduate degree and 2.44% a baccalaureate degree. Their professional experience ranged from 11 to 32 years. On average this group of teachers had 18.7 years of experience. Regarding the length of time teaching blind Specific training for teachers of elementary integrated education. 3 students in school with these students, this ranged from one month to 22 years, with an average of 10.2 years and  $\sigma 5.52$ .

The majority of teachers (60.98%) reported they did not feel prepared to work with blind students, while 29.27% indicated being prepared only in some situations.

This lack of preparation translated, for example, in the lack of preparation to read and or write braille (92.68% of professionals said they knew, neither read nor write braille) and concerning the use of materials/special equipment for blind students (only three teachers said they know how to use this type of material).

### **Instrument**

The method used in data collection was the questionnaire survey applied to teachers, which had two goals: to characterize the factors that, in the opinion of the elementary school teachers, influence both positively and negatively the inclusion process of blind students of Praia and identify the difficulties in the process of inclusion. The questionnaire contained 32 items and resorted to using an attitudes and opinions - Likert

scale - with five levels: totally agree (SA), agree (A), disagree (D), strongly disagree (SD) and no opinion (NO).

#### Procedures

We chose to inquire all school teachers of elementary integrated education of Praia that had blind students in their classes. The questionnaire was subjected to a pre- test (with experienced teachers) to verify whether it was appropriate for the population under study and whether it allowed to collect the desired information, after which some items were changed. Forty-three questionnaires were handed and 42 were returned at this stage. One survey was considered invalid for a teacher had participated in the pretest. The sample in this case, consisted of 41 participants. Data were analyzed using the computer program Excel for a descriptive analysis.

#### Results

##### Perceptions on the inclusion of blind students in school

Most teachers (70.73%) said they agreed with the inclusion of blind students in common schools. They also stated that there is a need to train teachers because their preparation is inadequate to work with blind students, which is consistent to what several authors tell us (cf. Correia, 1999; Rodrigues & Rodrigues-Lima, 2011). They also said that we need to include these pupils who have learning ability and have the same rights as their peers. Almost half of teachers (between 44% and 42.46%) did not position in relation to the preparation of teachers of regular schools to work with blind students, nor the attitude expressed by teachers, students and other professionals relative to blind students. According to these data, it is considered necessary to promote more training opportunities that help teachers to have specific attitudes and knowledge that will help promote the inclusion of these students in regular education.

The majority of respondents (68.29%) also said that schools do not have adequate material resources to educate blind students (only two teachers agreed with the statement that the school had resources to educate these students). Therefore, it is also necessary to improve existing material conditions in schools.

##### Factors influencing the inclusion of blind students in regular education

Respect for individuality and curricular flexibility were two of the factors that most respondents (80.49%) claimed to influence the inclusion of blind students in regular education as well as the collaboration between blind students and other students (reported by 73.17% of respondents). Almost half of the participants (43.91%) agreed that teachers' practices in the classroom influence the inclusion. These views are consistent to those reported in several authors (cf. Correia, 2012; Mantoan, 2006; Martins, 2012; Maset, 2011). Over half of the participants confessed having a consolidated not opinion regarding the influence of assessment, climate and practices in the classroom in the inclusion of blind students' process.

##### Factors that hinder the inclusion of blind students

The main factors highlighted as barriers to the inclusion of blind students were: i) the scarcity of material resources (equivalent to 87.89%), ii) the non-stimulation of participation of blind students in class as well (considered by 82.93% of faculty respondents), iii) the lack of training of teachers (representing 82.92%), iv) the educational policies that do not respect differences (representing 73.17%), v) the weak collaboration existing among teachers (considered by 63.42% of respondents), vi) the expectation created by the teachers towards the inclusion of blind students (reported by

59.54%), and vii) weak collaboration among blind students and other students and the characteristics of blind students (mentioned by 56.10% of teachers).

From this set of factors we must highlight the lack of specific training materials and resources for teachers, because the specificity of blind students require materials that facilitate access to the curriculum, as well as knowledge by the teachers in order to help them in the teaching and learning process (cf. Aranha, 2006; Correia, 2008; Maset, 2011; Rodrigues & Rodrigues-Lima, 2011). We believe that the situation requires a commitment to initial and in-service training of teachers in this field/domain.

### **Conclusions**

Participants showed sensitivity to joint schooling of blind students and colleagues without SEN in school and regular class, which may contribute to the success of the inclusion process. However, there appear to be important constraints in the inclusion process of these students in the integrated elementary education being these constraints at the curriculum level (e.g. lack of specific materials and equipment for blind students); at the level of education policy that does not respect the difference, attitude and the lack of training of teachers in the education of these students. Therefore, conditions must be improved in some schools in the city of Praia, highlighting equipment of schools with the appropriate needs material resources, for these students and train professionals with teaching skills and expertise to help ensure that they can feel more confident the schooling of these students.

