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International Journal of Special Education

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I N D E X
VOLUME 29 2014 NUMBER 1

A Cross-Cultural Comparison of Teachers' Perspectives on Inclusive Education through a Study Abroad Program in Brazil and in the U.S.....	4
<i>Sumita Chakraborti-Ghosh, Karee M. Orellana, & Joseph Jones</i>	
Effective Spelling Strategies for Students with Dyslexia in Hong Kong Secondary Schools.....	14
<i>Nicole Wai Ying Chan & Kaili Chen Zhang</i>	
Experiences of Students with Disabilities in a Public University in Jordan	25
<i>Hanan Al-Hmou</i>	
How Well Do They Read? Brief English and French Screening tools for College Students.....	33
<i>Catherine S. Fichten, Mai N. Nguyen, Laura King, Alice Havel, Zohra Mimouni, Maria Barile, Jillian Budd, Shirley Jorgensen, Alexandre Chauvin, & Jennifer Gutberg</i>	
Inclusive and Individually Adapted Education in Norway: Results from a Survey Study in two Municipalities focusing the Roles of Headteachers, Teachers and Curriculum Planning.....	47
<i>Jorun Buli-Holmberg, Sven Nilsen, & Kjell Skogen</i>	
Perspectives of College of Education Students in Turkey on Autism Spectrum Disorders.....	61
<i>Pinar Yasar & Kathleen A. Cronin</i>	
Preparing Special Educators for Collaboration in the Classroom: Pre-service Teachers' Beliefs and Perspectives	76
<i>Bethany M. Hamilton-Jones & Cynthia O. Vail</i>	
Rehabilitative Learning: Education During Psychiatric Hospitalization.....	87
<i>Haim Shaked</i>	
Selected Pre-Vocational Students' Experiences of School in Brunei Darussalam	98
<i>Lili Mariam Ismail, Teng Leong Koay</i>	
Supporting Social Competence among Secondary Students in Hong Kong: Teachers' Beliefs about School-Wide Interventions.....	111
<i>Andrew Ming Hei Tong & Kaili Chen Zhang</i>	
The Effect of a Disability Camp Program on Attitudes Towards the Inclusion of Children with Disabilities in a Summer Sport and Leisure Activity Camp	121
<i>Christina Papaioannou, Christina Evaggelinou, & Martin Block</i>	
Transitioning Children with Autism to Australian Schools: Social Validation of Important Teacher Practices	130
<i>Wendi Beamish, Fiona Bryer, & Helen Klieve</i>	
What Does Teachers' Perception Have to do With Inclusive Education: A Bahamian Context.....	143
<i>Norissa G. L. Newton, Dr. Yvonne Hunter-Johnson, Janelle Cambridge-Johnson</i>	

A CROSS-CULTURAL COMPARISON OF TEACHERS' PERSPECTIVES ON INCLUSIVE EDUCATION THROUGH A STUDY ABROAD PROGRAM IN BRAZIL AND IN THE US

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The purpose of this study was to examine the differences in philosophies and perceptions of inclusive education between teachers in Brazil and teachers in the United States. As part of a study abroad program, a team of university faculty and graduate students from Tennessee traveled to Rio de Janeiro, Brazil, in order to investigate their inclusive educational practices. Mixed-methodology approach was used including analyzing classroom and school observations, teacher and administrator interviews, and analysis of survey questionnaire. The participants were teachers from both private and public schools in the United States and Brazil. Results demonstrated that the Brazilian philosophy of inclusion is not exclusively related to special education and students with disabilities, but encompasses a more democratic ideal for all students, including those with disabilities and those from extreme poverty. Of all the teachers surveyed, the private school teachers in Brazil had the most positive perception of the overall role of inclusive education compared to their public school and American counterparts.

Introduction

Proponents of inclusive education may differ from slight to moderate in their views about motivation and emphasis. When speaking of inclusion, some emphasize the rights of those who have been excluded by separation due to physical and/or mental disabilities, that is, children in special education (Lindsay, 2007). Others emphasize how it is the guarantee or the right of education for every child and the way to a democratic system of education. This latter viewpoint places emphasis on meeting the needs of all students such as the poor, those who must work to survive, those who are discriminated against, and those who drop out due to failure (Mantoan, 2008). This means that inclusion is an all-encompassing ideology in which the placement of special education students in the general classroom is a particular case of practicing inclusion. How teachers feel about the concept of inclusion would seem then to depend primarily on their understanding and usage of the term. According to Heward (2010), there is no clear consensus in the field about the meaning of inclusion; some view it as full time placement of all students with disabilities in general education, some interpret the term to any degree of integration into the mainstream (p.73). The Council for Exceptional Children (CEC) believes that the term inclusion means all children, youth, and young adults with disabilities should be served whenever possible in general education classrooms in inclusive neighborhood schools and community settings which is supported and strengthened by trained personnel (CEC Ethics and Standards, 2009, p.255).

Inclusion in the United States

Controversies, research, and legislation have shaped a collaborative relationship between general and special education. A wide range of political, epistemological, and institutional factors have facilitated a more child-centered public education, (Hossain, 2012). Today, the inclusion movement focuses on two generations of practices: a) moving students with disabilities from segregated to general education settings; b) providing evidence based practices through the development of an effective evaluation system (Turnbull, Turnbull, Wehmeyer, Shogren, 2013). It also focuses on *What* and *How* it is taught than *Where* these students are taught (Turnbull, et.al. 2013). Cooney, Jahoda, Gumley, and Knott (2006) stated that, *mainstream schooling is a key policy in the promotion of social inclusion of young people with learning disabilities* (p. 432). This social inclusion is tied to a sense of belonging and acceptance

(Voltz, Nettye, & Ford, 2001). Social inclusion, belonging, acceptance, and self-esteem are part of the argument put forward for the acceptance of inclusion. For example, Martins (2007) stated, Proponents of inclusion have argued in favor of its benefits primarily on social and philosophical grounds. For students with disabilities, they contend, inclusion can result in academic and social gains, better preparation for community living, and an avoidance of the negative effects caused by exclusion (p. 80).

Other arguments such as better student achievement, the improvement of teachers' professional skills, and the positive attitude of typical students toward students with disabilities are considered as reasons for moving toward an inclusive educational approach (Begeny & Martens, 2007).

Terminology is an issue to some extent. The term inclusion can have different emphasis depending on who is using it as mentioned in the introduction. Begeny (2007) acknowledged that inclusion is a term that speaks to the including of all students, regardless of abilities and backgrounds, in the regular classroom where all of their needs are to be met. Carpenter and Dyal (2007) call inclusion a *philosophy* where diversity is embraced and student's unique needs are met. There are those who make distinctions between the so-called pullout programs and inclusion (Rea, McLaughlin, & Walther-Thomas, 2002) where inclusion is the term used for a student always attending a regular classroom. Idol (2006) stated:

In the inclusive school, all students are educated in the general education programs. Inclusion is when a student with special learning and/or behavioral needs is educated full time in the general education program. Essentially, *inclusion* means that the student with special education needs is attending the general school program, enrolled in age appropriate classes 100% of the school day (p. 77).

Idol also made a distinction between the terms inclusion and mainstreaming. The placement of students with disabilities in the regular classroom for 100% of the time is considered as inclusion whereas mainstreaming, on the other hand, is when students with disabilities spend only a portion of their day in the regular classroom. A combination of these two approaches is what others refer to as inclusion. This combination is held to be the fulfillment of The Individual with Disabilities Education Act (1997) which supports the concept of least restrictive environment (LRE) where some students with disabilities may be in the regular classroom all of the time and others are not according to need following the continuum of services (Keefe & Moore, 2004).

Although inclusive education has been gaining momentum for a number of years in the United States, there are still many areas of concern in its implementation (Rea et al., 2002). One such area is that of professional development. Some of these concerns are (a) how to make modifications to the curriculum and instructional practices, (b) coordination between what is taught in the resource and regular classroom, (c) how to make child-by-child decisions on whether or not they should be in a general classroom, and (d) how best to go about the collaboration efforts between the special and general education teachers (Idol, 2006).

A variety of other topics are also treated in the literature on inclusion. For example, inclusion is seen as a way to accomplish an *equal opportunity* for achievement (Aguilar, Morocco, Parker, & Zigmond, 2006). The effect of inclusion on student achievement, which needs further study, is encountered in some articles (Hawkins, 2007; Rouse & Florian L, 2006). There are also studies on how an inclusive approach (in the broader sense of the word) to education helps in correcting the exclusion that poverty can bring (Preece, 2006).

Inclusive Education in Brazil

Mantoan (2008) expressed the general emphasis of the concept of inclusion in Brazil by stating that when all students are of *equal special concern in an educational system, then the democratic principle of an education for all is fulfilled* (p. 5). This concept of inclusion, as the approach of a democratic principle of education, is continually emphasized by many authors (*Fundamentos Para Uma*; Glat, Santos, Sousa, 2004). Although there is a strong emphasis on the democratic principle and equity for all, the inclusion of students with disabilities in the regular classroom is also a central concern (Alencar, 1993).

The problems associated with implementation of inclusion for students with disabilities faced in Brazil are essentially the same as those found in the United States and other countries (Drodge & Shiroma, 2004). The training of teachers needs to improve (Glat, 2004; Sant'ana, 2005). Adaptations to curriculum and differentiated teaching need to take place (Sant'ana, 2005). Professional development is

an area of concern (Alencar, 1993). The required course work for new teachers should be expanded (Sénéchal de Goffredo, 2002). Finally, the basic fundamentals of inclusion and all that it implies must be learned and accepted throughout the education system (*Fundamentos Para Uma*). The literature indicates that the problems and concerns associated with the implementation of inclusion in Brazil are seemingly the same as those in the United States and the rest of the world.

Current initiatives of inclusion shows, that educators and policy makers are dedicated to provide inclusive services in Brazil. Hübner & Macedo (2011) mentioned in a case study about a teaching model which intimately dialogues with the inclusive education concept adopted by the Brazilian Ministry of Education. This model was developed by the teachers in the Clarisse Fecury School in Rio Branco, Acre, Brazil. This model prescribes that students with disabilities, students with pervasive developmental disorder as well as gifted students should all attend regular classrooms and receive specialized services when not at school, so they may enjoy the benefits of socializing with other students (Hübner & Macedo, 2011). Galery & Alonso (2011) also mentioned about a student with Pervasive Developmental Disorders (PDD) was offered a chance to take a course on the particular subject area with other student. There the student were given an opportunity to have the Individualized Educational Plan (IEP) methodology. The use of IEP was helpful to all the teachers in the school, but it was not the only change the course brought to the student. It also marked a paradigm shift in terms of the teacher's perception of students, lesson planning, and the role of evaluation. The teacher took a less *conventional* teaching approach, using task-based lesson plans, short duration activities, flexible assessments and other strategies, in order to be able to teach the same content, but with different teaching techniques (Galery & Alonso 2011). Ana Lucia Lago, a physical therapist Ana Lucia Rago (2013) shares her experience in developing inclusive educational programs in Brazil. She talks through a web-cast about the process and the partnerships required to develop a successful inclusive program (www.youtube.com/watch?v=VrOvE0eaF-0).

Method

Purpose

For this study, there were two inherent purposes. First, a team from the Tennessee State University traveled to Rio de Janeiro, Brazil in order to observe and interview teachers and administrators regarding the implementation of inclusive education. Initial observations were conducted in schools in Rio de Janeiro and surrounding areas. Additionally, interviews were conducted with both pre-service teachers and special education professors from two area universities. Second, the study intended to compare the perceptions of inclusive education between teachers in Brazil and the United States. In order to fulfill this purpose a survey instrument was administered to both private and public school teachers in Brazil and in the United States. The following research questions were given:

1. How do Brazilian schools facilitate inclusion?
2. How does the Brazilian government support inclusive education? Legally? Financially?
3. How are teachers in Brazil trained to implement inclusive education?
4. What are Brazilian teachers' perceptions of inclusive education?
5. How do Brazilian teachers' perceptions of inclusion compare to the perceptions of teachers in the United States?

Participants

Observation and interview participants included teachers and administrators in both public and private schools in Brazil. A total of three private schools and three public schools were observed. Additionally, the research team met with pre-service teachers and two professors of special education from two large universities in the Rio de Janeiro area.

While conducting tours of various schools and classrooms in Brazils, survey instruments regarding teachers' perceptions of inclusion were distributed to classroom teachers. Upon return from Brazil, these same surveys were administered to teachers in the United States as well. Survey participants included both private and public school teachers in Brazil and in the United States. In Brazil, 22 private school teachers and 24 public school teachers were surveyed regarding their perceptions of inclusive education. In the United States, 35 private school teachers and 38 public school teachers were surveyed. Table 1 presents the demographic information of the survey participants.

Data Collection Procedures

This study followed a mixed-methodology approach. Observations and interviews were conducted with teachers and administrators in schools in Brazil. Two area university professors also participated in the

informal interview process. Additionally, survey instruments were used in order to obtain quantitative data from private and public school teachers regarding perceptions of inclusive education. Teachers from both Brazil and the United States participated in the survey in order to compare results.

Table 1. Demographic Information of Survey Participants

	Brazil	United States
Private School Teachers	22	35
Public School Teachers	24	38
Gender		
Male	7	24
Female	39	49

Observations

The observation data collected for this study can best be described as a reactive observation performed qualitatively. Gall, Gall and Borg (2007) described observers using this type of data collection as observers who *do not seek to remain neutral or 'objective' about the phenomena being observed and often include their own feelings and experiences in interpreting their observations* (p. 275). Though every effort has been made to maintain neutrality, some personal interpretations may have been unavoidable.

Observations were conducted in six schools in the Rio de Janeiro area; three private schools and three public schools. The first private school observed served students at the elementary level. One specific kindergarten classroom served 12 students including a young boy with a severe, cognitive disability. Though he was socially included in the classroom, he clearly was not placed in an age-appropriate environment. While most of the kindergarten students were five years old, this young man was nine. He was included in classroom activities with the assistance of a classroom aide. The student's parents had paid for the aide to be in the classroom. The school's director explained that no financial assistance is received from the Brazilian government. According to the school's director, many private schools in Brazil refuse to accept students with special education needs into their programs.

The second observation was conducted at a private school that served students at the secondary level. The director shared with us that the school made a strong effort to include students with disabilities though they were unequipped to serve students with cognitive disabilities. While observing, the research team noted that the school was in the process of installing an elevator in the building in order to accommodate a student who used a wheelchair. Additionally, the school provides assignment and testing modifications to students who may require more extended time on tests and alternate homework and classroom assignments. The school director shared that they served 15 students with special needs in a school with an enrollment of 264. Government funding was not available to this school.

