‘Facilitating Greek young learners with Asperger syndrome into the mainstream EAL (English as an Additional Language) classroom through the use of Interactive Whiteboard Technologies’

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Profile

Sagia is a teacher of English and German as a foreign language in Greece. She holds an MA and a PhD in English from Washington International University and a BA in Business Administration from the University of Patras. She also holds BTEC certificates in “Coping with emotional and behavioural disorders in children” and in “Managing students with different educational needs in an inclusive environment” as well as certificates by the Greek Kapodistrian University in “Autism”, “Parents Counselling”, “Educational Psychology” and “Dyslexia and Learning Difficulties”. She was a Local Secretary for the Cambridge-ESOL exams in 2003-2004. She has successfully completed an MPhil in Special Education from The University of Bolton. Her research interests include learners of EAL with Autism Spectrum Disorders and inclusion for SEN children.

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Abstract

Students on the spectrum are often seen as having difficulty in learning a foreign language. This assumption often works as an additional barrier to their successful integration in the mainstream education, robbing them of one more learning opportunity in comparison to their peers. Their abilities have often been overlooked or underestimated and their needs have been given low priority. However, on the basis of their cognitive abilities children with Asperger syndrome are attractive candidates for inclusive education although some teachers still express their concern. Obstacles to participation reside mainly in the school environment and such barriers can be eliminated as new technology seems to offer exciting opportunities to that end, IWBs being one of them. Recent literature has indicated a plethora of ways to support children's learning through the use of the IWB.

This study explores ways to facilitate the learning and inclusion of students with Asperger syndrome in EAL through the use of the IWB. The research took place in a language school in Greece and a case study approach was employed with naturalistic observations and semi-structured interviews so as to investigate how the IWB as a teaching and learning tool enhanced the teacher’s pedagogical practices and allowed her to meet the specific needs of the two participants.

Findings suggest that new technologies offer new answers on dealing with barriers for children’s participation in education and social life but also that inclusion is inherently dependent on the teachers’ perception of technology as a facilitating factor, on their attitudes towards children’s with AS needs, in-service training and on the provision of sufficient resources. The case study also reports on various strategies that can potentially help students with AS meet their learning objectives.

Keywords

ASD (autism spectrum disorders), AS (Asperger syndrome), EAL (English as an Additional Language), IWB (interactive whiteboard), inclusion
Introduction

Asperger syndrome with characteristics first defined by Hans Asperger (1944) lies within the autistic spectrum. It is characterized by difficulties in social interaction and communication and stereotyped behaviors. Although subgroups of AD, Asperger’s disorder and PDD-NOS were combined into one broad diagnosis: autism spectrum disorder (ASD) in DSM-V since May 2013, it is still widely used by people on the spectrum and practitioners alike.

Most students with Asperger syndrome receive their education in mainstream classrooms with teachers who have limited experience and training with children on the spectrum (Myles, 2003). Social skills deficits remain the greatest challenge for them. According to Wire (2005) and Humphrey & Lewis (2008) a number of barriers prevent these students from making the most of their education although a proportion of individuals can achieve high academic qualifications (Baron-Cohen, 1999; Fitzgerald, 2002).

Children with Asperger syndrome are typically in the normal or higher range of cognitive and intellectual ability (Choi & Nieminem, 2008). Thus, most children with Asperger syndrome are placed in mainstream schools. However, such factors as an inclusive school culture and appropriate teacher training have been overlooked, thus allowing for general problems connected to the dynamics of the classroom to emerge.

In Greece, where this research was undertaken, students on the spectrum are often misunderstood by teachers who find them challenging to work with and as literature suggests a legislative framework is not enough for an inclusive education (Padeliadou & Lampropoulou, 1997; Faragoulitaki, 2001; Vlachou, 2006; Coutsocostas & Alborz, 2010; Gena, Alevizos et al, 2013).

Students with AS interact with peers but often in an odd and self-centered way as they have difficulty with social communication (Wing, 1981; Howlin & Goode, 1998). They also take language literally (Attwood, 2006) and find it difficult to understand and predict actions of others (Baron-Cohen, 2008). This has often prevented them from having an equal opportunity to fulfill their cognitive potential. This is so in the field of foreign languages (Oda, 2010).