### **Acknowledgments**

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## **Difficulties found for physical education teachers in inclusive classes**

Gabriela Gallucci Tolo  
São Paulo State University, Marília, SP – UNESP  
[Gtolo@hotmail.com](mailto:Gtolo@hotmail.com)

Eduardo Jose Manzini  
São Paulo State University, Marília, SP - UNESP.  
[ejmanzini@uol.com.br](mailto:ejmanzini@uol.com.br)

### **Abstract**

The inclusion of students in physical education classes is still a task that requires planning and preparation of the teacher. In this context, the research aimed to identify, through the reporting of physical education teachers, the main difficulties to teach students with disabilities in the regular education classroom to promote training to those professors. Two focus groups were composed to identify the difficulties: one with six participants and the other with four. A guide was previously organized with the aim of generating interaction and discussion among participants in the sense to share experiences and difficulties. A pilot study was conducted to verify the acoustic sound recorded in order to get audible speech. Altogether, there were four focus group meetings, lasting an average of an hour and 35 minutes for each meeting. Verbal interactions were transcribed and subjected to content analysis. Through this analysis it was possible to identify difficulties related to 10 categories: 1) Access to diagnosis; 2) Lesson Plan; 3) PE programmatic contents; 4) Inclusive Practice class; 5) Architectural and Administrative Barriers; 6) Inclusion; 7) Class Participation; 8) Family collaboration; 9) Relationship with other professionals; 10) Teacher Training. The identification of these difficulties allowed to elaborate a listing of activities with purpose of made actions to improve teacher's education in order to provide answers to pedagogical practice and improve the training PE teachers in inclusive settings.

**Keywords:** physical education, inclusion, special education, difficulties

### **Introduction**

The education changes caused during this decade increased the complexity and open new challenges of the educational system. When we refer to the work to be given to students with Special Educational Needs, we can find within the school context many controversies, even before the decisions be made to include this student. Therefore, the problem presented with the inclusive schools, can be observed in the analysis of how people that belonging in the school system interact to the issue of difference.

The inclusive school, nevertheless, has sought appropriate responses and increases quality. However, we can still say that educational inclusion is summarized mistakenly, in inserting students with disabilities in school benches, without adopting a flexible and heterogeneous teaching technique (Goés & Laplane, 2004).

Furthermore, the Physical Education as a discipline that belongs on the school setting cannot remain indifferent to the movement of Inclusive Education, especially for being

part of the curriculum offered by the school.

Although, we have to think, then, in the context of professional training of those teachers that is working in schools, being necessary to seek to overcome the obstacles imposed by the lack of professionals training in the Brazilians schools.

In Physical Education, the situation is addressed through the discipline called Adapted Physical Education, when college students starts the contact to knowledge the disabilities issues and geared teaching strategies to the disabled person. The discipline also offers opportunities to experience adapted activities for all types of disabilities, and also allowed students to become familiar with resources and adaptive equipment. In Brazilian nomenclature, such resources and equipment were called technical support (Brasil, 2004) and more recently, is called Assistive Technology (Brasil, 2008).

According to Manzini (2005) the technical support can serve in order to assist students in the educational environment, creating necessary conditions for adequate education. However, the author adds that if for one side, technical supports are required and must be inserted in school, on the other side, it becomes important that the school teacher learn how to handle and has knowledge about these supports.

Thus, as a justification for conducting the research, we looked for to analyses what are happening in the practice of Physical Education teacher's regarding inclusion and from there, we can try to determine some considerations.

The participation of students with disabilities in Physical Education classes in mainstream schools seems to generate insecurity on the teachers. This insecurity hooks up to not knowing how to deal with these students, and the lack of professional training to teach students with disabilities in a regular school setting seems to be an aggravating factor. Thus, in the area of Physical Education, the teacher that works with this population requires a deeper knowledge of how to handle, teach and propose adequate activities for this population. To initiate this process of empowerment, we thought of checking what the real situations encountered by teachers in inclusive classes. This action meets the research objective that is identified the pedagogical practices and the main difficulties that PE teacher's has when work with students with disabilities.

## **Method**

The study was based on the elaboration of the actions of reflective and collaborative research method (Pepper, 2005; Mendes & Toyoda, 2008; Jesus, 2010) and also uses aspects of the descriptive research, describing the participant's conversations and establishing correlation between the data collected (Gil, 1999).

The research procedure for collect the data was focus group (FG). According to Fern (2001); Gatti (2005), the FG can be an important procedure when you want highlight the attitudes, interests, needs. For Morgan & Krueger (1993) the FG aims to provide exchange of experiences and information in a way that would be very difficult to be collecting through other methods.

To selection of the participants, were invited all Physical Education teachers members of the schools system in Bauru, São Paulo, Brazil. However, were present in the meeting 15 Physical Education teachers that were working in the year 2012 in an inclusive setting. A criteria were pre-established for participation in the research and those were: 1 ) Degree in Physical Education; 2 ) Have been working with the inclusion more than one year; 3 ) Do not be a substitute teacher; 4) Accept voluntary participation in the research . Of the 15 teachers present, 10 accomplished the criteria and were interested in participating in the research. These participants were separated into two focus groups, one with six participants, called focus group 1 (FG1), and a second with four participants, called focus group 2 (FG2). Thus, according to preference and

availability of teachers the dates and times were determined and established for each group. Participants in all groups signed a consent form approved by the Institutional Ethics Committee.