The third private school observed was a Catholic school under the Franciscan order. The school had been established to serve children from extreme poverty. The majority of the students in this school came from one of the most violent neighborhoods in all of Rio. Therefore, many of the student's homes are very unstable. The school desires to promote the democratic philosophy of inclusive education by serving students who suffer from extreme poverty and students with emotional special needs. Students with more physical needs are not a focus for this school and its facilities reflect this. The research team observed that students with physical disabilities would find it very difficult to navigate the school environment where stairs were often used. The four pillars of this school's philosophy included spiritual, cultural, academic, and vocational development. A bakery, welding workshop, and computer lab were all available on site. Most of the school funding came from the area's Rotary Clubs and a German-based Catholic bank.

In addition to the three private schools, the research team observed three public schools in the district of Niteroi located just outside of the city of Rio de Janeiro. Nelma Pintor, the director of special education department of Niteroi, provided the team with bus transportation in order to visit three schools: Escola Municipal Altivo Cesar, Unidade Municipal de Educacao Infantil, and Escuela Municipal Mestra Fininha. The school system of Niteroi strives to have a strong emphasis on inclusive education. The

schools in the system are divided into *cycles* with each cycle having a special education coordinator. Additionally, resource teachers are available at many schools in order to provide extra assistance to students with special education needs. Instead of serving students in pull-out or segregated settings, most students with special needs in the Niteroi systems are provided with extra-curricular opportunities. All teachers in resource rooms have specific training and share with the other teachers in their schools. Support personnel are also provided as needed.

Interviews

Interviews are defined as *a form of data collection involving direct interaction between the researcher and the research participant, using oral questions by the interviewer and oral responses by the participants* (Gall, Gall, & Borg, 2007, p. 643). Three interviews were conducted with a school system administrator and two university professors.

The research team's first official interviews were conducted with the key officials from special education department for Niteroi schools district, the special education department at Universidade Federal Fluminense, and The State University of Rio de Janeiro. All participants shared information regarding Brazil's approach to inclusive education. Brazilian law requires a zero reject policy (similar to the one outlined by The Individuals with Disabilities Education Act in the U.S.) that states no child can be turned away from a school for any reason including a disabling condition. In Brazil, students began leaving segregated schools in order to enter into a more inclusive setting in the late 1980s. In 1988, a new constitution was written in Brazil that included laws for the inclusion of students with special needs. Brazil also participated in the Salamanca convention in 1994 where countries from around the world agreed to support the policy of education for all.

These in-depth interviews also revealed that students were served in a *general education classroom—pullout program*. These students are included and receive assistance from itinerant teachers who travel around the district working with students with significant impairments. Support personnel are also available as needed.

This interview provided a positive outlook on inclusive education in Brazil, but several challenges still need to be addressed. Teacher training continues to be a major hurdle. Teachers who serve children in kindergarten through fourth grade are not required to have any formal educational training beyond a high school diploma. The only educational training these teachers receive is a specific concentration of courses while still attending high school. In addition, since the idea of inclusion has caused teachers to rethink the entire concept of education, there is much debate about how best to serve students with special needs in the most appropriate inclusive settings.

According to the interview from a special education professor from The State University of Rio de Janeiro, Brazil does provide a federal definition for inclusion. Students with special needs have the right to be admitted to public schools regardless of financial support from the federal government. In Brazil, students have the right to social inclusion which encompasses not only students with disabilities, but others who may be marginalized due to poverty, family dynamics, or other social difficulties.

When asked if there are any limitations regarding the number of students with special needs who can be included in a general education classroom, the response was that *The law states that we must have no more than three students who have special needs in a general education classroom, but in practice this is not the case. We often have more and it is a concern.* During the interview, the team discussed the use and application of the Individualized Education Plan (IEP) in the U.S. public school system. When asked if Brazil provided something similar to the IEP, the answer was *No, we do not have anything similar to that... There is no accountability.*

Regarding the effort to include parents in the decision making process, a component strongly supported in the United States under IDEA and NCLB, Brazil has no such mandates. There is no requirement for parents to be consulted. *We have a serious lack of parental involvement here. The private schools have more though.* Finally, when asked about testing modifications and the availability of alternate assessments for students with disabilities, Dr. Glat offered that students are often given extra time on tests, a lesser number of test questions, or an alternate assessment altogether.

Table 2. Teachers' Perceptions of Inclusive Education

	Brazil		U.S.	
	Private	Public	Private	Public
1. All students with disabilities should be included in the regular classroom regardless of severity or type of disability.	3.23	2.92	1.74	1.92
2. All students with disabilities can be included in the regular classroom regardless of severity or type of disability.	3.27	2.91	2.09	1.95
3. Students with disabilities improve their social skills when placed in the regular classroom.	4.23	4.13	3.03	3.39
4. Students with disabilities do better academically in inclusive classrooms.	4.00	4.08	2.74	2.86
5. Students with mild/moderate disabilities can benefit from being in a regular classroom.	4.45	4.63	4.14	4.05
6. Students with severe/profound disabilities can benefit from being in a regular classroom.	3.41	2.61	2.56	2.24
7. Schools in Brazil are prepared to serve students with disabilities in inclusive classroom settings.	1.55	2.04	-	-
8. Schools in the U.S. are prepared to serve students with disabilities in inclusive classroom settings.	-	-	1.67	2.18

Surveys

A short teacher survey instruments were distributed to teachers in private and public schools in the United States and in Brazil in order to determine their perceptions of inclusion.. For convenience purpose for Brazilian teachers, the survey, was translated into Portuguese. The survey consisted of seven-items on a Likert scale. Respondents rated all seven opinion statements on a Likert scale from 1-5; strongly agree=5, agree=4, neutral=3, disagree=2, and strongly disagree=1.

Results

After the surveys were collected, the data from each survey was analyzed using descriptive statistics. A mean score for all items was calculated in order to determine teacher perceptions of inclusive education. A mean score of three was considered neutral. A response of more than three demonstrated agreement with the presented survey item while, conversely, a response of less than three showed disagreement with the statement. Table 2 presents the results of teachers' perceptions of inclusive education. Results are broken down between country and type of school; private versus public.

Discussion

The information gathered by means of observations, interviews, and from surveys distributed to teachers in both private and public schools in Brazil and the United States provided the researchers with the data necessary to answer the five previously outlined research questions.

Research Question One: How do Brazilian Schools Facilitate Inclusion?

Based on the information gathered, Brazilian schools view inclusive education not just as a means of educating students with disabilities, but as means of providing educational equality for all students who are marginalized. Regarding students with disabilities, one private school that was observed sought to provide inclusive education to students with learning disabilities or physical disabilities, but felt ill-equipped to provide services to students with severe cognitive disabilities. Another private school was providing inclusive educational services to a student with a more severe cognitive impairment, though he was being educated in a classroom of much younger peers. Additionally, the student had an educational assistant that was provided at the parents' expense.

The public schools that were observed strongly supported the ideal of educational equality. Students with mild learning disabilities were fully included in the general education classroom setting while students with more severe disabilities were served in what was called a *general education classroom — pullout program*. These children received extra-curricular support and support personnel were provided on an as-needed basis.

Research Question Two: How Does the Brazilian Government Support Inclusive Education? Legally? Financially?

The Brazilian government has recognized the need for inclusive educational programs. Laws have provided a federal definition for inclusion though little to no federal funding is provided to schools for implementation. Similar to the IDEA in the U.S., Brazil also has a policy of zero reject, which means no student can be turned away from a public school education due to their disability. Unfortunately, information gathered in interviews stated that this is not always the case and schools in some areas of the country do continue to turn students away based on disability. Unlike the IDEA in the U.S., Brazil does not have a policy supporting parental participation or the use of an accountability instrument similar to the Individualized Education Program (IEP).

Research Question Three: How are teachers in Brazil trained to implement inclusive education?

Teacher training is a significant barrier to implementing inclusive education in Brazil. Teachers who serve students in kindergarten through fourth grade have no formal education training beyond high school. Those who teach children of this age level only receive education classes as a concentration at the high school level. Once teachers are employed, it is up to the school system to provide additional training. One school system that was observed, stressed that their teachers receive training regarding special education and inclusion through in-service. Resource teachers are trained by the school system who then provides additional training to teachers within their specific schools.

Research Question Four: What are Brazilian teachers' perceptions of inclusive education?

Based on data gathered from the survey instrument, teachers in Brazil had a positive perception of the inclusive educational philosophy, but were not as positive about their country's ability to implement this philosophy. Additionally, both private and public school teachers exhibited similar opinions.

When asked if students with disabilities *should* be included in the regular classroom regardless of severity, private school teachers expressed slight agreement (3.23) while public school teachers demonstrated slight disagreement (2.92). In answer to the item that all students with disabilities *can* be included in the regular classroom, the responses were similar to the previous question with the private being (3.27) and the public (2.91).

Both private (4.23) and public (4.13) school teachers in Brazil were in high agreement when responding that inclusive education helps students develop appropriate social skills. In regards to improved academic performance, the private school (4.00) and the public school (4.08) teachers strongly agreed that inclusive education is beneficial.

Regarding the level of disability, the private (4.45) and public (4.63) school teachers in Brazil strongly agreed that students with mild/moderate disability can benefit from being educated in the regular classroom environment. However, the teachers' opinions differed when asked about students with more significant disabilities. Private school teachers (3.41) agreed that students with severe and profound disabilities could benefit from being taught in regular classrooms, while public school teachers (2.61) disagreed.

Finally, when asked if schools in Brazil were prepared to serve students with disabilities in inclusive classroom settings, both private and public school teachers expressed negative opinions (1.55 and 2.04 respectively).

Research Question Five: How do Brazilian teachers' perceptions of inclusion compare to the perceptions of teachers in the United States?

Overall, teachers in Brazil have a more positive opinion of inclusive education than their American counterparts. In reference to whether students with disabilities *should* be educated in the regular education setting, Brazilian private teachers were in slight agreement and Brazilian public school teachers were in very slight disagreement while American private and public school teachers expressed strong disagreement. Regarding whether all students with disabilities *can* be educated in the regular classroom regardless of severity, Brazilian private school teachers agreed, American private and Brazilian public schools were in slight disagreement, and the American public school teachers disagreed the most.

All teachers agreed that inclusive education benefits student's social skills, though Brazilian teachers were more positive about it. However, a more significant contrast presented itself with regard to the benefits that inclusive education has on student's academic skills. Brazilian teachers strongly agreed that inclusion benefits academic skills, while American teachers slightly disagreed.

Based on disability, all teachers strongly agreed that students with mild and moderate disabilities can benefit from being educated in a regular education classroom setting. However, regarding students with severe and profound disabilities, only Brazilian private school teachers expressed a benefit of teaching students in inclusive settings.

Finally, in response to the item regarding their country's preparedness to implement inclusive education, all teachers from both Brazil and the United States disagreed indicating that their schools were not prepared nor equipped to serve students in such a manner.

Limitations

This study presents several limitations. First, and most important, the small number of participants in this study makes it impossible to generalize to the entire population of either country. For this reason, inferential statistics were not performed. Additionally, a small number of Brazilian schools were observed which limited the researcher's ability to fully understand the entire Brazilian educational system. The entire study abroad experience took place during a two-week duration which contributed to a limited exposure to the nation of Brazil. Finally, the teacher participants in the study all represented teachers who work with students in the general education setting. Special education teacher perceptions were not gathered in this study.

Future Recommendations

As mentioned previously, this study included a relatively small number of participants. In order to attain a better understanding of the cross-cultural differences between teachers in Brazil and the United States, a larger sample size should be acquired. Additionally, future research would likely benefit from observing more schools in more areas of Brazil. This study concentrated on observing schools, interviewing personnel, and surveying teachers in the area of Rio de Janeiro. Schools and teachers outside of this large metropolitan area may possess different practices and perspectives of inclusive education. Future research would also benefit from comparing special education teachers' perceptions of inclusive education. Finally, in order to better understand cross-cultural inclusive educational practices across the world, further study should be conducted not only in Brazil and the United States, but in other countries as well.

Summary

The literature shows that inclusion is a worldwide concern. Within this concern, one can find a variety of emphasis. In the United States, the concept of inclusion is, for the most part, centered on the idea of placing the student with disabilities in the least restrictive environment where his/her needs can be met. There are a number of motivations for this such as better student achievement, acceptance, self-esteem, and the rights of the individual student. In Brazil, this same concept of inclusion is considered, but there seems to be a stronger mentioning of inclusion being the backbone of a democratic approach to education than is found in the literature of the United States. In this sense, Brazil uses the word inclusion when treating not only special education students but also the education of the poor and minorities.

Beyond this, there does not seem to be any large differences between the U.S. and Brazilian approaches to inclusion nor in the difficulties encountered in its implementation.

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**EFFECTIVE SPELLING STRATEGIES FOR STUDENTS WITH DYSLEXIA IN HONG KONG
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This study examines the effectiveness of five spelling strategies used to teach junior secondary school students with dyslexia. Participants were 30 secondary school teachers in Hong Kong. The teachers commented on five spelling strategies: the phonological strategy, an integration of phonological and orthographical strategies, the rule-based strategy, the visual-imagery strategy and teaching spelling with other skills. The study compared teachers' opinions and suggestions given in the literature. Results indicated that the five strategies have both strengths and weaknesses. The strategies are complementary; therefore, integration is suggested. Implications are discussed in the context of spelling strategies and measures of teaching junior students with dyslexia.

Traditionally, children with special needs such as learning difficulties were often seen as a group of *disabled students* who needed to be catered for separately in order to learn (Crawford, 1998; Mitchell & Chen, 1996; Zhang, 2010). However, since the formulation of the Code of Practice on Education by the Equal Opportunities Commission in 2001, students with special learning needs have had the same opportunities as their average counterparts to receive non-discriminative normal education in mainstream schools (Cheung & Hui, 2007; Sin, 2001; Yuen & Westwood, 2001). An important implication of this formulation is that teachers now face the challenge of handling students with mixed abilities in a class. As a result, not only have extra strategies been implemented aimed at helping students with special educational needs in school, but also, the Education Bureau has provided courses on special educational needs for teachers in general and special schools.

Dyslexia is one of the most common learning difficulties found among Hong Kong students. According to the Jockey Club in Hong Kong (2006), dyslexia accounts for over 80% of specific learning difficulties cases. The general symptoms of dyslexia include difficulties regarding motor or perceptual skills, language skills, early literacy or pre-reading skills, reading skills and writing skills (Rief & Stern, 2010). Davis and Braun (2010) pointed out that it is difficult to define the symptoms of dyslexia since those with dyslexia do not have exactly the same set of symptoms. Although there are different points of view concerning the symptoms of dyslexia, it has been shown that one thing that learners with dyslexia have in common is problems in spelling. Such problems in spelling always receive attention because they are often persistent and may affect learners for a long time. The problems worsen if learners are not taught how to improve their spelling techniques as the gap between their reading and spelling abilities increases with age (Bruck, 1990; Høien & Lundberg, 2000). The International Dyslexia Association (2008) outlined the drawbacks and difficulties with spelling of learners with dyslexia: (a) individuals with dyslexia have conspicuous problems with spelling and writing, in spite of being capable in other areas and having a normal amount of classroom instruction and (b) though many individuals with dyslexia learn to read fairly well, difficulties with spelling (and handwriting) tend to persist throughout life, requiring instruction, accommodations, task modifications, and understanding from those who teach or work with the individual.