Education is the key for inclusion and social justice. Inclusive education is every child’s right. However, the daily reality for children with disabilities is frequently one of discrimination and exclusion (Slee, 2007). Providing equal opportunities of foreign language learning to everyone including children on the spectrum relates to fundamental human rights. Creating an “autism friendly society” does not necessarily have to be very difficult or costly. The types of adjustments required can often be small and easy to do, with a bit of creativity and a lot of empathy (Slee, 2011). Children with AS deserve no less.

Language learning is a powerful tool for building tolerant and inclusive multicultural societies. Success in foreign language learning extends beyond communicative competence and includes personal and social development, tangible advantages in the job market, reduction of isolation, opportunities for meaningful communication and increased ability to understand and empathize across cultural lines. The assumption that people with autism have less ability to acquire foreign languages still prevails, although many studies indicate that their language development is unhindered (Hermelin, 2001 cited in Oda, 2010; Wire, 2005; Attwood, 2006; Besnard, 2008 cited in Oda, 2010).

Thus exclusion or in the best case problematic inclusion in the language classroom is often the result and students with AS find themselves locked in a vicious circle of educational rejection.

The real work of enacting inclusion in the school environment belongs to teachers, parents, children and support staff working together in participation and dialogue so as to find a form of inclusion that can meet learner needs and maximize inclusion. As Ravet (2011) proposes, collaboration, flexibility and creativity accompanied by an understanding of autism is the only “recipe” for the inclusion of children on the spectrum. The move towards mainstream inclusion, which has been largely welcomed, is not always fully supported with
adequate training or resources. Regarding teacher training many teachers in mainstream schools think that the education of students with AS lies outside their responsibility as they feel teaching lessons concerning social and life skills is the work of special education teachers. In order to avoid barriers to these students’ learning and participation, there is a need to shed light on teachers’ perceptions and beliefs. As far as resources are concerned technology enhanced education has been a major trend in recent years so there is a significant body of research in the area of digital technologies and Asperger syndrome. There is limited research, however, into the use of Interactive Whiteboards (Interactive equipment used in conjunction with a laptop and a projector to incorporate software, Internet links and data projection) in relation to pedagogical practices in foreign language classrooms and especially children with AS. At the same time with the inevitable proliferation of new technologies in the classroom the role of the teacher is changing. Teachers who are enthusiasts have immediately integrated IWBs, others have been cautious and a few have ignored them. As Wheeler (2001) states some teaching resources become obsolete, computer based testing will make older forms of assessment redundant, teaching strategies and resources can be shared through the internet. Therefore, teachers, including those of children with AS must begin to reappraise the methods by which they meet children’s learning needs.

Methodology

This research has adopted a mixed methodology comprising elements of a case study and action research following an ethnographic paradigm. This methodology was chosen because of the small number of participants and my relationship with them as their teacher of English and the fact that it was conducted in a naturalistic setting. It dealt with the study cases of two children with Asperger syndrome included in a group of eight (six typically developing) who are learning English as an additional language. The case study was selected as it brings us to an understanding of a complex issue and can extend experience or add strength to what is already known through previous research through extensive description and contextual analysis (Yin, 2002). Action research was chosen as it is the key to making research relevant to the concerns and needs of teachers and the education profession (Kemmis, 1986). It is carried out by teachers in their own classrooms and the research goals and questions are local and specific to their own teaching environment (Lightbown & Spada, 2006). So this attempt to reflect honestly and critically on one’s teaching practice and to share these reflections with colleagues brings added value to this project.

This study aims to give a portrayal of a specific situation identifying the unique features of interaction within it and providing an example of “real people in real situations” (Cohen, Manion & Morrison, 2000). It examines the practical experiences of a teacher integrating the IWB into her practice in an effort to meet the curriculum and at the same time to facilitate learning of English as an Additional Language for students with AS. The goal in this project was one of describing a specific group in detail and of explaining patterns that may exist and not one of discovering general laws of human behavior.

The research project took place at a Language School situated in a suburban area of Athens, Greece. Courses in language schools in Greece aimed at children and teenagers are specially designed to improve students’ language skills and provide preparation for the recognized language exams (mainly CELA, University of Michigan Examinations, ESB, Edexcel etc.)