As essential for planning the FG, we began the construction of a structured interview. Proposed by Manzini (2003) the script have several functions; one of them, is that would give the interviewer a way to help the researcher to collect the right information, which includes the research objective. For script elaboration indicated by Rea & Parker (2000), Manzini (1990,1991,2002) the researcher needs to be careful with the language used in the instrument, and suggest that need to be checked by judges. Therefore, the script went through three versions up to judges determined the construction of the final version. Prior to use, a pilot interview was made to verify the efficiency of the script instrument, and also allowed us to verify through analysis of data an accuracy in the questions and answers in relation to the research objectives.

To record the FG was use the audio recording, which was made through a digital recorder Sonny brand. Before starting the FG was verified the quality of the recording and microphones to give audible speech. Furthermore, to report the interactions two college students were helping with cursive annotations of events in the group, but did not interfere in the group interactions. One of the reports was being the observer, noting the interactions of the group and the other being the reporter of the order of speeches. The same actions were carefully used for both groups.

All participants signed a Statement of Informed Consent, which was requested permission to make the recording the FG. Was formed a total of four FG, with the time minimum of one hour and 30 minutes and maximum of two hours for all meetings.

The four FG were fully transcribed and after the collected data, we used the content analysis technique developed by Bardin (2011). This technique is the process of elaboration to an organized data through categories. This categorization is a step crucial and mandatory when performing content analysis. To Manzini (1990,1991) the analysis begins when the researcher separates the lines in parts, and captures the information contained in these parts, turning them on data.

### **Results and Discussion**

From analyze the data emanating from FG, the study identified four major themes: 1) Concepts related with Disability; 2) Pedagogical Practice, 3) Assistive Technology; 4) Difficulties.:

After structuring the themes the results outlined the topic difficulty, which was discussed from ten subthemes. Below you can check through the structuring of Table 1, the subject difficulties, subthemes and speech transcripts.

**Table 1. Subject difficulties - subthemes and speech transcripts.**

THEME	SUBTHEMES	SPEECH TRANSCRIPT
Difficulties	1) Access to diagnoses	<p><b>Researcher:</b> How do you know that a person with disability is in the school and will be your student?</p> <p><b>Rosana:</b> Realizing his attitude within the school, because in no moment they notified us, look there is a student with disability in the school, he has this, or that. When he goes to the physical education class for the first time, then a class teacher says: be careful he is special.</p> <p><b>Mauro:</b> At the same class day, they say, you have a student with disability; they do not specify which disability and says: now is your problem, and suddenly you get fright. Until last year I had three students, today I have nine.</p> <p>When you go to get the class the teacher says: this class has a student with disability. I ask: which disability? The teacher answers: you will realize.</p>
Difficulties	2 Lesson Plan	<p><b>Fagner:</b> I had difficulties; actually I think I still have difficulty in planning the lessons. Many activities I have to cancel rather than try, because I know that my student with disability will not be able to participate. It also has the issues about make choices, the group needs to be exposed to several activities, even though the child with disability will not participate. In some moments I prioritize the group and in others I prioritize the student with disability.</p> <p><b>Adriana:</b> The goals are others, and I do not specify in my lesson plan, things are going to changing as the class is happening, at the moment. When the situation happens then I think how I do, how I adapt. Add to the lesson plan does not work, I just do right during practice. Sometimes I plan something but than during the lesson is another.</p>
Difficulties	3 PE programmatic contents	<p><b>Mauro:</b> I do have lots of difficulties in some contents. I feel a little lost in some contents. Even in those meetings that we have to talk about the common curriculum, and we can share some experiences, I still feel that is very difficult to follow some topics, such as, dance and combat, this are very difficulty.</p> <p><b>Isadora:</b> I worked with baseball and was very complicated. Was very nice and the students helps a lot, but we had some moments that I was thinking, I do need some help. Sometimes are very hard, how to do? What should I do? Am I doing this right? I do have all those doubts, and</p>
Difficulties	4 Inclusive Practice class	<p><b>Adriana:</b> This student that uses wheelchair and has intellectual disability, he was close to me and then suddenly he runs, he was not at the game. And when he runs the caregiver goes to get him, he was happy to be there, he was not at the game, but he was there.</p> <p><b>Fafá:</b> I have a student that she has muscular dystrophy, she does not move and she had a peer tutor. In some activities I pushed the wheelchair and she made the exercise, I could not move her out of the chair. So, with this student, sincerely I have a lot of difficulty, there are times that I come and speak: - I cannot do anything else with her. I think I am depriving the class from doing other activities, because she couldn't</p>
Difficulties	5.1 Architectural Barriers	<p><b>Isadora:</b> I have a student who has an orthesis on her leg, she uses crutches, is complicated because it has no ramp, to get water is far and have stairs, so if I had a student in the wheelchair, would be impossible.</p> <p><b>Carlos:</b> where I am has ramp and handrail, but specific bathroom for students with disabilities I do not know, I have to check, but as outbound access from the classroom to go to the gym is fine.</p>
	5.2 Administrative Barriers	<p><b>Fagner:</b> I've had the impression that the school considers the student an obstacle, but I also have had impressions on the opposite, which the school may be getting well those students, perhaps are just some moments, do not know.</p> <p><b>Mauro:</b> Yes, the direction supports the inclusion, supports that a student with disability be part of the school and everything, but just in terms of personal help, I think there is a bit desired. Because they see us doing things, and thinks that are beautiful, wonderful, but do not know the cost worth what we're doing that, and then when talks they says: -we have no equipment, no money. Then yes, they accept without any rejection but also do not support.</p>
Difficulties	6 Inclusion	<p><b>Isadora:</b> So, there is no way. As far as it she could go we went, but really there is no way, because of the issue of low vision, she does not see the ball bounce and she cannot catch and hold...</p> <p><b>Adriana:</b> The inclusion is only possible due to this caregiver, it takes care of two that are in this class, this boy needs to hold him by the hand, he escapes, then had to work with him holding his hand, now he's enjoying the school, acquainting themselves, but in the beginning it was very difficult, if was not this caregiver...</p>
	7 Class participation	<p><b>Adriana:</b> Within the limitations we encountered in classes, in general they participated.</p> <p><b>Isadora:</b> They want to participate, but I have some difficulty with some students.</p> <p><b>Vitoria:</b> Their willingness to participate is great.</p>