Spelling is a very complex process as it includes many sub-processes, involving phonological, morphological, semantic and orthographic skills (Høien & Lundberg, 2000). Generally, for many learners who learn English as their second language, learning to spell is systematic. Many students can learn to spell through repeated practice, dictation, oral practice and recitation. Nevertheless, learners with dyslexia often need special instruction and training in learning to spell as they may have difficulties in using sound-letter correspondence rules in spelling correctly when compared to young adults without disabilities (Horn, Leicht, & O'Donnell, 1988). Since traditional teaching approaches are not suitable and sufficient there should be more tailor-made and effective strategies for teaching children with dyslexia.

Literature review

Over the past decades, a great deal of research has been completed for spelling deficiencies of learners with dyslexia. Different researchers have recommended different strategies. The most common suggestion for teaching children with dyslexia how to spell is to teach step-by-step. Many frameworks have been developed with reference to this strategy. Amtmann and Berninger (2003) recommended systematic and structured learning steps. In their intervention study, they categorized the spelling problems into several types in order to raise students' phonological awareness, to teach the rules and principles in English and to implement repeated practice. In another study, Mercer and Mercer (2005) divided the words into nine competencies, and they also stated the reasons why the words were categorized in this way and suggested the sequence of teaching these English words. According to the International Dyslexia Association (2008), there are, in general, three types of words: phonological, orthographic and morphological. However, teaching spelling should not only be based on these three categories. Following, the most commonly used strategies will be discussed. The strategies that have been suggested by different researchers are: (1) the phonological strategy (Berninger & Amtmann, 2003; Nunes & Bryant, 2009; Swerling, 2005), (2) an integration of phonological and orthographical strategies (Berninger & Amtmann, 2003; Pressley, 1999; Swerling, 2005), (3) the rule-based strategy (Darch & Simpson, 1990; Moats, 2005), (4) the visual-imagery strategy (Sears & Johnson, 1986), and (5) teaching spelling with other skills (Berninger & Amtmann, 2003; Berninger, Vaughan, Abbott, Begay, Byrd, Curtin, Minnich & Graham, 2002; Swerling, 2005).

Phonological Strategy

Some researchers have pointed out that having problems with phonological awareness may be one of the challenges that face children with dyslexia (Martin, Pratt, & Fraser, 2000). Therefore, it is recommended by some that the phonological strategy (teaching phonological relationships) is the most effective method in raising dyslexic students' phonological awareness so as to improve spelling (e.g., Martin, Pratt, & Fraser, 2000). The phonological relationships of words refer to the relationships between the pronunciation and the letters in spelling English words. There have been numerous studies emphasizing the importance of phonological knowledge development in helping learners develop their spelling skills (e.g., Berninger & Amtmann, 2003; Nunes & Bryant, 2009; Swerling, 2005; The International Dyslexia Association, 2008). In some cases, knowledge of phonological relationships is thought to be the most important type of knowledge, and should even be taught first in spelling lessons. The International Dyslexia Association (2008) maintained that students should learn how to pronounce the target word before trying to link the sound and letters and before learning the morphological features of the target word. It has also been suggested that knowledge of letter-sound relationship is the most basic kind of knowledge required for good English spelling (Swerling, 2005). However, some researchers (e.g., Sears & Johnson, 1986) have maintained that the auditory strategy (which focuses on syllabication and pronunciation) is the least useful method as poor spellers tended to be bound by rules of letter-sound relationships. Therefore, these researchers do not suggest using the auditory strategy to teach spelling as the pronunciation and syllabication might confuse learners.

An integration of Phonological and Orthographic Strategies

At the same time, many authors have confirmed the importance of using phonological and orthographic strategies together (Berninger & Amtmann, 2003; Pressley, 1999; Swerling, 2005). While the phonological strategy aims to teach the letter-sound relationships, the orthographic strategy refers to the method of accessing words' specific orthographic patterns accurately and quickly (Klein & McMullen, 1999). According to Høien and Lundberg (2000), the orthographic strategy allows the reader to go directly from the word's orthographic representation to the word's sound and meaning. In other words, orthographic representation is an abstract image of how the word is spelled.

When the orthographic strategy is applied, students are taught to distinguish between a word and a homophonic non-word, and between two homonyms when the context is given. Martin, Pratt and Fraser (2000) conducted a study on whether phonological and orthographic strategies should be used with particular age groups, and they confirmed that there was a need to use both phonological and orthographic strategies together because alphabetic orthography is necessary to the development of phonemic awareness, regardless the age and the level of the learners (Martin, Pratt, & Fraser, 2000). Although Pressley (1999) pointed out that the use of the orthographic strategy probably depended on phonological decoding skills, Martin and colleagues confirmed the value of using both strategies. Therefore, it was suggested in Martin, et al.' study (2000) that phonological and orthographic strategies should be adopted together in order to teach students decoding and spelling providing a balance between both decoding methods to prevent students from over-relying on orthographic coding which is suggested to be a coding strategy.

The Rule-based Strategy

The rule-based strategy focuses on teaching the rules of English words. Some educators believe that this is the most effective method to teach learners with dyslexia to spell (e.g., Darch & Simpson, 1990; Moats, 2005). Some also maintain that the formation of rules in English is essential as there are various rules in spelling English words, such as inflectional and derivational morphemes, word structures and the features of prefixes and suffixes (e.g., O'Dwyer, 2006; Moats, 2005). Høien and Lundberg (2000) and Swerling (2005) stressed the importance of teaching morphological and grammatical knowledge about words. Nunes and Bryant (2009) emphasized the importance of teaching morphemes and suggested that teaching inflectional and derivational morphemes could help learners develop a systematic and structured spelling method. Similarly, Madshid (2008) in examining the influence of the first language on the second language (which was English), pointed out that the morphological strategy was the most useful method in training learners to spell as it addressed the difference between the learner's first and second language and the importance of morphological features of English. Darch, Kim, Johnson and James (2000) compared the rule-based strategy with the traditional spelling strategy and suggested that the rule-based strategy was the most effective when it was used with elementary students, while for other students, the rule-based strategy was in fact ineffective.

The Visual Imagery Strategy

Some researchers (Sears & Johnson, 1986; van Hell, Bosman & Bartelings, 2003) maintain that the visual imagery strategy is very effective in teaching students to spell. The visual imagery strategy uses visual images of words to aid memory. For example, the target word *run* is shown on the screen or through other methods, and students are asked to look at the word. After several seconds, the word will be covered and students try to write down what they have seen. The process is repeated until the learners are able to spell the word correctly. There have been some studies aimed at testing the effectiveness of this strategy. Sears and Johnson (1986) constructed a framework for visual imagery strategy in spelling and found that visual imagery methods were associated with better performance than auditory imagery (which focused on pronunciation) because spelling was a visual and individual activity. However, researchers such as Darch and Simpson (1990), who disagreed with this belief, emphasized that the visual imagery strategy was less effective based on the evidence of data collected from their research. They stated that the ineffectiveness of the strategy might have been due to the fact that it was not clear whether students were using the target strategy when they spelt the words.

Teaching Spelling with Other Skills

While some researchers believe that spelling should be taught individually, some suggest that it is more appropriate to teach spelling through reading or writing. Berninger and Amtmann (2003) illustrated four treatments (spelling only training, genre-specific essay composing training, combined spelling and essay composing training, and a contact control of keyboard training without explicit writing instruction) in training students with dyslexia to spell and to write. They discovered that *only the combined treatments of spelling and essay writing improved both spelling and composing skills* (Berninger & Amtmann, 2003; Berninger et al., 2002), while spelling only training enabled students to spell better in compositions.

In addition, some studies have indicated the dependent relationship between spelling and reading. Swerling (2005) pointed out that reading could promote spelling knowledge. He also encouraged independent reading to increase exposure to printed words and to help to promote spelling knowledge. Undoubtedly, learning to spell can have a positive effect on learning to read and write (Berninger & Amtmann, 2003; Høien & Lundberg, 2000; Mercer & Mercer, 2005; Moats, 2005) as students are able to understand the words in text if they can spell them. Also, if they know how to link the words with the

sounds, they are able to understand the single words in order to understand the whole text. For learners with dyslexia, more explicit instruction and training is needed compared to their typical counterparts; therefore, even if spelling is taught through reading or writing tasks, they still need separate and distinct instructions and guidelines in learning to spell.

In all, the above literature review includes comments on strategies such as the phonological spelling strategy, which focuses on teaching the phonological relationships between the pronunciations and the letters; an integration of phonological and orthographic strategies, which focuses on the sound-letter relationships and also the patterns of words; the rule-based strategy, which focuses on teaching the grammatical and morphological rules of English words; the visual imagery strategy, which emphasizes the visual treatment in memorizing the spelling of the words; and teaching spelling with associated skills such as reading and writing. Although there are sufficient references in the literature to spelling strategies used to teach students with dyslexia, all of these are based on Western contexts, where the target learners learn English as their first language. Therefore, this study focuses on giving an overview of the spelling strategies that the teachers in this study believed to be effective for secondary students with dyslexia who are learning English as a second language in Hong Kong.

Methodology

A qualitative study has the potential to return rich information. Qualitative research also can approach a topic with open-ended questions and potentially discover variables that can later be studied quantitatively (McCracken, 1988). Therefore, a qualitative research approach was chosen for this study.

This study involved 30 secondary teachers in Hong Kong. We attempted to investigate the effectiveness of spelling strategies used by teachers to teach junior secondary school students with dyslexia. The rationale was to discover whether the current situation in Hong Kong concerning teaching spelling to students with dyslexia is consistent with the situation and spelling strategies suggested by the literature. In this study, a total of 30 teachers were interviewed and asked to fill in a questionnaire developed by the authors. To test the content and concurrent validities of the questions, three teachers (who later did not participate in the main study) were asked to review and give suggestions for improving the pretest form of the questionnaire. Questions were then revised and retested until they were understood accurately by all of the pretest participants. Finally, the revised questionnaire was sent to two professionals for further review and refinement.

The main purpose of the interviews and questionnaire was to obtain detailed information about commonly used spelling strategies. Also, they were asked to comment on the spelling strategies suggested in the literature. All participants were experienced teachers of children with dyslexia in Hong Kong secondary schools. About 90% (26) of the teachers were aged from 25 to 50, experienced in teaching in mainstream secondary schools in Hong Kong and familiar with the special needs of children with dyslexia. Prior to the study, information regarding the purpose and nature of the study was disseminated among the teachers, and the issue of confidentiality was emphasized with all participants. In this paper, pseudonyms are used to protect the teachers' privacy.

The questions set the direction of this study:

1. What are the common spelling mistakes made by junior secondary students with dyslexia?
2. What are the teachers' opinions about the five selected spelling strategies (most commonly used strategies as indicated in the literature)?
3. How can the strategies recommended by the researchers be used to help junior secondary school students with dyslexia to spell?

Findings and Discussion

Data gathered from the interviews were first transcribed to printed documents for more in-depth analysis. These data were combined with the data gathered through the questionnaires. Both sets of data were analyzed using coding analysis of similar comments to facilitate the grouping of like-responses. A process of data reduction, data display, and data analysis was used (Miles & Huberman, 1984).

Questions One and Two: Results Determined by the Structured Interviews

The common spelling mistakes made by junior secondary students with dyslexia

According to the results of the interviews, the teachers suggested some common spelling mistakes made by junior secondary students with dyslexia. These include:

- (1) mirror image such as *doy* for *boy*, *giq* for *pig*

- (2) omission of letters such as *bals* for *balls*
- (3) misspelling of vowel clusters such as *dit* for *diet*
- (4) reversion of letters such as *sarcf* for *scarf*

Although only four types are mentioned above, there are more, which cannot be categorized. In other words, the mistakes made by the spellers with dyslexia are spontaneous. This reflects that students may have deficiencies in identifying phonological relationships. Also, they are confused about letters. The vowel clusters and letters which are not pronounced are difficult for students because they do not know how to spell the words when they hear the pronunciation. Some teachers pointed out that students with dyslexia do not make consistent mistakes. Therefore, teaching them spelling requires sufficient time and effective spelling strategies.

A majority of the teachers (75%) interviewed pointed out that students with dyslexia often have learning problems in both their native language and the second language. Therefore, students with dyslexia in Hong Kong often have problems in reading articles or identifying words in both Chinese and English. As a result, they need extra help in both aspects, and they may, in turn, become frustrated with all the knowledge that they need to learn. Most teachers (83%) advised dividing the target topics into smaller steps for ease of following and avoiding confusion.

Teachers' opinions on the spelling strategies

About 60% of the participants believed that it was most essential to raise students' phonological awareness and that the phonological strategy was the most effective strategy in teaching students with dyslexia how to spell. For these teachers, therefore, teaching students with dyslexia the phonological relationships between letters and sounds was of the highest priority. Two teachers (about 7%) addressed the importance of noting the learners' weaknesses in learning phonological relationships because these may be very difficult for young learners. If the target learners are more mature, however, it may be easier for them to learn the relationships and use them when they come across some new vocabulary. Also, one teacher, Miss Cheng, who had been teaching students with dyslexia for more than ten years in a Chinese as the Medium Instruction (CMI) secondary school, pointed out that it was vital for students to learn through the phonological strategy because English was very different from their first language—Chinese. In addition, the phonological strategy provides students with the foundation to *tackle* a new word. Mr. Chan, a teacher with three years' teaching experience in a CMI school, pointed out the importance of mentioning phonological relationships explicitly to learners with dyslexia because of their inability to relate sounds to letters.

Regarding the phonological strategy, 18 teachers (60%) suggested teaching regular words before irregular ones. However, they had different opinions about whether to teach students vowels before consonants in the early stages. About 23% stressed the importance of raising students' phonological awareness and suggested that teachers should teach students vowels first because of the importance of vowels in English. They might pick a certain vowel to focus on in each lesson so that students would have enough practice in using the target vowel. However, about 37% pointed out that students may find learning vowels very difficult as vowels are complicated and variable. For example, the vowel /e/ can be spelt as *e* in *bed* or *ea* in *head*. Therefore, according to Mr. Pang, who had taught in an EMI school for two years, the vowel-based rule may not be as helpful to students compared to the consonant-based strategy. Students should learn consonants first as consonants are in general more predictable and consistent in that students can hear the sound of the word and spell it relatively easily. At the same time, eighteen teachers (30%) agreed that it was important to scaffold the process of spelling and guide students step by step. However, a majority of the teachers (75%) also reported that some students with severe dyslexia may have problems in distinguishing consonants such as /b/ and /d/, and this may not be because of their lack of phonological knowledge, but rather their inability to distinguish the difference between the directions of these two consonants. Therefore, teaching consonants at the beginning can help students resolve their existing problems first, before they move on to learn more advanced knowledge, such as of vowels.

In addition, eighteen teachers (30%) believed that it was better to teach phonological relationships between sounds and letters before introducing morphological rules. They also suggested that teachers should adjust spelling lessons according to students' prior knowledge and need, teaching these rules only

when it is necessary. .