Throughout the research conscious efforts to maintain confidentiality were made. This project was conducted according to the University of Bolton “Code of Practice for Ethical Standards in Research involving Human Participants”. Consent letters were given by parents of the participants and the students themselves agreed to be interviewed. The identity of the participants, “Mary” and “James”, has been protected by the use of pseudonyms.

Data collection

Research instruments were used for both the baseline and the intervention phase which included language skills observation protocols, behavior observation protocols and basic language skills control lists so as to check
the behavior and the language skills of students. Questionnaires for students and parents to collect information regarding their goals and expectations in EAL learning have also been used and examples of students’ work and tests results before and after IWB application in terms of motivation and interactivity. Data were also collected from legislation and literature, field notes and diary keeping.

Two assistants were used for the observations (an experienced EFL teacher and a psychologist specialized in students with autism). There were 10 observations of whole-class lessons in the baseline phase (5 by the language teacher observing discourse management and language skills and 5 by the psychologist observing behavior and social skills) and 10 observations in the intervention phase. Baseline phase was undertaken from September 2011 to May 2012 and Intervention phase from October 2012 to May 2013.

In order to enhance internal validity, the research triangulated the views of parents and students. A phenomenological approach respects the meanings created by the participants. In this way, “the other’s” way of seeing the world is communicated through the words of the students in the interviews. The words from the students themselves provide an insight and illustration of the growing published understandings about the characteristics of Asperger syndrome.

Although this is a small study which makes no claims to generalize the findings, I felt that within the brief of illuminating the research questions, cross checking in this way provided validity. The commitment to truth, openness and ethics that underpins all the processes and procedures in this research contributed to keeping it honest and believable.

Findings

The research focuses on understanding whether the use of IWB can facilitate foreign language learning for students with Asperger syndrome and I aimed to answer the following research questions:

1. Do Interactive Whiteboard Technologies help students with Asperger syndrome develop specific language skills in English as an additional language (EAL)?
2. To what degree such technologies modify and affect the teacher’s role?
3. Can IWB Technologies facilitate foreign language learning for students with Asperger Syndrome (AS) in terms of motivation and interactivity?
4. Can IWBs facilitate inclusive education in the foreign language classroom for students with Asperger syndrome?

Collected data indicated that both participants were enthusiastic with the use of IWB. They were willing to participate in the lesson. Comparison of their behaviors after the intervention phase showed that their social skills in the classroom environment improved. This improvement was apparent due to the fact that participants wanted to engage in activities with other students. Social interactivity was enhanced and student motivation was increased. The findings suggest that IWBs are appealing to children with Asperger syndrome, force students to engage with others and provide opportunities to teach attention, social interactions and communication. The IWB can provide assistance in the areas of social and behavioral learning for children with AS through modeling and visual support.

There was some improvement in student attitude towards the lesson itself. Students’ questionnaires showed that both children liked learning English. “James” reported that he liked taking tests and “Mary” liked being with “friends”; however they both felt bored in class when activities that didn’t interest them came up. They always felt frustrated in the speaking activities and had problems understanding reading texts. Students’ answers were consistent with parents’ answers as they want to obtain knowledge on the subject. Parents think English will be important for their future and students feel they will be able to communicate through the Net. On the other hand parents feel that activities that frustrate them are grammar ones while learners feel the hardest for them is the speaking part of exams.
Regarding the logistics of the lesson with the use of IWB there were fewer interruptions during the lesson as both participants remained focused and more actively involved. Visual stimulation was used to the full and students were eager to take part in every lesson. However, there were also signs of competitiveness among students on IWB games and both participants had problems accepting “defeat”. While enthusiasm peaked, the major challenge also lurked i.e. the danger of the enthusiasm turning to obsession and private use of the IWB. Instead of enhancing social skills, exercises can easily become more stereotypical. IWBs are appealing to children with Asperger syndrome, force students to engage with others and provide opportunities to teach attention, social interactions and communication.

Regarding language skills reading comprehension remained challenging for both as the two participants showed little understanding of abstract concepts and ideas, metaphors and idioms. The Speaking part of the Cambridge KET test is two-paired, conducted face-to-face with another candidate and this was confusing for both participants. “James” had little problem asking and answering the questions but couldn’t hold eye contact, while “Mary” seemed better at holding eye contact but had problems remaining to the topic. Nevertheless, they both showed improvement after the use of Cambridge KET videos showing what they had to do and the visual support created by the teacher. As for the writing part of the test they had problems to elaborate answers. As a result the IWB use in itself does not guarantee linguistic development unless the teacher uses certain strategies to help learners.