Difficulties	8 Family Actions	<p><b>Rosana:</b> Look, I think that, Adriana mentions a factor that I think has been forgotten, the mother, sometimes the mother of a child with disability is the biggest problem within the school.</p> <p><b>Isadora:</b> She does not accept that the child has a disability. Was already in her third year, and the mother had never done anything. For this mother the girl had no disabilities, and then when the institutional report came, she has multiple disabilities, physical and intellectual, so sad to see why the father besides do not accept, does not see a child as deficient.... it's complicated.</p>
Difficulties	9 Relationship with others professionals	<p><b>Fagner:</b> They do not recognize you, perhaps they recognize you as a moment of freedom from them, is the moment when you will withdraw students from the room, and he'll be a little more quiet.</p> <p><b>Carlos:</b> We did not stay at the parents meetings, because while the meeting is going on, we are with the students, and in many cases the classroom teachers are somehow our spokesperson, and they say: Physical Education ... it goes well ... some teachers will speak, but others not.</p> <p><b>Adriana:</b> And including, when occurs a parents meetings and you want to participate, you</p>
Difficulties	10 Teacher training	<p><b>Fafá:</b> Many special courses that I have been done, is for everyone, what I learned was what the pedagogues learned. I think we need a specific course for Physical Education, in that sense we do not have.</p> <p><b>Carlos:</b> Gets a little complicated, so I see like that: is the teacher training, yes it is. However, is to seek that the teachers do not stay at all times just getting good intentions, so if you want to do, then have to seek the training.</p> <p><b>Fabia:</b> we need to have better teacher training ...</p>

It is remarkable that the normal course of classes does not seem so quiet and smooth when the teacher is faced the students with special educational needs, especially at school. Therefore, the themes and subthemes found by teachers through FG can be one of the ways to start acting directly in the discussion of some solution of those problems and issues stated by them.

Other studies also should strive to make such approaches, perhaps using the same methodological structure, thus, with more knowledge we can starts to think of how to minimize or even solve those problems, which are so rooted in the discourse of teachers within their practice in physical education classes.

However, a first step that could be seek is to explore changes in the attitudes of professionals that working in a school context. Experiences in inclusive environments can strongly influence attitudes change among teachers and professionals working with group with special educational needs in school settings (Block et al., 2010; Kurniawatia, Minnaert, Mangunsong, & Ahmeda, 2012, apud Mauerberg-deCastro et al., 2013).

The educational inclusion is currently something that is present within the educational context and teachers are somehow accepting better and more each day the idea of inclusion. Although, according to Mauerberg-deCastro et al., (2013) “while it seems that school teachers and professionals recognize the positive value of inclusion, they continue to improvise their practices”.

Despite the importance of identifying what difficulties teachers face in their day by day school in the pursuit of inclusion, we also have to think about the quality of care that these teachers provide for their students with or without NEEs. We can seek to find lots of alternatives to meet the difficulties highlighted through teachers, but professional attitude by acceptance and commitment to inclusion should come spontaneously from personal, emotional, social, and professional attitudes of each teacher.

Thus, will can believed that Physical Education classes which promoted diversity of activities such as dancing, sports, games and gymnastics, can during classes, made the teacher realizes that is necessary to establish teaching strategies and select suitable and/or adapted resources for your student with and without disabilities, looking for to perform adequately the activities proposed for all.

## Conclusion

The importance of identify, verify, organize and categorize the real difficulties evidenced by physical education teachers in the inclusive classes, may serve to guided the basis for making a training program specific to this area, aiming to try to cover all the different themes and subthemes mentioned by teachers, in search of the capacitation and teacher training, covering the real situations encountered in inclusive schools by teachers of physical education.

Furthermore, we seek to fill the gaps mention by difficulties founded by teachers of physical education, in order to change this word to the actions of inclusion in physical education classes.