On the other hand, two teachers (about 7%) believed that the phonological strategy was useful, but not the most effective strategy, and should not be used in the early stage of teaching spelling. Miss Leung, an English language therapist, suggested that phonological relationships between sounds and letters may sometimes make spelling even more difficult for some learners as they may become confused and distracted when the sound relationship is mentioned. Because of this, best practice is to discover students' difficulties in learning spelling so that further assistance can be offered and amendments be made.

Seven teachers (23%) suggested that the rule-based strategy was the most effective in teaching spelling. Mrs. Lee, a teacher who had been teaching in a CMI secondary school for more than fifteen years, emphasized the importance of teaching rules in teaching English. She stated that if rules such as inflection and derivation were taught, students would understand the way a particular word was formed and they would know how to spell it. After they had got used to the rules, they might know how to spell unfamiliar words by using the morphological rules. However, Mr. Chan pointed out that rules should only be taught in the later stages since rules can be complicated, and students may be confused if both phonological and morphological concepts are introduced at the same time.

Five teachers (17%) commented that to teach students with dyslexia how to spell effectively, an integration of the phonological and the rule-based strategies should be used. This is because both phonological knowledge and rules of the language are essential in learning English. Mr. Ho used an example to illustrate his idea: when students learnt words such as *unsure*, both phonological and morphological knowledge were required as they had to know that *un* was a prefix. To spell the word, they had to remember not only the prefix *un* that carried a negative meaning, but also the pronunciation of the whole word in order to spell it correctly. The magic *e* at the end was also an important feature of some English words that should be mentioned when teaching students spelling. Therefore, he maintained that to teach English to students with dyslexia effectively, the integration of different spelling approaches is essential.

None of the teachers suggested teaching spelling through the visual-imagery strategy. Some teachers argued that although the visual-imagery strategy could be easily adopted, it might only help students cope with short words. For example, if they have to learn words like *bag* and *cat*, the visual-imagery strategy may be useful. However, the method is not effective if students have to learn words such as *satisfaction* and *employment* as none of the features of the target words is mentioned. If students learn through this method, they may only recite or memorize the visual appearance of the word instead of knowing why it is spelt in this way. As a result, they may not know what to do when they come across new vocabulary. Therefore, the majority of the teachers (75%) agreed that when compared to the other four spelling strategies, the visual-imagery strategy was the least effective.

Twenty seven teachers (90%) recommended that instead of teaching spelling with other skills, spelling should be taught separately. They said that the strategy of integrating spelling with other skills such as writing and reading skills can be employed after the students have acquired the basic techniques of spelling and are able to apply these techniques when encountering new words. At this stage, teaching spelling through reading and writing will come naturally.

Besides teaching strategies, the teachers also commented on the teaching elements that were needed to teach students with dyslexia. Miss Cheng stressed the importance of implementing interactive elements. For example, she used colourful flash cards and games during her lessons, and incorporated colourful objects and interesting songs to motivate students. As her students were reluctant to read, it was essential to provide something that might arouse their interest in learning English. Therefore, Miss Cheng believed that these elements were of great importance and should accompany the appropriate teaching strategy. Miss Mak's opinion was similar; she stated that although the students she was teaching were in junior forms, she treated them as primary school pupils, who needed a lot of excitement and stimulation. She therefore prepared a variety of interesting tasks and presentations to motivate learning.

It should be noticed that all teachers emphasized the importance of habit formation, regardless of the effectiveness of different strategies. They pointed out that no matter which strategy was being used, what was more important was helping students apply what they had learnt and develop good spelling habits through practice. As a result, they might learn how to decode and spell unfamiliar words. Therefore,

teaching spelling is actually not only about the methods used to spell and to remember the words; what is most important is that students are able to use strategies they are most comfortable with to decode new words and to understand the formation of the words.

Question Three: Discussion and Implications Concerning the Spelling Strategies

How can the strategies recommended by the researchers be used to help junior secondary school students with dyslexia to spell?

Teachers indicated that the most commonly used and effective strategies for students with dyslexia were the phonological strategy, and the rule-based strategy. It also appeared that although different strategies were suggested by different teachers, it was noted that all teachers agreed that explicit introduction and explanation of the target vocabulary were needed. This echoes the idea mentioned by other researchers (e.g., Darch & Simpson, 1990; Høien & Lundberg, 2000; Pressley, 1999). These authors noted that explicit teaching of spelling was helpful to students with dyslexia in that the rules and components of a word could be explained and analysed. Since students with dyslexia may have difficulties in decoding words, they fail to use a particular method to spell the words, and so explicit instructions should be used. This is quite different from teaching other students because when one teaches students without specific learning difficulties, one does not need to focus on how to spell the words as students may know to divide the words into several components according to their pronunciation or their morphology.

Among the five strategies mentioned in the literature, the phonological strategy was considered the most effective by the majority (60%) of teachers interviewed. These teachers stressed the importance of the relation between sounds and letters in learning English. They also pointed out that learning to relate letters to sounds could help students acquire effective spelling skills. Repeated drilling on such aspects could encourage students to form the habit of paying attention to the sounds and then relating the sounds to the letters. As a result, they might be able to spell independently. This idea is in line with the suggestions in the literature. According to Swerling (2005), the most basic kind of knowledge required for good English spelling involves phonic knowledge, or knowledge of common letter-sound relationships.

Although the phonological strategy was believed to be the most effective strategy in teaching spelling to students with dyslexia, there was a lack of consensus with regard to what kind of words should be taught first, or whether vowels or consonants should be taught first. Indeed, there is no certain answer to such questions. Swerling (2005) examined the effectiveness of spelling strategies in teaching students with specific learning difficulties and suggested that some common irregular words should be taught in the earliest stage of spelling because irregular words such as *of*, *what* and *were* were commonly used in generating a complete sentence. However, if the phonological strategy is employed, the decision about what words should be taught first and together should be based on the words' phonological features rather than on their usage or frequency of occurrence in making sentences. The choice should also be made according to the learner's level. Paying attention to the learner's language proficiency level is necessary so that teachers can adjust their steps and method of teaching according to the students' needs. Swerling (2005) and Moats (2005) advised that consonants should be focused on first if the students have a lower level of language proficiency because introducing vowels may confuse them as vowels involve more complicated letter-sound relationships because of the greater variations and unpredictable patterns. It was also suggested by Moats (2005) that vowels, especially diphthongs, were more complex, and most learners with dyslexia make mistakes in spelling words involving vowels clusters such as /aiə/ in *society*. Therefore, to begin, teachers may focus on similar consonants such as *bay*, *day*, *may*, *pay* and *gay*, if students are of lower language proficiency or with more severe dyslexia. Decoding analogies such as these can complement the phonological strategy so that students can learn accordingly, as suggested by Pressley (1999) and Høien and Lundberg (2000). In addition, easy words should be taught before the more difficult ones so that teachers can scaffold the target knowledge and students can learn step by step.

The effectiveness of the phonological strategy is especially evident among learners with dyslexia in Hong Kong who learn English as a second language. A big difference between English and Chinese is that Chinese is a logographic writing system, while English is an alphabetic one. Drawing students' attention to the phoneme-grapheme relationships can help students familiarise themselves with the writing system. On the other hand, the drawbacks of the phonological strategy should be noted: students cannot use the strategy to cope with all English words as some letters are not pronounced in certain words, such as *k* in *knife* and *h* in *hour*. Consequently, the phonological strategy alone is not adequate in teaching students with dyslexia spelling.

It was found that all the 30 teachers believed that the rule-based strategy was important, but inadequate alone to teach spelling effectively. Some teachers pointed out the importance of teaching morphological rules in English. However, it should be noted that learners with dyslexia need explicit and extra instructions in learning. Darch and colleagues (2000) examined the effectiveness of the rule-based strategy and found that even if students knew the morphological features of words, they failed to spell the prefixes and suffixes, or even attached these features in the wrong place. Therefore, even if morphological features are taught, teachers still need to find a way to teach students to spell the segments of the target vocabulary.

To some extent, the rule-based strategy is more complex because it requires students to have a deeper understanding about the language, other than the phonological features. Researchers like Darch and Simpson (1990) mentioned that the rule-based strategy may sometimes be difficult to apply for students with learning difficulties. Therefore, it is recommended that teachers should implement the rule-based strategy based on the students' level, with the goal not to confuse the students, but to provide them with extra information and assistance in spelling.

The visual imagery strategy was believed to be the least effective strategy as the effects of visual imagery strategy are rather short term, while phonological and rule-based strategies have more long-term effects on learners. Therefore, if the aim is to enable students to form the habit of decoding in order to spell, the visual imagery strategy, in this aspect, fails to help. It is effective if students are required to spell short words using their short-term memory, but students with dyslexia may fail to recall the words after a short period of time because of their insensibility in letters and sounds. The visual imagery strategy is supported by some researchers such as Sears and Johnson (1986), who pointed out that spelling is a visual activity in which a visual structure in learning is at work, and they concluded from their research that maybe a mental picture is also worth a thousand pronunciations. However, in real practice, students with dyslexia rely on orthographic or phonological decoding, and the morphological features to spell. Therefore, teaching students to pay attention to the visual structure of the words is too random and not effective in teaching students to spell.

More importantly, teachers stressed the problems of whether or not students apply the spelling strategy when they encounter new vocabulary. This was also suggested by Darch and colleagues (2000) that students with specific learning difficulties did not use appropriate strategies when spelling words. As a result, teaching spelling may become ineffective as students do not know how to apply the strategies when they encounter new words. Therefore, as teachers, it is important to help students to form the habit of decoding in order to spell. Ellis (1997) explained the importance of forming habits with reference to behaviourist learning theory, stressing the idea that learning took place when learners had the opportunity to practice making the correct response to a given stimulus. Repeated practice and drilling may be needed to emphasize the importance of decoding a word in order to spell it. Habit forming can be done by having conventional spelling, as suggested by Berninger and Amtmann (2003). Continuing assessment and intervention may also help students with dyslexia, so teachers would need to include more guided practice when a strategy was first introduced so that learning disabled students could efficiently apply strategies when working independently (Darch & Simpson, 1990). Therefore, teaching children with dyslexia spelling is not a short-term pedagogy, but one which may last for a prolonged period.

The above comments show the drawbacks of different strategies in teaching students with dyslexia spelling. Undoubtedly, the phonological strategy is effective in teaching students to relate sounds to letters, but it fails to explain words which involve silent letters. The rule-based strategy succeeds in teaching students to separate the words into segments according to their morphological features, but it may fail to address the spelling problems that the students have. Students may end up learning the rules, but not knowing where to put the morphemes. To help students with their spelling skills, extra instructions are needed. The visual-imagery strategy focuses on the visual features of the words and can be easily adopted. However, it is not a structured and systematic strategy that students can apply individually. Consequently, the implication is that no strategy can stand alone in teaching spelling effectively, and an integration of strategies is recommended because the strategies complement each other. Therefore, teachers can help students in forming the habit of applying the phonological strategy and, at the same time, teach students the rules that they can use when spelling. Høien and Lundberg (2000) pointed out that spelling included many sub-processes, involving phonological, morphological, semantic and orthographic skills. To tailor-make the teaching process, it is advisable that phonological and morphological strategies be applied in an integrated way. The two strategies can work as

complementary to each other to be used in explaining word formations to students. It will be the most useful if the intervention in teaching spelling aims at explicitly teaching children different levels of sub-syllabic segmentation, and training them in the acquisition and effective use of multiple decoding strategies (Lovett, Barron, & Benson, 2003).

While the focus of the literature on this topic is often the implementation of spelling strategies, the teaching elements involved in real practice should also be stressed. For example, students with dyslexia may be discouraged by the long words and passages they are asked to read. Therefore, attractive visual aids should be used in order to attract their attention and arouse their interest in learning. The use of pictures is essential as *people with dyslexia are visual and multi-dimensional thinkers* (Davis & Braun, 2010). By using pictures and objects in teaching spelling, teachers can utilize the students' strengths in learning, which can help students improve their confidence in learning.

To set appropriate learning goals and learning focuses for each lesson, teachers should prepare well before the lessons, observe the students' learning behaviours and reactions in the lessons and reflect after the lessons. Doing so may allow teachers to adjust their teaching strategies accordingly based on the level of the students and their learning progress.

Limitations

The current research has some limitations. First of all, the scale of the research is not large, as only 30 secondary school teachers in Hong Kong were interviewed. As a result, it is impossible to identify all effective strategies used for teaching spelling to students with dyslexia.

The strategies suggested were applied to students with dyslexia in general; individual differences were not considered. To find out the most effective strategy in teaching children with dyslexia spelling, learning styles and preferences, language proficiency and learning habits should all be taken into account so as to conduct the most suitable and most effective strategy to teach.

Conclusion and Implications

Like many other parts of the world, in Hong Kong, most students with dyslexia study in general education schools. As they have special needs in learning, extra assistance should be offered. Campbell, Soler and Reid (2009) suggested that students with dyslexia work and learn with their average counterparts so that those who encounter difficulties in learning may improve their self-esteem and also their confidence in learning. However, while special organized and structured treatment programmes have been proposed by many researchers, it is believed that extra learning sessions offered only to students with dyslexia are essential so that teachers can more closely follow the students learning progress.

Spelling is a complex process, which involves different skills at the same time when a word is spelt. In this study, 18 of the 30 participants (60%) agreed that the phonological strategy was very important; seven (23%) proposed the use of the rule-based strategy; and five (17%) recommended an integration of phonological and rule-based strategies. The teachers, at the same time, pointed out both the strengths and weaknesses of the strategies. They also suggested that the phonological strategy, the rule-based strategy and the visual imagery strategy cannot stand alone effectively. Findings of this study indicate that an integration of the strategies help students learn to employ different strategy to spell different words. Helping students to form a habit of decoding words systematically can bring the biggest benefits to students, especially those with dyslexia because they have deficiencies in referring sounds to letters and in decoding. At the same time, teachers should be able to offer immediate response and feedback to students, to scaffold the teaching steps as well as to assist them in their learning journey.

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EXPERIENCES OF STUDENTS WITH DISABILITIES IN A PUBLIC UNIVERSITY IN JORDAN

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The study examined students with disabilities perspectives toward their experiences in a public University in Jordan using a survey approach. The aim of this study was to take a closer look at the experiences of students with disabilities in Jordan and, in light of new legislation, to identify obstacles in the higher education system. It found that there was still much work to be done to enhance the higher education experiences for students with disabilities and identified several issues that should be addressed in order to enable access and entitlement to higher education. Recommendations and implications for future research are discussed in the context of the current disability legislation in Jordan.

In 2009, the population of Jordan was estimated to be approximately six million (Jordan Statistical Yearbook, 2009). Applying the proposed population growth rate of 2.2 % and considering the number of Iraqi and Syrian refugees in Jordan, the population of Jordan will be around seven million by the end of 2012. Jordan ranks number one in the Arab World in education (The Ministry of Higher Education, 2012). Despite strained resources in Jordan, the Ministry of Education developed highly advanced national curriculum and many other nations in the region have developed their education system using Jordan as a model.