Once again the teacher plays the most important role as he/she is the one to create the appropriate material for learning. The teacher’s role of “facilitator” is highly dependent, however; for success upon the amount of prior preparation. Teachers need strategies to help them cope socially and academically with clear explanations and encouragement of positive interactions. The IWB creates a new set of routines and the teacher has to be flexible and resourceful to create appropriate activities which enhance learning and socialization for students with AS. The findings accord with previous literature which indicates that if learning is to occur some cognitive effort on the part of the students is also required. In this view the role of the teacher is one of setting tasks which present some challenge to the learners and then “orchestrating” activities (Woods & Pollard, 1998; Kennewell, 2001).

The success of inclusive education for children with AS relies on the right mixture of prior planning, resources, good communication and creativity as well as appropriate inclusive practices. Building a school culture that supports interactivity sets the groundwork for an IWB implementation. However, the IWB is only a medium through which interactivity may be afforded. It is the user of the board who chooses to take full advantage of the IWB potential. The teachers’ confidence and competence with ICT remain centrally important.

Discussion - Limitations

Perhaps because a case study focuses on a single unit the issue of generalizability looms larger here than with other types of research. However, much can be learned from a particular case and there is no reason to doubt that at least similar findings would be obtained with other children in other settings.

A second limitation is the fact that language skills performance was mainly linked with a particular exam in English, Cambridge KET and the students’ results before and after the introduction of the IWB. However, language performance is wider than results in language exams as many students fail in them no matter how competent in language performance due to various reasons.

Another limitation is the fact that this research was conducted in a language school where classes involve a small number of students coming twice a week. A typical mainstream state school usually means a large number of students in the classroom and unexpected variables that may affect students’ social relationships and academic results. Generalization may be enhanced if relevant research is undertaken across different school settings (not limited to private language schools) such as state schools etc. where conditions are dramatically different.

It is interesting to note that the high levels of social engagement and initiation occurred when the activities
incorporated the students’ with AS preferred interests. Further research may be needed in this area.

This research brings together all these issues in a naturalistic setting and examines how teachers try to reorganize their practice and role and how students are facilitated to renegotiate their position and achievement in the classroom habitat. Despite these generic limitations I believe that this research apart from adding to a growing body of literature on the subject it also, due to its strong naturalistic orientation, may serve as a basis to understand better how the inclusive practices for pupils with AS work in the EAL classroom and to generate future research and discussion in this regard.

Conclusion

The inclusion of children with AS in mainstream schools presents both challenges and opportunities. At the same time the traditional classroom environment in recent years is being replaced by utilizing technology through IWBs, Wikis, Podcasts, social media, online communities. Given the challenges associated with autism spectrum, emerging technologies may be a means to support these students in mainstream education.

The use of the IWB may be the most significant change in the classroom environment in the past decade which transforms the teacher’s role. This study has hopefully added to the growing body of literature in an attempt to help children with AS in foreign language lessons through the use of the IWB.

This research showed that although the IWB is a support for good language teaching it is not a panacea. It can’t help a weak teacher and won’t teach on their own. In other words, a good whiteboard needs a strong teacher to complement its abilities. A whiteboard cannot only open new avenues of education but can turn just about anything into an interactive lesson.

A balance is needed including various strategies to best help them participate in a meaningful way. The challenge therefore today is for teachers to understand how best to use technology and create activities meaningful and applicable to their learners’ with AS needs. The case study above showed that the more sound the pedagogy that informs the technology use, the more meaningful its integration. Teachers should fully understand the affordances of the IWB, develop the expertise and use appropriate software that also affords interaction.

Teachers cannot make inclusion work in isolation. The real work of enacting inclusion in the school environment belongs to teachers, parents, children and support staff working together in participation and dialogue so as to find a form of inclusion that can meet learner needs and maximize inclusion. I hope that this study will enhance educators’ interest to conduct in-depth research exploring the changing educational opportunities for children with AS, as well as software developers’ and EAL publishers’ interest to design applications in association with pedagogical approaches in the field of English as an Additional Language.
References


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