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## **Behaviors of Concern to Croatian Primary School Teachers**

Kathleen Beaudoin  
University of Washington Tacoma United States  
[kathymb@uw.edu](mailto:kathymb@uw.edu)

Sanja Skočić Mihić  
University of Rijeka, Rijeka, Croatia

Darko Lončarić  
University of Rijeka, Rijeka, Croatia

### **Abstract**

Researchers surveyed 706 teachers in the Republic of Croatia about problem behaviors of concern to them and the support they needed to address these behaviors. Teachers reported higher levels of concern and greater need of support for behavioral dimensions related to distractibility and disobedience compared to those for aggressive and delinquent behaviors for both boys and girls. They also reported significantly higher levels of concern and greater need of support for the behavior of boys in comparison to girls across behaviors. Options for future practice are recommended.

**Keywords:** Problem behavior, distractibility, teacher concerns, primary schools

### **Introduction**

Preventative practices and early intervention are standards of best practice in the field of special and general education. This is especially true when working with young children with behavioral challenges as problem behaviors left unchecked can intensify with age and result in the future diagnosis of an emotional/behavioral disability (Hester et al., 2004). Kauffman and Landrum (2010) suggest “the need for early intervention in two ways: 1. Catch problems when the child is young. 2. Catch the early stages of misbehavior regardless of the person’s age” (p. 46). Moreover, research indicates that interventions targeting young students with challenging behavior leads to positive outcomes (e.g., Riney & Bullock, 2012). However, it is necessary to have a clear understanding of the problem behaviors causing concern for teachers who work with children in the early grades in order to provide those teachers with the necessary skills and supports to effectively target behaviors for early classroom intervention.

It is apparent that many teachers have ample opportunity to observe problem behavior in the early grades. In the United States it is estimated that 10% to 25% of children entering school display significant levels of problem behavior (Campbell, 1995; Lavigne, et al., 1996; Qu & Kaiser, 2003; West, Denton, & Germino-Hausken, 2000). In the Republic of Croatia the levels of problem behavior in schools are less clear. The scant research that does exist suggests that Croatian primary school teachers may view student behavior positively and regard problem behaviors as not disruptive for their daily teaching (Kerestes, 2006; Vidic, 2010). In the present investigation we conducted a nationwide study to examine the types of problem behaviors of concern to Croatian primary school teachers and the support they needed to address these behaviors in their classrooms.

## **Method**

A total of 706 teachers serving students in grades one through four were recruited from 73 primary schools across the Republic of Croatia (96.4% female, 3.5% male and 1.8% not reported). Teachers were asked to provide background information about their age, years of experience, class size and teaching role (position). The sample consisted of classroom teachers (91%), substitute teachers (4%), teachers in afterschool programs (4%) and assistants in teaching (1%). The average class size was 17.75 (SD = 6.89) pupils and the average school size was 220.24 (SD = 110.22) pupils. The mean age of respondents was approximately 45 years (SD = 9.76) and average teaching experience was 20 years (SD = 10.7).

## **Measures**

The Child Behavior Survey (Martin, Linfoot, & Stephenson, 1999) was used in this study to assess the occurrence of types of problem behavior, the level of teachers' concern about those behaviors and the support needed by teachers to address the behaviors. Teachers identified whether or not the behavior occurred within their current classrooms for each gender using a 2-point scale (0 = no; 1 = yes). Four-point scales were used to rate level of concern for the problem behavior (1 = not at all to 4 = extremely) and need for support to address the misbehavior (1 = not at all to 4 = a lot of support), separately for boys and girls. The survey contained items related to distractibility (5 items), disobedience (4 items), aggression (5 items) and delinquency (6 items).

## **Procedure**

A national database of statistics for primary schools in Croatia was used to select a stratified sample of two Croatian statistical regions (36% Coastal and 64% Continental region of Croatia) representative of approximately 10% of primary school teachers across Croatia (n = 955). Once schools were identified, principals of these schools were sent a letter of invitation, a copy of the questionnaire, and a statement of the Ministry of Education, Science and Sport's approval for the study via email. Principals were then telephoned and invited to participate in the study. Most (74 of 83) principals initially approached agreed to participate in the study. Questionnaires were then sent by mail and were administered by school staff instructed to recruit participants with different level of teaching experience. Instructions for obtaining participants' informed consent and for completing questionnaires were provided to each participant. Of the 955 primary school teachers invited to participate in the study, 706 (74%) completed and returned the surveys. This response rate represents approximately 8% of all primary teachers in the Republic of Croatia. The time to complete questionnaires was approximately 20-25 minutes.

## **Results and Discussion**

Mean teacher ratings for the occurrence of problem behavior, level of teacher concern and support needed to deal with those behaviors by problem type are presented in Table 1. All subscales were found to demonstrate acceptable internal consistency using Cronbach's alpha, with reliabilities generally higher for ratings of boys than girls. A paired samples Wilcoxon test was used to test differences between teacher ratings of boys and girls. As can be seen, boys were rated significantly higher than girls across all problem behavior sub-scales with regard to occurrence of misbehavior, level of teacher concern and need for support.