Higher Education, Disability, and Legislation in Jordan

During the last two decades, the sector of higher education in Jordan witnessed a prominent development as well as progress evidenced by the increasing number of institutions of higher education, enrolled students, faculty members, administrative and academic members, size of expenditures, and the financial government support to this significant educational sector. The number of public universities as a result has reached 10, besides 17 universities that are private and 51 community colleges. This progress in numbers of universities accompanied by significant increase in number of students enrolled to study in these universities, where the number of enrolled students in both public and private universities is estimated at nearly 236 thousand; 28 thousand out of the total are from Arab or foreign nationalities (The Ministry of Higher Education, 2012).

Higher Education (HE) institutes in Jordan are required to make reasonable adjustments for students with disabilities and it is no longer possible for them to justify failing to do so. According to Jordanian Law (31) on the Rights of Persons with Disabilities, (Section B) Education and Higher Education, the main responsibilities of the Ministries of Education and Higher Education are:

(a) providing persons with disabilities with general, vocational, and higher education opportunities in accordance with their disability category through integration; (b) adopting inclusive education program between students with disabilities and non-disabled counterparts and implementing these programs within the framework of educational institutions; (c) making available reasonable accommodation that assist persons with disabilities to learn, communicate, receive training, and enjoy mobility, such tools should include Braille methods, sign language for the deaf and other necessary equipment and tools; (d) carrying out educational diagnosis within the overall comprehensive diagnosis team to determine the nature of disability, its degree and requirement; (e) creating qualified technical cadres for dealing with students with disabilities; (f) carrying out guidance, awareness, and orientation programs for students with disabilities and their families; (g) providing modern techniques for educating with disabilities in the public and private sectors, including teaching mathematics and computer skills; (h) admitting students with disabilities who pass the General Secondary Studies Examination to public universities, in

accordance with conditions to be agreed upon between the Higher Council for the Affairs of Persons with Disabilities and the Council of Higher Education; and (i) making available methods of communication for persons with hearing disabilities, including sign translators. (The Higher Council for the Affairs of Persons with Disabilities, 2007, p.4).

Additionally, Jordan is one of the countries that signed on the Convention on the Rights of Persons with Disabilities. It can be concluded from the legislation movement in Jordan that there is now a requirement for HE institutes to anticipate the needs of students with disabilities and to make adjustments that will apply for all students, rather than responding reactively to their needs on an individual basis. While all of these signs of progress were encouraging, the student case studies in Jordan (Masaedeh, 1995) and other countries (Barnes, 2005; Butterwick&Benjamin, 2006; Fuller, Healey, Bradley, & Hall, 2004; Hougann, 1987) revealed gaps between policy and practice and showed that significant barriers remain to the participation of students with disabilities in education and HE.

Experiences of Students with Disabilities in Higher Education

Students with disabilities have long been denied the opportunities to pursue HE around the world. However, they have increasingly participated in HE in recent years. The surveys and statistical data suggest that nearly 9%, 5%, and 3% of all students in HE programs have a type of disability in the US, the UK, and Australia, respectively (Henderson, 2001; Higher Education Statistics Agency, 2002; Productivity Commission, 2003). However, it is very essential to consider the facilities available in the school and university complexes which have to be suitable for the needs of students with disabilities. There should be a careful attention to the design of the classrooms that has to accommodate the type of disabilities exhibited by students who are included in the classroom. Diverse severity of the disabilities represented between the disabled students in the class might need special demands from the classroom teacher. For example, those students with totally blind, deafness, physically impaired, will require a significant instructional accommodations or curriculum modifications. The classroom space, design, location, lights, elevators, and assistive tools should be considered in environmental settings (Schmidt & Cagran, 2008).

In addition, students with disabilities pose particular challenges to HE not only in terms of gaining physical access to buildings, but also in relation to much wider access issues concerning the curriculum, teaching, learning, and assessment. For example, (Fuller et al., 2004) studied obstacles that faced students with disabilities at university. The results of the study indicated that there were many obstacles such as the fast rate of the teachers' speech during the lectures, as well as difficulty in participating in the discussion and answering the questions. Also some lecturers resented allowing disabled students to tape the lectures, and it was hard to access the educational centers. There was a lack of suitable computer programs. Another study conducted by (Haugann, 1987) to identify the visual impairment students' problems in higher educational institutions. The results indicated that these students face many different problems; for example the absence of counseling services, few numbers of Braille printed books, lack of visual readers, the difficulty of adjustment with the university life, teachers' neglect of their special needs, and the problem of taking exams and transport in were the most important. Holloway (2001) reported that students may face increases in stress, additional time demands and financial burdens in trying to circumvent these barriers. Many studies, though, do also report examples of good practice in terms of provision of support and a desire to improve and widen access for students with disabilities (see Fuller et al., 2004). When students with disabilities enter higher education they are taking up an opportunity to increase their knowledge, to develop their social skills, to obtain good qualifications and to expose themselves to debate and discussion. It is an important experience for empowerment (Hurst, 1996, p. 141).

Significance of the Study

In line with disability equality legislation, universities are expected to make reasonable and anticipatory adjustments to curriculum, pedagogy, and assessment practices and students are legally entitled to these adjustments. Furthermore, Riddell, Tinklin, and Wilson (2005) suggested that until HE institutions consult students with disabilities directly they will remain ignorant of the difficulties and barriers faced by them. Thus, students with disabilities are being marginalized by HE institutions who are not sufficiently adopting positive strategies to consult students with disabilities when implementing policies and practices to break down barriers to study (Green, 2007). In fact, Hurst (1999) argued that hearing the voices and lived experiences of students with disabilities should be a central tenet of successfully understanding their needs and as such they should be proactively consulted and empowered to advocate their views.

Although educational policies in Jordan promise to take into consideration the necessity to provide basic and comprehensive services for students with disabilities, recent research on disability in Jordan and empirical data gathered during fieldwork in 2012 all point to the serious disadvantages faced by people with disabilities in Jordan in relation to every area of life, including education (Al-Rossan, 2012). It is no secret that disabled students are under-represented in higher education. Despite the growing interest in issues surrounding inclusion of students with disabilities in HE in Jordan, the voices of students with disabilities have rarely been heard.

Listening to the experiences of students with disabilities themselves has the advantage of letting individuals express their 'lived experience' of being a student in Higher Education and enables the physical and hidden barriers that they encounter to be highlighted. Examining the students' perspectives provides an insight into ongoing practices at HEIs and generates knowledge about how to make HE more accessible to students with disabilities in Jordan.

Study Purposes

The main aim of the study is to identify the obstacles to the inclusion of the students with disabilities in a public University in Jordan. These obstacles will be highlighted to provide enough information to the decision makers in the University and the Higher Education Ministry so they will be able to recognize such obstacles and consider them carefully while planning for inclusion in the University. Therefore, the final aim of this study is to make recommendations to enhance the quality of the learning experience of students with disabilities. This study addressed the following question: what obstacles do students with disabilities face in a public university in Jordan?

Method

Participants

A total sample of 52 undergraduate students with disabilities from a southern university in Jordan participated in the study. There were 27 students with health and physical impairment, 20 students with visual impairment, and 5 students with hearing impairment. The ages ranged from 19 to 23 years of age with the majority being 20 years old. Forty seven students were in humanitarian colleges and five in scientific colleges. Of the total sample, 15 were males and 37 females. These students enrolled in the first semester of 2012/2013. The University in which the research was undertaken was a large public southern University in Jordan with around 17,000 students, 550 academic staff, and 12 colleges.

Procedure

A letter from the author was submitted to the University to request an ethical approval for the study. This letter was supplemented by the survey and the study purposes. When approved, The Dean of Students' Affairs in the University provided the researcher with all descriptive information for this research. The researcher approached students with disabilities and asked their permission to be part of the study. Students were assured that the study was for scientific purposes only and that their responses were confidential and anonymous. They were urged to respond to all items to the best of their knowledge. The students completed the hard copy of the survey and handed it back to the researcher within one week after the survey was given to them. Consent for participation was obtained from all participants. All data was collected during the month of September of 2012.

A cover letter explaining the survey purposes, the term of inclusion, and the estimated time of filling it out (30 minutes) was presented in the beginning of the study. For the purpose of this study, inclusion was defined as *reconstruction of the educational process including its educational services, curriculum, and the rehabilitation of the staff's beliefs and roles in the educational field in order to meet the needs of students with disabilities* (The Higher Council for the Affairs of Persons with Disabilities, 2007, p.2). The person with disabilities: *any person suffering from permanent, partial or total impairment affecting any of his/her senses, or his/her physical, psychological or mental capabilities, to an extent that undermines his/her ability to learn, work, or be rehabilitated, and in a way which renders him/her unable to meet her/his normal day-to-day requirements under circumstances similar to those of non disabled persons*. Reasonable accommodation: *the necessary fixtures to adapt the environment conditions related to the place, time, and the provision of equipment, tools and assistive devices wherever necessary to ensure that persons with disabilities exercise their rights on equal basis with others provided that this shall not inflict serious damage on the party concerned* (The Higher Council for the Affairs of Persons with Disabilities, 2007, p.2).

Instrument

The survey instrument had two main sections. The first section requested descriptive information about the age, student's gender, student's college, and student's disability. The second section requested information about the students' knowledge of the Jordanian Law (31) on the Rights of Persons with Disabilities. Specifically, section (B): Education and Higher Education. The survey included 15 items that were distributed randomly to mitigate order effects and selection bias. The 15 items of the instrument were formulated based on a review of relevant literature and reports (Alqaryouti, 2010; Barnes, 2005; Butterwick & Benjamin, 2006; Fuller et al., 2004; Hougann, 1987; Masaedeh, 1995; Schmidt & Cagran, 2008).

Areas covered in the survey included: general needs and services, students' Disability Office and designated resources in the University, physical environment and assistive devices, staff, reasonable accommodation, inclusion, and major challenges and obstacles that faced by students with disabilities in the University. The responses on 14 of the items were in Likert-type forms designated as follows: (a) yes always, yes sometimes, and no; (b) very adequately, adequately, inadequately, and very inadequately; (c) very easy access, reasonable access, poor access, and very poor access; (d) yes but only some of the buildings and no, none are accessible; (e) yes definitely, yes maybe, and no; and (f) yes or no. The item number 15 was an open-ended question that asked participants to list the major challenges and obstacles in the University.

Validity and Analyses

To establish the face and content validity of the instrument, an initial version of the survey was given to 10 university instructors. These referees were asked to judge the content of the survey and provide feedback. They made comments on a few items and suggested merging some items due to similarity of their meanings, and re-phrasing some for more clarity; these suggested changes were taken into consideration when making the final version of the survey. In addition, internal consistency was calculated using Cronbach's alpha. Cronbach's alpha measures how well a set of variables measures a single unidimensional latent construct (Field, 2009). The instrument had a high coefficient (.91) of reliability.

In order to respond to the research questions, the information from the closed-ended items in the questionnaire was entered into the statistical package for the Social Sciences (SPSS Inc., Chicago IL, 2008). An exploratory analysis approach was applied to all data, providing frequency distributions as well as graphical displays of data. In addition, to generate categories and themes for the item number 15, the researcher was immersed with the data by reading the students' responses to this question many times. Then generate the category through the prolonged engagement with the data (the students' answers). These categories then become buckets into which segments of text are placed. These categories are internally consistent but distinct from one another (Marshall & Rossman, 2006, p.159).

Results

The students with disabilities were asked to indicate their level of knowledge about the section in the Jordanian Law (31) on the Rights of Persons with Disabilities that affect postsecondary education. Only 19% (10) of the students indicated that they were familiar with the law. A closer inspection of the data is introduced in the form the percentages, frequencies (see Table 1), and themes for an open ended question of the survey items in the next sections according to the covered domain.

Generally, Table 1 indicates that most of the students' responses were negative to most of the study's items. For the domains General Needs and Services and Reasonable Accommodation, most of the students believe that not only the university did not support them with the necessary resources that should meet their needs but also the services and the reasonable accommodations were inadequate. With regard to the Student Disability Office and Designated Resources in the University, most of the students demonstrate bad experiences. Their responses to all items of this domain show that they did not have an easy access to the disability office nor they have enough staff and resources or experienced staff who have good understanding of disability issues and students needs. In addition, the responses in the Physical Environment and Assistive Devices and staff domains indicated that the students were also not happy with the availability of the assistive devices and the teaching staff who were not trained or equipped to deal with disabilities issues. However, they expressed that some of the residential accommodations and indoor or outdoor facilities were accessible to them. Finally, regarding the inclusion domain, students' responses indicated that the university should do more to support the

inclusion of students with disabilities and this is evident since most of the students do not have many friends without disabilities in the university.

Table 1. Percentages and Frequencies of the study's items

Domain/Item	Item's Response	Percentages (%)	Frequencies
General Needs and Services			
1- Do you have all the resources necessary to meet your study needs?	yes always	7	4
	yes sometimes	10	5
	no	83	43
2- How adequately do these services address your needs?	very adequately	5	2
	adequately	7	4
	inadequately	65	34
	very inadequately	23	12
Student Disability Office and Designated Resources in the University			
1- Do you have an easy access to the Students Disability Office?	very easy access	2	1
	reasonable access	9	5
	poor access	70	36
	very poor access	19	10
2- Is there a sufficient number of staff in the Students Disability Office to meet students' needs in your opinion?	yes always	5	3
	yes sometimes	23	12
	no	72	37
3- Does the staff in the Disability Office demonstrate a good understanding of disability issues and student needs?	yes always	4	2
	yes sometimes	19	10
	no	77	40
4- Does the Disability Office have the resources to address your needs (e.g., budget, facilities, and equipment)?	yes always	7	4
	yes sometimes	25	13
	no	68	35
Physical Environment and Assistive Devices			
1- Is the campus environment accessible for you (e.g., residential accommodation, indoors and outdoor facilities)?	most of the buildings	10	5
	yes but only some of the buildings	84	44
	no	6	3
2- Is a special technology or assistive devices available to meet the needs of students with disabilities?	yes always	8	4
	yes sometimes	17	9
	no	75	39

Table 1–(Continued).