Teachers reported the highest occurrence of problem behavior for both boys and girls as

distractibility, followed by disobedience, then aggression and delinquency. This pattern was repeated with regard to teachers' level of concern for problem behavior and their need of support to address the behavior.

**Table 1: Between-Group Comparison of Mean Scores for Occurrence, Teacher Concern and Needed Support by Student Gender**

Subscale		$N$	$\alpha_b/\alpha_g$	Boys Mean ( <i>SD</i> )	Girls Mean ( <i>SD</i> )	Wilcoxon <i>Z</i>
<b>Occurrence</b>						
1.	Distractibility	5	.82/.77	.65 (.36)	.36 (.34)	14.37***
2.	Disobedience	4	.72/.67	.42 (.36)	.18 (.27)	14.54***
3.	Aggression	5	.74/.67	.29 (.30)	.08 (.17)	14.10***
4.	Delinquency	6	.66/.58	.14 (.18)	.06 (.13)	9.43***
<b>Concern</b>						
1.	Distractibility	5	.89/.88	2.28 (.76)	1.69 (.70)	8.72***
2.	Disobedience	4	.87/.84	2.01 (.86)	1.41 (.63)	7.20***
3.	Aggression	5	.88/.88	1.72 (.83)	1.23 (.51)	7.16***
4.	Delinquency	6	.83/.85	1.34 (.56)	1.20 (.45)	3.17***
<b>Needed support</b>						
1.	Distractibility	5	.90/.89	2.04 (.88)	1.53 (.69)	7.46***
2.	Disobedience	4	.87/.81	1.82 (.87)	1.35 (.58)	6.03***
3.	Aggression	5	.88/.90	1.63 (.82)	1.21 (.51)	6.90***
4.	Delinquency	6	.86/.87	1.32 (.61)	1.19 (.49)	3.36***

Notes.  $\alpha_b/\alpha_g$  = Chronbach's alpha for subscales for boys/girls.

\*\*\* $p < .001$ .

Mean ratings for individual items are presented in Table 2. Teachers consistently rated boys higher than girls on all problem behaviors with regard to the occurrence, concern for the behavior and support needed to address the behavior. Teachers indicated three items in the distractibility subscale, "inability to remain on-task for a reasonable time", "distractibility/not listening" and "disrupting the activities of others", as the most frequently occurring of all problem behaviors. These behaviors held high rank for teacher concern and need for support for both boys and girls, with the addition of high ratings for "excessive demands for teacher attention/not working independently" for girls. Within the disobedience subscale the highest ratings across occurrence, level of concern and needed support were for problems with "following established class rules" for boys and "not getting along well with other children" for girls. In the aggression subscale teachers reported greater occurrence, concern and needed support for girls and boys for "inappropriate expression of anger" with similar concern and need for support for boys with regard to "physically aggressive with others/bullies". For both groups "lies" was the most problematic behavior related to the delinquency subscale.

**Table 2: Gender and Distractibility**

	boys	girls	Boys	girls	boys	girls
<b>DISTRACTIBILITY</b>						
Demands must be met immediately/cannot for attention	.55	.28	2.04	1.66	1.80	1.52
Disrupts the activities of others	.69	.32	2.37	1.72	2.09	1.57
Doesn't remain on-task for a reasonable	<b>.75</b>	<b>.47</b>	2.40	1.92	2.12	<b>1.76</b>
Excessive demands for teacher's work independently	.53	.33	2.22	1.81	2.04	1.71
Distractibility or attention span a problem/does not listen	.74	.43	<b>2.42</b>	<b>1.94</b>	<b>2.13</b>	1.73
<b>DISOBEDIENCE</b>						
Argues when reprimanded or corrected	.37	.14	2.07	1.49	1.88	1.44
Does not get along well with other children	.45	<b>.24</b>	2.14	<b>1.72</b>	1.99	<b>1.60</b>
Refuses to obey teacher-imposed rules	.31	.14	1.95	1.45	1.78	1.38
Does not follow established class rules	<b>.59</b>	.21	<b>2.26</b>	1.57	<b>2.00</b>	1.46
<b>AGGRESSION</b>						
Expresses anger inappropriately	<b>.49</b>	<b>.17</b>	<b>2.23</b>	<b>1.56</b>	<b>2.13</b>	<b>1.47</b>
Is physically aggressive with others/bullies	.34	.07	<b>2.23</b>	1.35	<b>2.13</b>	1.33
Damages others' property	.12	.03	1.58	1.19	1.53	1.17
Uses obscene language or gestures	.42	.12	2.05	1.40	1.82	1.36
Breaks things/damages others' property	.08	.02	1.46	1.14	1.39	1.12
<b>DELINQUENCY</b>						
Runs away from school or classroom	.04	.01	1.30	1.12	1.32	1.13
Steals	.05	.04	1.32	1.22	1.29	1.17
Lies	<b>.43</b>	<b>.20</b>	<b>2.12</b>	<b>1.60</b>	1.85	<b>1.48</b>
Engages in inappropriate sexual behaviour	.05	.01	1.32	1.14	1.30	1.14
Is verbally aggressive with others	.39	.15	2.10	1.52	<b>1.90</b>	1.42
Ignores the feelings of others	.34	.14	2.04	1.46	1.85	1.42

### Conclusions

The current results suggest that Croatian primary school teachers do encounter students with challenging behaviors, especially when the nature of the behavior is distractible or disobedient and the students are boys. Moreover, these teachers are concerned about the problem behaviors they observe given that 14 out of 20 behaviors for boys had mean ratings above 2 (i.e., "somewhat concerned"). In addition, although teachers reported less need for support than level of concern about behaviors, four of the five distractible behaviors and two of the aggressive behaviors received ratings above 2, indicating some need for support to address these problem behaviors in classroom settings. It is well established that significant behavior problems in early grades lead to poor outcomes in adolescence and beyond (Montague, Enders, & Castro, 2005). Thus, it is imperative that

teachers who identify students with challenging behaviors in their classrooms and report concern for and a need of support to address those behaviors be provided the necessary tools to achieve positive change. One such approach noted to be a vital component of early intervention for challenging behavior is the implementation of Positive Behavior Supports (PBS) (Riney & Bullock, 2012).

School-wide PBS can be used to systematically and directly address the behaviors of most concern to classroom teachers in ways that are likely to result in positive behavior change. School-wide PBS utilizes a 3-tier systems approach for establishing environments that support all students in the development of positive behaviors (Sugai, O’Keeffe, & Fallon, 2012). While this model has gained wide acceptance and implementation in thousands of schools across the United States as the research base on its effectiveness in reducing problem behavior continues to grow (e.g., Bradshaw, Mitchell, & Leaf, 2010), it is less practiced among education professionals in other countries, including the Republic of Croatia. As PBS practices implemented in elementary schools have been shown to significantly reduce the development of chronic behavior problems, it seems a logical selection for education professionals in Croatia to explore these proactive methods to support teachers in fostering positive behavior for all.

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## **Training Regular Teachers To Promote Alternative Communication Resources To Non Vocal Students**

Leila Regina d'Oliveira de Paula Nunes  
Universidade do Estado do Rio de Janeiro  
[leilareginanunes@terra.com.br](mailto:leilareginanunes@terra.com.br)

Cláudia Alexandra Góes Araújo  
Metropolitan Board of Education

Carolina Rizzotto Schirmer  
Universidade do Estado do Rio de Janeiro

Catia Crivelenti de Figueiredo Walter  
Universidade do Estado do Rio de Janeiro

### **Abstract**

In Brazilian school settings there has been a significant increase in enrollment of students with severe physical and oral communication impairments has been observed in the last few decades. The literature has highlighted the relevance of both teacher preparation and consistent employment of Augmentative and Alternative Communication (AAC) resources. The purpose of this study was to evaluate the effectiveness of an in-service training program for teachers and teacher aides to introduce the use of Alternative Communication resources by non-vocal students in school contexts. A quasi experimental single subject research A-B design was employed to verify the effects of an in service teacher training procedure on teachers and teacher aides. During the baseline, the experimenter provided no instructions. During the treatment phase, the following procedures were implemented: reading, discussing texts about collaborative teaching and AAC, planning adapted activities, constructing low adapted instructional material, demonstrating the use of softwares, and vocalizers, and presenting the videotaped sessions on teacher-children interaction to the teachers and teacher aides. Both qualitative and quantitative data showed that the teacher aides, but not the main teachers, increased significantly the frequencies of the target teaching responses. The teacher aides developed their own strategies to better teaching; which stimulated the participation of the non-vocal children in the educational activities and helped them to expand their communication skills. It seems that the presence of the teacher aides may have affected adversely in the involvement of the main teachers with the special students, making the teachers feel under no obligation to provide educational services for them.

**Keywords:** teacher training, non-vocal students, augmentative and alternative communication

## **Introduction**

In Brazilian school settings there has been a significant increase in enrollment of students with severe physical and oral communication impairments, it has been observed in the last few decades. The literature has highlighted the relevance of both teacher preparation, and consistent employment of Augmentative and Alternative Communication (AAC) resources. AAC involves the use of hand gestures, postures, facial expressions, miniatures, graphic symbols, letters, digitized or synthesized voice through which people without articulate speech, due to psychological, neurological, emotional, physical and / or cognitive, can establish face to face communication (Nunes, 2003). These resources are intended to promote the so-called communicative accessibility, e.g., acceptance, understanding, and encouragement offered by the social group to the AAC users in inclusive school environments, where they are able to interact with their speaking peers (to von Tetzchner and Soto (2003)).

An increasing number of studies have been conducted in Brazil to implement and to evaluate the effects of continuing special education for regular teachers to promote communicative accessibility in the classroom (Nunes, Araújo, Schirmer & Walter, 2013). Nonetheless, besides the training of effective teachers, the role of mediator should be. In Brasil, the urgent need to provide qualified educational services for students with disabilities in regular settings facilitates the emergence of this new educational agent (Mousinho, Schmid, Mosque, Mendes, Sholl & Nóbrega, 2010)

Considering the importance of continuing education for teachers and mediators to favor the inclusion of students with learning and physical disabilities and without articulate speech, this study was conducted in order to plan, implement, and evaluate the effectiveness of a program of ongoing education for teachers and mediators on communicative accessibility to facilitate the use of AAC resources by nonvocal students in school contexts.