Domain/Item	Item's Response	Percentages (%)	Frequencies
Staff			
1- Are teaching and administrative staff adequately equipped and trained to deal with students with disabilities?	yes always	6	3
	yes sometimes	15	8
	no	79	41
2- Do you experience any attitudinal barriers within the Institution?	yes always	32	17
	yes sometimes	46	24
	no	22	11
Reasonable Accommodation			
1- How adequate are the reasonable accommodations that are provided to individual students with disabilities?	very adequately	6	3
	adequately	29	15
	inadequately	52	27
	very inadequately	13	7
Inclusion			
1- Could the University do more to support the inclusion of students with disabilities?	yes definitely	63	33
	yes maybe	25	13
	no	12	6
2- Do students without disabilities offer assistance when required to you?	yes always	10	5
	yes sometimes	67	35
	never	23	12
3- Do you have more friends without disabilities than friends with disabilities on campus?	yes	13	7
	no	87	45

Major Challenges and obstacles that faced by students with disabilities in the University

Responses to the open-ended question that asked participants about the major challenges and obstacles in the University were coded. These were then read and re read and themes were developed to reflect the nature of the responses. The main themes that represented the challenges and obstacles that faced by students with disabilities in the University were: (a) the issues of students with disabilities are still managed in a fragmented way with the Disability Office being reactive in their approach, strong policy frameworks are not in place or, alternatively, not known to support the inclusion of students with disabilities in the University; (b) funding for the activities of the Disability Office is very limited; (c) learning and assessment materials are not in accessible format in most courses; and (d) faculty staff and administrators in the University don't have enough awareness about disability issues and how to respond appropriately to the needs of the students.

Discussion

As the number of students with disabilities in higher education in Jordan has increased in recent years, it is a necessity to address their needs and demands at universities and colleges. Their access has been facilitated in part by the Law on the Rights for Persons with Disabilities for the year of 2007. The purposes of this study were to explore the obstacles to the inclusion of the students with disabilities and

make recommendations to enhance the quality of the learning experience of students with disabilities in a public University in Jordan.

Several interesting findings from the descriptive information of the participants and the survey questions were documented in this study. First of all, it would be easy to think that legislation in itself has created an environment that can accommodate the educational needs of students with disabilities in Jordan but this is not true. The law of education and higher education for students with disabilities needs to be enforced in Jordan. In fact, research by authors such as Barnes (2005) and Butterwick and Benjamin (2006) indicated that legislation alone is insufficient to effect change and thus a much more complex strategy of reviewing practices, procedures and active consultation of people with disabilities is required to work towards a fairer higher education.

The results of this research indicated that: (a) students with hidden disabilities (eg., specific learning disability, emotional disturbance, communication disorders) were not represented in the university; (b) the percentage of students with disabilities compared to their non-disabled counterparts is very low; ; (c) students with disabilities are not familiar with Law on the Rights for Persons with Disabilities for the year of 2007; (d) students with disabilities do not have all the necessary resources to meet their study needs; (e) students with disabilities are not satisfied with the support that provided by the Student Disability Office and designated resources in the University; (f) most, but not all, of the buildings are accessible for students with disabilities; (g) assistive devices are not available for most of the students with disabilities; (h) teaching and administrative staff are not trained to deal with students with disabilities; (i) most of the students with disabilities consider that the reasonable accommodations that are provided to them are inadequate to address their needs in learning and assessment in the University; (j) although students with disabilities are studying in an integrated higher education institution, inclusion is not practiced properly in the University where the research was undertaken. Same findings were documented by the students with disabilities when they responded to the open-ended question that addressed their major challenges and obstacles in the University. These results are in line with previous research that identified the educational, social, and environmental problems that the students with disabilities would encounter at the university besides the lack of tradition in higher education for accommodating students with disabilities (Alqaryouti, 2010; Barnes, 2005; Butterwick & Benjamin, 2006; Fuller et al., 2004; Hougann, 1987; Masaedeh, 1995; Riddell et al., 2005; Schmidt & Cagran, 2008).

In terms of the very low percentage of representation for students with disabilities in the University, this may be due to the fact that it is easier for the educational system in Jordan to identify students with severe disabilities and sensory impairments using the medical approach than identifying students with learning disabilities or mild disabilities. In consequence, student with learning disabilities or mild disabilities are rarely diagnosed and do not receive the necessary assessment and interventions in the general and higher education system of Jordan. Approximately 90% of the population of students with disabilities has learning disabilities, intellectual impairments, emotional disabilities, or communication disorders. Since all these students were excluded from the admission of the University, it was expected that the number of students with disabilities in the University would be very low.

Based on the results of this study, the researcher recommended the following: (a) considering students with disabilities needs in all discussions of physical estates, teaching, learning and assessment and admissions, as well as raising awareness among all institutional staff of the needs of students with disabilities; (b) providing assistive tools which would help students with disabilities in getting the required information from courses and libraries; (c) providing the teachers who might teach students with disabilities with enough information about these students, the assistive tools they need and the alternative assessment that teachers need in their evaluation; (d) hiring qualified staff in the Disability Office that recognizes students' needs and making the University staff more aware of the difficulties that their students with disabilities encounter; and (e) establishing an advisory group at University level to prepare information, organize training, collect information, and produce reports about students with disabilities.

In conclusion, students with disabilities present a challenge to higher education staff to question conventional concepts about teaching and learning. If higher education takes up the challenge, then this could represent a significant improvement in practice for all students. Until institutions consult their students with disabilities directly they will remain ignorant of the difficulties and barriers faced by students with disabilities in daily studying at colleges and universities. They will not know which areas need particular attention or development and members of staff remain unaccountable for their practice.

The difficulties faced by students with disabilities provide a catalyst that enables the least effective parts of higher education to be more clearly seen.

Limitations and Future Research

Generalizations from the experiences of 52 students with physical, visual, and hearing impairments in a public University in Jordan must be treated with caution. It is unknown whether institutional differences occurred. Future studies should investigate possible institutional differences as well as obtain larger samples that represented all disabilities. However, in general there were more similarities in policy and provision for students with disabilities across types of higher education institutions in Jordan. A possible focus for further study is to explore how faculty, administrators, and leaders in higher education institutions can strengthen their awareness about students with disabilities and create activities to promote inclusion of all students. The researcher also recommended other researchers to study the counseling and psychological needs of the students with disabilities and the relationship between their self esteem and academic achievement. Finally, attitudes of academic and other staff towards making accommodations for students with disabilities may be explored in future research.

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HOW WELL DO THEY READ? BRIEF ENGLISH AND FRENCH SCREENING TOOLS FOR COLLEGE STUDENTS

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We translated and report on the psychometric properties of English and French versions of two reading difficulties screening tools for junior/community college students. We administered the Adult Reading History Questionnaire-Revised (ARHQ-R) (Parrila, Georgiou, & Corkett, 2007) to 1889 students enrolled in compulsory language courses in English and French colleges in the language of instruction at the school. Eighty students (4%) self-reported a learning disability. We also administered English and French versions of the Test de lecture - Épreuve de compréhension (Institut de Recherche et d'Évaluation Psychopédagogique Inc., 2000) to 432 college students. We categorized all participants into adequate, poor and very poor readers based on each measure and examined scores of students with and without learning disabilities. Although there were significant differences among groups under regular testing times, extended time resulted in comparable reading comprehension scores for all groups. Recommendations based on the findings are made for research and practice.

Reading difficulties are a substantial concern in North American postsecondary education. Indeed, many students with specific learning disabilities (LDs) have reading difficulties. Furthermore, learning disabilities are amongst the most common disabilities in Canada's junior/community colleges (Lavallée, Raymond, & Savard, 2012). The Learning Disabilities Association of Canada (2002) defines LDs as a number of disorders which may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information in individuals with otherwise normal intellectual abilities. The definition notes that LDs may interfere with the acquisition and use of one or more of the following: oral language (e.g. listening, speaking, understanding); reading (e.g. decoding, phonetic knowledge, word recognition, comprehension); written language (e.g. spelling and written expression); and mathematics (e.g. computation, problem solving). (Learning Disabilities Association of Canada, 2002, paragraph 3)

A specific type of learning disability (LD), known as dyslexia, is manifested in reading difficulties related to decoding problems and comprehension difficulties (Couston, 2006). This is the most common learning disability everywhere, including Québec (Mimouni & King, 2007; AQICESH, 2011). However, not all students who have poor readings abilities have an LD. Some students who have difficulty reading have not yet mastered the language of instruction. Other poor readers may, in fact, have an undiagnosed LD (Harrison, Larochette, & Nichols, 2007; Mimouni, 2006). Another explanation may be that reading skills are normally distributed in the population.

Regardless of the reason, it is important to be able to quickly identify students with possible reading difficulties to help design and implement programs to assist them. Since Canada has both English and French colleges and universities, it is imperative to be able to do this in English and French educational institutions. More to the point, it is important for research to be able to administer the same screening tools to both English and French speaking samples.

To our knowledge, the only measure that exists in both English and French is the Canadian Adult Achievement Test (CAAT) / Test de rendement pour francophones (TRF) (Pearson Assessment, undated). Although the CAAT and TRF were normed on English speaking Canadian and French speaking Quebec samples, respectively, the appropriate version of the measure (i.e., Level D, developed for use for individuals with 11 – 12+ years of formal education) does not exist in French. In addition, the Reading Comprehension subtest takes 40 minutes to administer, thereby not qualifying as a *brief* screening tool.

Therefore, one of the goals of this investigation is to provide information on the validity and reliability of the translations of two brief (i.e., 10 minutes or less) screening measures. The goal was not to repeat the original validation, nor to propose these screening tools as valid instruments for the diagnosis of a learning disability. The goal is to provide information on the psychometric properties of the translations.

We selected the oft used 9-item Elementary Education Subscale of the Adult Reading History Questionnaire-Revised (ARHQ-R) (Parrila, Georgiou, & Corkett, 2007) to allow us to rapidly screen students into adequate, poor and very poor reader categories. This measure has been validated in English and used in several primarily Canadian studies (Deacon, Cook, & Parrila, 2012; McGonnell, Parrila, & Deacon, 2007; Lefly & Pennington, 2000; McGonnell, Parrila, & Deacon, 2007; Parrila, Corkett, Kirby, & Hein, 2003). It asks students about their reading experiences in elementary school and takes approximately five minutes to administer. In accordance with established practice (Vallerand, 1989), we used translation and back-translation, and evaluated the French version's psychometric properties.

We also needed a brief, inexpensive reading comprehension screening test in both French and English that we could adapt for online administration. Since we could find no valid bilingual measure we translated the reading comprehension portion of the Test de lecture - Épreuve de rapidité et de compréhension (Institut de Recherche et d'Évaluation Psychopédagogique Inc., 2000) into English. This screening test takes approximately 10 minutes and consists of 11 one-paragraph stories followed by 4-option multiple choice items. These items consisted of literal questions (asking the reader to pick out specific details from the text).

Because we needed large samples to validate the translations, here we report not only on the psychometric properties of these tools, but also on the scores of three groups: very poor readers, poor readers and adequate readers, with and without a self-reported LD. Moreover, we also report on reading comprehension scores using both the typical 10-minute (speeded) administration as well as an extended time of 20 minutes. Extended time is one of the most frequently requested and accorded accommodations for students with LDs (Gregg & Nelson, 2012; Fichten, Jorgensen, Havel, & Barile, 2006; Hadley, 2007; Mimouni & King, 2007; Ofiesh, Mather, & Russell, 2005), in spite of the substantial controversy about its use (e.g., Lesaux, Pearson, & Siegel, 2006; Lovett, 2010).

The following hypotheses were made. (1) Scores on the English and French versions of the measures will provide similar results, (2) There will be a moderately strong relationship between the two measures of reading ability, (3) Students with a self-reported LD will score more poorly on both measures than students without a self-reported LD, and (4) Both students who read poorly and those with a self-reported LD will have substantially higher reading comprehension scores when they are allowed extended (double) time, while students who are adequate readers will benefit only minimally.

Method

Measures

Adult Reading History Questionnaire - Revised (ARHQ-R) - Elementary Education Subscale. This 5-point Likert-type scaled measure is available in English in Parrila et al. (2007) (the French version of the measure is available from the authors). It was recently found to be an effective screening measure for good and poor university students by McGonnell, Parrila, and Deacon (2007), who used a 9-item version of the measure (items 1-9). We also used these 9 items. Mean scores on the ARHQ-R range from 0 to 1, with lower scores indicating less, and higher scores indicating more difficulty reading in elementary

school. Items are simply worded and inquire about elementary school reading experiences (e.g., *How much difficulty did you have learning to read in elementary school?*). A mean between 0 and .25 indicates no reading problems (Adequate reader), scores equal to or greater than .37 suggest poor reading ability (Very Poor reader), and scores between these two suggest some reading difficulties in college (Poor reader) (Deacon et al., 2012; McGonnell et al., 2007). The measure has been used in several studies (e.g., Parrila et al., 2007; Lefly & Pennington, 2000; McGonnell et al., 2007; Parrila et al., 2003). Parrila et al. (2007) reported a mean of .62 (SD = .15) for 28 university students with self-identified reading problems, and a mean of .12 (SD = .08) for a control group of 27 students. The mean score for 10 participants with reading difficulties who had been diagnosed with an LD was .71 (SD = .13). It was .58 (SD = .14) for those with reading difficulties who had not been diagnosed.

Reading Comprehension Test. The reading comprehension component of the Test de lecture - Épreuve de compréhension (Institut de Recherche et d'Évaluation Psychopédagogique Inc., 2000) is a timed test that lasts 10 minutes. The English version of the measure is available from the authors. It consists of 11 one-paragraph stories followed by 4-option multiple choice questions. A sample item is as follows:

Last summer, Patricia spent her holiday with her cousin Anne, who lives in Ontario. Upon return, she was glad to see her parents after being away for a month. She told her parents that every morning, at about nine o'clock, she went swimming and running with her cousin. In the afternoon, Anne and her cousin had so much fun they did not see the time pass. They visited the zoo, historic sites and saw shows. In the evening, they listened to music and went to bed around 10 o'clock.

1. What does Patricia tell her parents about?

- a) her visit to the zoo
- b) the shows
- c) her departure
- d) her stay at her cousin's

Originally designed for elementary and high school, this measure has recently been normed for French language college students (Mimouni, 2009). Norming was carried out using a paper and pencil version without informing students about the time limit. Scoring is determined by the number of correct responses after 10 minutes. Based on Mimouni's results, college students are classified as Adequate, Poor or Very Poor readers according to cutoffs. Students who score fewer than 30 correct out of 44 multiple choice items are considered Very Poor readers, those who score between 30 and 35 correct are considered Poor readers, and those who score 36 or more are considered Adequate readers.

The measure, in paper format, has been administered to several populations (King, Mimouni, & Courtemanche, 2006; Mimouni & King, 2007), including students from French language junior/community colleges, where the mean score of *normal readers* was 37.24 (SD = 5.80). The mean for college students from remedial reading courses was 28.21, and the mean score of college students with an LD was 25.79 (SD = 6.30). Similarly, the mean for 39 college students enrolled in a compulsory French course was 37.33 (SD = 5.74) and it was 28.04 (SD = 9.21) for students with reading difficulties, and 26.70 (SD = 6.00) for 28 students with dyslexia (Mimouni, 2009).

Participants

All participants were enrolled in a 2 or 3-year junior/community college diploma program in one of three urban colleges: one where the language of instruction was English and two where it was French. It should be noted that in Québec, where the study was carried out, all students attend a junior/community college after successfully completing a high school diploma. Only after graduation from junior/community college can they go on to 3-year university Bachelor's programs. Students may enroll either in a 2-year pre-university stream or in a 3-year career/technical stream. Regardless of stream, all students must take a minimum of two compulsory English courses (or French in French language colleges).