## **Method**

**Participants:** Three mediators – Stela, Rose, and Angel - from two public schools and three non-vocal students with cerebral palsy – Marcia, Matheus and Daniel - were used. The main researcher had the support of an interdisciplinary research group.

**Setting and instruments:** The study was conducted in two regular public schools in the city of Rio de Janeiro, Brazil. The researchers employed: a) semi-structured interviews script with the educational coordinator, principal, teachers, and mediators responsible for these special students, b) researcher's field diary, and c) observational protocols. Camcorder, digital audio recorder, notebooks, digital camera, printer and laminator, AAC softwares, communication boards, digital communicators, special adapted keyboards, vocalizator, and handmade cards with pictograms were used.

**Procedures:** The project was approved by the Metropolitan Board of Education, the school directors and the Committee on Research Ethics. When the research proposal was presented to teachers in the classrooms, students, and parents all agreed to participate in the project and signed consent forms.

A quasi-experimental AB (baseline and intervention) research design was conducted to compare the performance of the participants - teachers / mediators and special students in the two phases. In the baseline sessions, the researcher provided no instruction to teachers and mediators. The interactions of the target students-teachers, target students –mediators and target students- colleagues were videotaped. These sessions were transcribed in a continuous recording. Participant's behavioral categories were created from these recordings, and an interval recording was implemented. Data from the field

daily were also used by the researcher. During the intervention in phase , the researcher conducted the following activities: reading and discussing texts related to collaborative teaching and AAC resources, elaborating adapted planning from the common class planning , preparing adapted and low-tech materials, teaching how to use AAC softwares and vocalizers, and watching the videotaped sessions containing the interactions of teachers, mediators, and / target learners. These videotaped sessions were shown to the teachers and mediators in order to provide an opportunity for the teachers / mediators to watch their performance from another angle and in this way, to become able to reflect, analyze, question, criticize, and seek new forms of pedagogical action .

Reliability of the categorizations: All sessions were recorded and transcribed verbatim. The participants responses were categorized by the researcher. Twenty- five percent of the sessions were also categorized by an assistant. The average reliability index in the responses categorizations was of 84 % (range 20 % to 100 %).

Variables. Altogether 21 categories of teachers and mediators behaviors and 17 categories of target students behavior were created . However; in this paper only four categories of mediators behaviors were examined..

## **Results**

After the intervention phase, there was a significant change in the mediators responses who came to observe more closely the targeted students during activities.

Angel became more attentive to Matheus in order to identify the meaning of body movements, sounds emission, and facial expressions

At the intervention phase, mediators routinely offered communication cards and boards to special students. In an activity with music, Matheus had his adapted lyrics material, and a sheet to mark his answers about lyrics interpretation. The students in the class wanted to help Angel in mediating activity to Matheus, properly using cards and waiting for Matheus responses.

Stela provided no verbal and/or visual resources to Márcia in order to make the girl to participate in pedagogical activities proposed for the class. The participation of Matheus, however, was stimulated by Rose, as well as by his colleagues. The materials produced to evaluate the paintings class favored that colleagues approached Matheus to mediate the activity .

Stela offered materials adapted for Marcia in the final sessions of the intervention phase However, the whole dynamic has been geared exclusively to Alternative Communication cards with “yes” and “ no” and a few words related to feelings, and to the classes contents. The suggestions offered by the researcher were only put into practice when carried out by her, who delivered the tailored materials.

## **Discussion**

Data evidenced qualitatively and quantitatively significant changes in the mediators behaviors, who had no prior knowledge regarding inclusive education and of AAC resources, nor prior relationship with people with severe physical and communication disabilities as their students. Their actions were more geared to " take care ", " preserve " and not to mediate the pedagogical activities. After the study, the results showed that the mediators developed strategies to better teaching, stimulated the participation of the non-vocal pupils in the educational activities and helped them to expand their communication skills. In fact, the non-vocal students used more frequently these skills interacting with different partners. Data collected on the performance of main teachers showed that the intervention failed to contribute to the modification of their traditional

teaching practices. These teachers did not attribute to themselves the responsibility for special student performance. In general, the teachers used only adapted materials or AAC cards and boards when they were made by the researcher, the research group and the mediators. Teachers often failed to elaborate the daily and weekly class schedule.. The schools commitment to hire paraprofessionals as Pedagogy students to perform the function of mediation may have negative side effects noted by Giangreco and Broer (2005) , who stated that the excess of individualized care provided by the mediators has been associated with adverse effects such as excessive dependency , stigma, less competent instruction, interference on special student interactions with peers, and on the involvement of classroom teacher with special students . Although the mediators of this study have benefited from training, showing increasing competence in teaching the target students and in turn promoting their development, their presence may have affected the participation of the main teachers who may have felt under no obligation to provide qualified educational services to this special students.

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