Sample 1 included 1889 students. All were over age 18 and all were enrolled in one of three Montreal area public junior/community colleges (1 English and 2 French): 731 were enrolled in an English college (59% females, 41% males) and 1158 in the two French colleges (53% females, 47% males). The median age of all the students was 19. All had completed at least one semester of studies. Eighty of these

students (4.0% in the English college and 4.4% in the French colleges) self-reported a *learning disability such as dyslexia* (53% were female, 47% were male); 59% of them indicated being registered to receive disability related services from their college.

Sample 2 included 432 students. Seventy-five of them (43 from the English college and 32 from the French colleges) self-reported a *learning disability such as dyslexia* (77% female, 23% male). The mean age for students both with and without an LD was 20. Among students with an LD, 25 (33.8%) indicated that they also had Attention Deficit Hyperactivity Disorder. The rate was 5.3% among students without an LD. Most (83%) students with an LD were registered to receive disability related services from their college; there was no significant difference between French and English colleges.

Procedure

The protocol was approved by Dawson College's Human Research Ethics Committee. The ARHQ-R was translated into French by a bilingual team member whose mother tongue is French. As recommended by Vallerand (1989), it was back-translated into English by a different bilingual team member whose mother tongue is English. The entire research team then evaluated discrepancies and made appropriate changes to the French version of the ARHQ-R. This procedure was followed in reverse when translating the Test de lecture - Épreuve de compréhension (Reading Comprehension Test) into English. The French version of the ARHQ-R was pre-tested on a small sample of students as was the English version of the online Reading Comprehension Test.

Sample 1. In the winter 2010 semester, we recruited students who had completed at least one semester of studies in over 100 different sections of compulsory college language courses (English courses in the English college, French courses in the French colleges). Students over age 18 were provided with an information and consent form and asked to complete the ARHQ-R, in paper and pencil format, in the language of instruction at their college. At each college, potential participants were informed that participation would make them eligible to win an iPod (one per college). Participants were also asked about whether they had a *learning disability such as dyslexia* and whether they had registered to receive disability related services for their LD from their college. To avoid confusion with learning difficulties, we specifically included the phrase *such as dyslexia*, a term that is well known in both English and French colleges.

Sample 2. In the fall 2010 semester, we emailed an invitation to visit our bilingual web site to all Sample 1 participants who indicated that we could contact them in the future. To ensure adequate sample sizes of very poor readers and of students with an LD, we recruited additional students from remedial reading courses, campus tutoring centers, as well as from Offices for Students with Disabilities at the three colleges. Potential participants read the online information and consent form and they could choose to complete the Reading Comprehension Test online in either French or English. Also, the participants were informed that they would receive an honorarium of \$10 upon completion of the questionnaire. Data from only those students who indicated that their best language was either French or English participated. In addition, we excluded students if their best language was English but they were attending a French college, as well as the converse pattern.

The online questionnaire consisted of a series of demographic questions (gender, age, presence of an LD, etc.) followed by the Reading Comprehension Test, which we adapted to an online format. The online version followed the instructions on the paper and pencil version. A sample item was presented first and students were instructed to read each paragraph, answer all multiple choice questions, and not to go back and forth between paragraphs (although students could go back if they wished to do so). They were asked to work as quickly as possible and they were told they had up to 20 minutes to complete the test.

As on the paper and pencil version, we did not indicate the number of test items and we presented each of the 11 paragraphs with its 4 associated questions on a series of 11 screens. We counted the number of correct and incorrect responses at 10 minutes, as is customary for the paper and pencil version, and at 20 minutes to evaluate the impact of extended time on scores. Because the online version was not supervised, as suggested by others (e.g., Prince, Litovsky, & Friedman-Wheeler, 2012), an experimenter, blind as to the student's status (student with or without an LD) discarded data whenever she encountered problematic scores. When they had completed all questions or at the end of 20 minutes, whichever came first, participants were thanked for their time and the Reading Comprehension Test was closed.

Results

Psychometric Properties

Gender. There were no significant differences between males and females, either with or without an LD, on either the ARHQ-R or the Reading Comprehension Test. Therefore, subsequent analyses ignore the gender variable. These include t-tests, correlations, and Chi-Square tests.

Language. For translation of a measure to be adequate, it is important that there be no significant differences between scores on the French and English versions. Therefore, we carried out a series of analyses to evaluate the psychometric properties of the English and French versions as well as to assess possible differences between them.

Differences between scores on English and French versions. Although we generally prefer to use 2 x 2 ANOVA (2 Language x 2 LD Status) to avoid Type 1 error, here the goal was to find *no* significant differences. Although it is not possible to prove the null hypothesis, we deliberately chose to use the less conservative multiple t-tests to show that the English and French versions of the measures are truly similar.

The results show that there is no significant difference between scores of non-LD students from English and French colleges on either the ARHQ-R ($M = .25$, $SD = .15$, and $M = .26$, $SD = .16$, respectively), $t(1807) = .62$, $p = .537$, or on the Reading Comprehension Test ($M = 36.51$, $SD = 7.62$, and $M = 36.30$, $SD = 7.67$, respectively), $t(255) = .22$, $p = .821$. The same is true for students with an LD on the ARHQ-R ($M = .52$, $SD = .27$, and $M = .58$, $SD = .22$, respectively), $t(78) = 1.09$, $p = .281$, as well as on the Reading Comprehension Test ($M = 33.14$, $SD = 6.45$, and $M = 30.42$, $SD = 6.65$, respectively), $t(72) = 1.76$, $p = .084$. Arffman (2010) noted that measures in the two different languages should have equal standard deviations. It can be seen in the scores above, as well as in Table 2, that standard deviations are very similar for English and French versions on both measures.

Internal consistencies need to be high and similar. The results also show that both English and French versions of the ARHQ-R have similarly high internal consistency reliabilities: Cronbach's alpha scores are as follows: for the 29 English students with an LD, $\alpha = .920$; for the 695 students without an LD, $\alpha = .793$; for the 55 French students with an LD, $\alpha = .851$, and for 1165 French students without an LD, $\alpha = .823$. Because we obtained only total scores after 10 and 20 minutes on the Reading Comprehension Test, no internal consistencies could be calculated for this measure.

Categorization. We divided students with and without an LD into Adequate, Poor, and Very Poor reader categories based on recommended cutoffs for each measure. Here, too, we found no significant differences in frequencies between French and English versions, whether students did or did not have an LD, either on the Reading Comprehension Test, $X^2(2,75) = .96$, $p = .618$; $X^2(2,357) = 1.69$, $p = .429$, respectively, or on the ARHQ-R, $X^2(2,1809) = .04$, $p = .979$, for students without an LD (it was not appropriate to run X^2 tests on the ARHQ-R frequencies for students with an LD because the frequencies are lower than 5 in more than 20% of the cells). Frequencies can be seen in Table 1, which shows that students with an LD were significantly more likely to be categorized as Poor and Very Poor readers on both the ARHQ-R, $X^2(2,1889) = 147.55$, $p = .000$, and on the Reading Comprehension Test, $X^2(2,432) = 13.16$, $p = .000$, than those without an LD, although a substantial number of students with an LD were classified Adequate readers on the Reading Comprehension Test.

Means for the LD and Non-LD groups in each category in Table 2 shows the Reading Comprehension Test means for students with and without an LD in each of the 3 groups are similar. The same is true for the ARHQ-R, with one exception. Scores of Very Poor readers with an LD are worse than those of Very Poor readers without an LD. This is similar to results reported by Parrila et al., (2007), who showed that students with reading problems who had an LD had substantially worse scores ($M = .71$, $SD = .12$) than those with reading problems who did not have an LD ($M = .58$, $SD = .14$). Students with an LD who had and those who did not have Attention Deficit Hyperactivity Disorder did not differ significantly on either measure.

Registration for college disability related services. The results show significantly worse ARHQ-R scores for students with an LD who indicated that they had registered for disability related services ($M = .62$, $SD = .24$) than for those with an LD who had not done so ($M = .47$, $SD = .22$), $t(69) = 2.65$, $p = .010$. On the measure of reading comprehension, although the results also followed the direction of poorer scores

for those who had registered ($M = 31.86$, $SD = 8.07$) than for those who had not done so ($M = 32.72$, $SD = 7.36$), the t -test was not significant, $t(41) = .28$, $p = .78$.

Table 1. Categorization of English and French Language Students According to the Two Measures

Measure		Category		
		Adequate Reader	Poor Reader	Very Poor Reader
ARHQ-R - English college	LD	5	5	19
	Non-LD	391	166	145
ARHQ-R - French college	LD	4	3	44
	Non-LD	622	259	226
Reading Test - English college	LD	15	13	15
	Non-LD	86	40	30
Reading Test - French college	LD	8	10	14
	Non-LD	97	58	46

Table 2. Mean ARHQ-R and Reading Comprehension Scores of Students With and Without an LD

	Category												ANOVA test: 3 Categories
	Adequate Reader			Poor Reader			Very Poor Reader			Entire Sample			
	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD	n	
Reading Comprehension Test													
LD	40.39	2.89	23	32.30	1.77	23	25.52	3.32	29	32.16	6.78	75	F(2,72)=1419.25, p=.000
Non-LD	40.94	2.67	183	32.44	1.85	98	25.39	3.08	76	35.30	6.79	357	F(2,354)=1066.55, p=.000
ARHQ-R													
LD	0.15	0.06	9	0.31	0.03	8	0.65	0.18	63	0.56	0.24	80	F(2, 77)=50.65, p=.000
Non-LD	0.15	0.07	1013	0.32	0.03	425	0.48	0.09	371	0.25	0.15	1809	F(2,1806)=3272.26, p=.000

Relationship between ARHQ-R and Reading Comprehension Test scores and categories. As there were no significant differences between English and French versions of the two measures, we combined scores for the two language groups and correlated ARHQ-R and Reading Comprehension Test scores for students with and without an LD separately. The sample sizes for these comparisons are relatively small, since these comparisons require that participants complete both measures. Results show that for students both with and without an LD, scores were modestly correlated, $r(12) = -.348$, $p = .222$, and, $r(135) = -.378$, $p = .000$, respectively. We also wanted to examine the extent to which the ARHQ-R and the Reading Comprehension Test categorized students in similar ways. Here, too, the results indicate moderate relationships between categories for both students with, $r(12) = .633$, $p = .015$, and without an LD, $r(135) = .399$, $p = .000$. These correlations also provide some evidence of concurrent validity for the two measures.

Differences Between Students With and Without an LD

Distribution of scores. It can be seen in Figure 1 (a and b) that the distribution of scores for students without an LD on both the ARHQ-R and the Reading Comprehension Test depart from normal and are skewed, such that a disproportionate number of students obtain high scores. For students with an LD, on the other hand, Figure 1 (c and d) shows that scores on both measures more closely resemble a normal distribution. This suggests that both measures have ceiling effects, that they do not discriminate at the higher end of reading ability, and that these tests are too *easy* for college students who are adequate readers.

We examined the Reading Comprehension Test scores of students with and without an LD who fell into the adequate category of the ARHQ-R. Although there were very few students with an LD in the Adequate reader group, there was no significant difference between scores of students with ($M = 41.33$, $SD = 1.58$) and without an LD ($M = 37.85$, $SD = 6.65$), $t(92) = .903$, $p = .369$. The same is true for Very Poor readers on the ARHQ-R, where the mean Reading Comprehension Test scores of students with an LD ($n = 11$) was 30.36 ($SD = 6.56$) while it was 31.24 for the 25 students without an LD ($SD = 5.29$), $t(34) = .425$, $p = .673$. There were insufficient numbers of students in the Poor category to carry out a comparison.

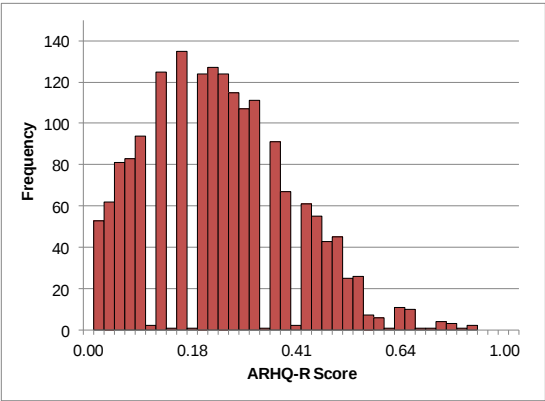


Figure 1a. Non-LD students' ARHQ-R scores

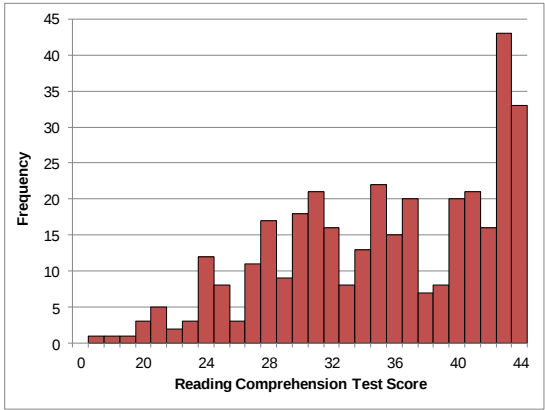


Figure 1b. Non-LD students' reading comprehension scores

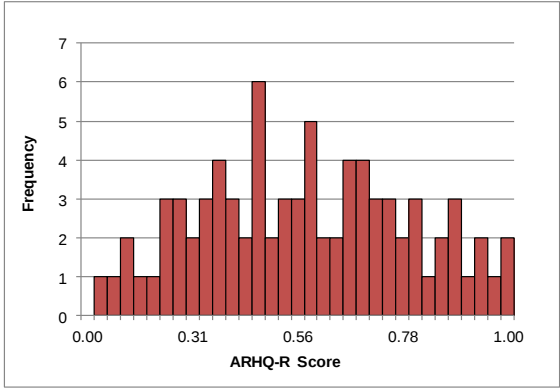


Figure 1c. ARHQ-R scores of students with LD

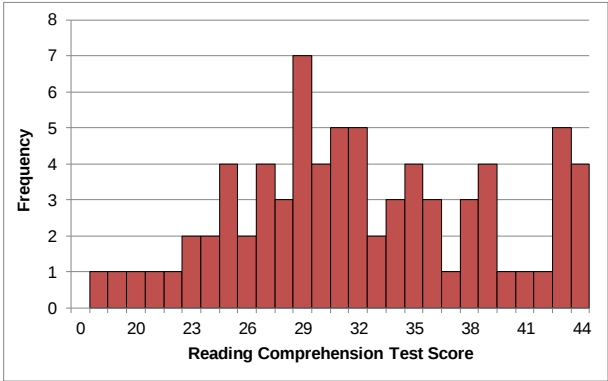


Figure 1d. Reading comprehension scores of students with LD

We conducted a series of one-way analysis of variance (ANOVA) comparisons on ARHQ-R and Reading Comprehension Test scores of students in the different groups (4 Groups [Non-LD Adequate, Non-LD Poor, Non-LD Very Poor readers, LD]). As expected, Figure 2 and test results show a significant Group main effect, $F(3,1885) = 1854.89$, $p = .000$, on the ARHQ-R. Moreover, post hoc tests show that all groups are significantly different from each other, with the LD group having the worst and the Adequate reader group having the best scores.

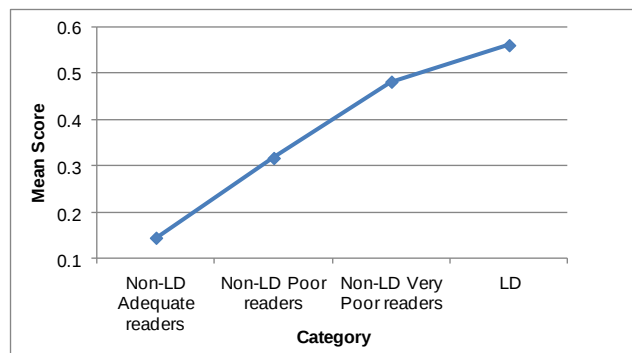


Figure 2. Significant ARHQ-R Group main effect

To evaluate the impact of extended time (20 minutes instead of 10) on the Reading Comprehension Test scores of the 4 groups (Non-LD Adequate, Non-LD Poor, Non-LD Very Poor readers, LD) we performed a 2-way repeated measures ANOVA: 4 Groups x 2 Times (10 minutes, 20 minutes). Both the Group, $F(3,416) = 230.65$, $p = .000$, and the Time, $F(1,416) = 2483.24$, $p = .000$, main effects were significant, as was the interaction, $F(3,416) = 337.56$, $p = .000$. Best seen in Figure 3, this shows that the groups differed at 10 minutes, with non-LD Adequate readers having substantially better scores than students with an LD or non-LD Poor readers who, in turn, had better scores than Non-LD Very Poor readers. By 20 minutes, all groups improved, to the point where their scores were very similar.

Discussion

Psychometric Properties of the Two Screening Instruments

Translations and linguistic differences. We predicted (hypothesis 1) that scores on the English and French versions of the measures would provide similar results. The results confirm this prediction. There were no significant differences on either measure between English and French versions between students with an LD, or between students without an LD. The same was true when we divided participants without an LD into Adequate, Poor and Very Poor categories where, once more, there were no significant differences between the two language groups. We were able to test the internal consistency reliability of the ARHQ-R. The results show good psychometric properties on both the English and French versions for students as well as for students without LDs. Modest correlations between the ARHQ-R and the Reading Comprehension Test for the various groups provide evidence related to concurrent validity.

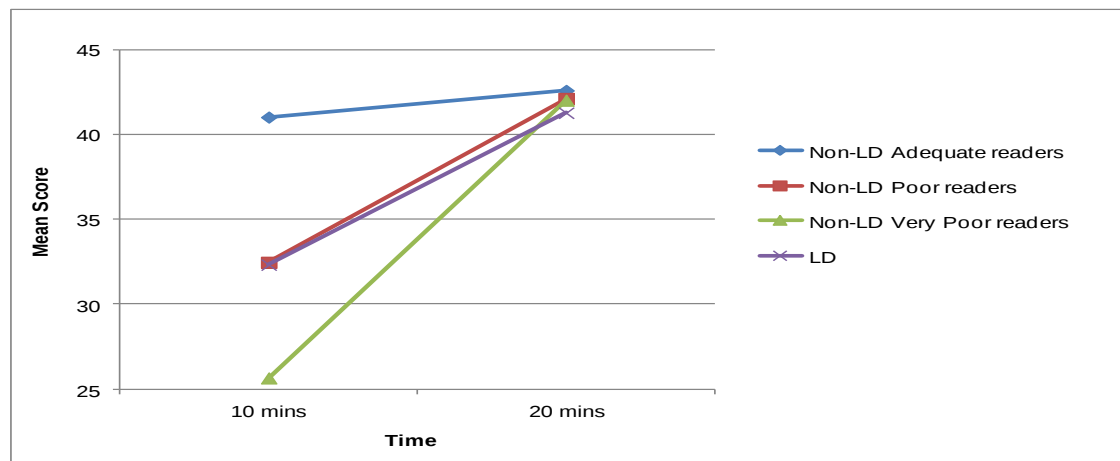


Figure 3. Effect of regular and extended time on reading comprehension scores

Relationship between ARHQ-R and the Reading Comprehension Test. We predicted (Hypothesis 2) that scores on the two measures would be related. This hypothesis, too is confirmed as our results show that scores on the two measures are modestly correlated both for students with and without an LD. When we grouped students into Adequate, Poor and Very Poor categories, the results for students without an LD were very similar. For students with an LD, however, the relationship between ARHQ-R and Reading Comprehension Test categories was substantially stronger ($r = .633$), suggesting that the ARHQ-R does a good job of predicting Reading Comprehension Test category for this population.

Gender. There were no differences between males and females with an LD either on the ARHQ-R or the Reading Comprehension Test. The same was true of students without an LD.

Distribution of scores. The results show that both the ARHQ-R and the Reading Comprehension Test fail to discriminate at the high end, as there were pronounced ceiling effects on both measures. At the lower end of reading proficiency, however, both for poor and very poor readers without an LD and for students with an LD, both measures performed as expected and resulted in normal appearing distributions. Thus, both measures can be useful as screening tools for reading difficulties.

The mean reading comprehension score of students with an LD was somewhat higher than expected given previous findings (King et al., 2006; Mimouni, 2009; Mimouni & King, 2007). There are three possible explanations for this. First, our sample of students with an LD was based on self-identification. Thus, it is possible that some of them did not have a diagnosable LD. Other possibilities include the lack of homogeneity within the LD classification, so that students with an LD do not necessarily have reading difficulties (Learning Disabilities Association of Canada, 2002). Moreover, approximately 1/3 of the sample also had Attention Deficit Hyperactivity Disorder, and it has been shown that college students with this disorder performed significantly better on an online multiple choice task than they did on paper-and-pencil testing (Lee, Osborne, & Carpenter, 2010).

As for ARHQ-R, the mean of the entire non-LD sample was .25, a score substantially worse than the .12 reported by Parrila et al. (2007). The difference may be due to the fact that our sample was comprised of junior/community college students while Parrila et al.'s sample consisted of university students. Also, our sample was quite large ($n = 1809$) and there was no pre-selection of students, since all were enrolled in compulsory English or French courses. Parrila et al.'s sample, on the other hand, was relatively small ($n = 27$) and students were described as reporting no history of reading problems. Moreover, their mean score of .12 is similar to our mean score for the Adequate reader category, rather than for our entire sample. Thus, it is possible that selecting students *with no reading problems* samples only the top half of the distribution, and this may not be normative for the entire school.

Cutoffs. When it came to categorization of students as adequate, poor and very poor readers, the ARHQ-R cutoffs identified a large proportion of students with an LD as very poor readers in elementary school, and their scores were substantially worse than those of Very Poor readers without an LD. This finding is consistent with results reported by Parrila et al. (2007).

Categories based on the Reading Comprehension Test, however, did not fare well, since these grouped a third of the students with an LD in each of the three categories, including *adequate reader*. Regardless of whether this is due to the ceiling effect, the online administration of the measure, or to *compensated dyslexics* who have learned effective reading strategies (e.g., McGonnell et al., 2007), this measure, when administered online to junior/community college students with the current cutoffs, does not do a good job of discriminating reading comprehension among students with an LD. We recommend adjusting the cutoffs upward so that a larger proportion of students with an LD are categorized as poor or very poor readers. Figure 3 provides some guidelines.

Sample Characteristics

Prevalence. It is important to note that slightly over 4% of students in sample 1, which is representative of the entire populations in participating colleges, self-reported a *learning disability such as dyslexia*. A recent study shows that the rate of undiagnosed LDs was very high in Canadian universities (Harrison et al., 2007), suggesting that many students may be unaware they have this disability. Thus the 4% figure is likely an underestimation of the prevalence of an LD in the junior/community college population. Among students with an LD, approximately 1/3 also indicated that they also had Attention Deficit Hyperactivity Disorder. Such findings, which have also been reported elsewhere (Fletcher, Shaywitz, &

Shaywitz, 1999), coupled with the results on differences in reading comprehension, suggest that the population of students who self-report an LD is by no means homogeneous and that students likely have different needs in an academic context. Parenthetically, it should be noted that the self-reported rate of Attention Deficit Hyperactivity Disorder was approximately 5% among students without an LD, a figure comparable to that recently reported for the adult population of the United States (Kessler et al., 2006). So this disability, too, is quite common in the junior/community college population.

Conceptions of an LD are somewhat different in the English and French colleges, with the French system focusing primarily on dyslexia (Dubois & Roberge, 2010). The definitions used in the English language North American system are broader and can include specific difficulties with reading, memory, thinking, spelling, mathematics, and the ability to listen and to speak (Learning Disabilities Association of Canada, 2002; Li & Hamel, 2003). Therefore, we expected a larger proportion of students to indicate they had an LD in the English college. Contrary to expectations, the rate was slightly, although not significantly greater in the French colleges (4.4%) than in the English college (4.0%).

Registration for disability related services. It is also worth mentioning that only 59% of students with a self-reported LD in the representative sample (i.e., sample 1) indicated that they had registered to receive disability related services from their college and that their ARHQ-R scores were significantly worse than those of students reporting an LD who had not registered. Reasons for not registering are diverse and range from lack of information about available services, wanting to do things *like everyone else*, and not wishing to being singled out as *disabled*, to not wanting to have a record of a disability (Lightner, Kipps-Vaughan, Schulte, & Trice, 2012). Although it is also possible that registered students had been diagnosed with an LD, making them eligible for services, while unregistered students did not have adequate documentation, we believe our findings suggest that registered students had more severe LDs and that they experienced more difficulties in school which needed accommodations. This is consistent with research which shows that graduates who self-reported an LD and who had registered for disability related services had lower college exit scores than graduates with other types of disabilities, while there was no significant difference between graduates with learning and other disabilities among those who had not registered for disability related services (Jorgensen, Fichten, & Havel, 2007).

Notwithstanding poorer reading scores, the literature shows that students who had registered for disability related services from their college experienced fewer obstacles and more facilitators of academic success and that they rated their college experience as easier and more satisfying than nondisabled students or students with disabilities who had not registered for disability related services (Jorgensen, Fichten, & Havel, 2009; Jorgensen, Fichten, & Havel, 2012). Since students with disabilities who had not registered for services were least satisfied with their college experience, students with an LD, even if their disability is relatively mild, may wish to register for services to make their academic lives more productive and more pleasant.

Differences between poor readers with and without an LD. On the ARHQ-R, students who reported an LD had the worst scores. On the Reading Comprehension Test, however, students with an LD and poor readers without an LD had very similar scores. What was surprising is that students with an LD had significantly better scores than the substantial numbers of students without an LD who fell into the *very poor* category (76 of the 357 students). Since none of these students were second language students, it is important to find out about their reading issues.

We have little information to offer about very poor readers who do not report an LD and who are not second language learners. What accounts for their abysmal reading comprehension results? Could these be students with an undiagnosed LD, as suggested by others (Deacon et al., 2012; Harrison et al., 2007), who are not aware of their LD and who have never had any intervention targeted for improving reading? Is reading comprehension simply a normal variant in the population? Although we do not have answers to these questions, we join others who have raised a red flag about the existence of this relatively large group of students in our colleges and universities (e.g., Harrison et al., 2007; Parrila et al., 2007; Mimouni, 2006; Mimouni & King, 2007).

Extended Time

Although Steward and Morris-Wales (2004) acknowledged the popularity of extended time as a disability accommodation, they argued that there is little evidence to support its use. Indeed, there is substantial controversy about this topic (Gregg & Nelson, 2012; Lovett, 2010). Consistent with Hypotheses 3 and 4, our data show substantial and significant differences among groups at 10 minutes on

the Reading Comprehension Test which virtually disappeared by 20 minutes (extended time). All groups improved to the point that the scores of the four groups, including those of students with LDs, were indistinguishable, with the most substantial gain being made by very poor readers without an LD. This finding is consistent with reports in the literature which show that extended time results in comparable outcomes for students with and without an LD (e.g., Lesaux et al., 2006; Mimouni & King, 2007).

Limitations

We have no concerns about the validity of the translations. We do, however, urge caution about the generalizability of the reading comprehension findings on *adequate*, *poor* and *very poor* readers. First, although the samples were relatively large, we studied students from only three colleges, only one of which was English. Sample 1, whose students completed the ARHQ-R, was representative of the students in the three colleges studied. But sample 2, whose students completed the Reading Comprehension Test, over-sampled poor and very poor readers as well as those with an LD. In addition, because there were relatively few students in the adequate and poor ARHQ-R categories who also completed the Reading Comprehension Test, some analyses are severely under powered. Another concern, although unavoidable given the study design, is that the data are based on self-reports of disability, and not on documented conditions. Also, the Reading Comprehension Test was administered online and this, too, may have affected scores (Higgins, Russell, & Hoffman, 2005; Puhan, Boughton, & Kim, 2007). And finally, the administration of this measure was not supervised.

Future Research

Future research on the relationship between ARHQ-R and Reading Comprehension Test scores should be carried out with more representative samples from several colleges. In such studies, it would be important to ensure that an LD is based on official documentation rather than simply on self-reports. Moreover, it would be important to evaluate the equivalence of paper-and-pencil and online versions of the Reading Comprehension Test. Also, additional norming of the Reading Comprehension Test for college students is needed. A time period less than 10 minutes may be needed to distinguish exceptionally good readers from merely adequate readers.

Since extended time is one of the most common accommodations requested by college students with LDs, more research is required in this area. Our study evaluated scores at *regular time* and *double time* and showed that at double time there were few differences among adequate poor and very poor readers. Would *time-and-a-half* have resulted in similar outcomes? This is an empirical question and deserves additional investigation.

Recommendations

Reading Screening

Colleges should administer the same valid, quick, easy, reading-screening tools, in their preferred language, to all incoming students. These would allow for both exciting research and applied outcomes. First, this would result in comparability of investigations and samples. Second, screening test results could be used to identify potentially poor readers early, allowing for early intervention. Students' scores can also be used to recommend LD testing. Some students will, likely, have a formal report of a learning disability. In this case, reading-screening results could be used to ascertain the nature of students' learning disabilities (e.g., reading, writing, mathematics, etc. – see Learning Disabilities Association of Canada, 2002) and to further validate the screening measures, the evaluations, as well as requested accommodations.

Poor Readers Without an LD

Perhaps the most interesting research question concerns what makes for poor readers who do not indicate that they have an LD. This group of students, often referred to as *garden-variety poor readers* in the literature (e.g., Stoodley, Ray, Jack, & Stein, 2008) requires further examination in terms of who they are and how to meet their needs. Why do some students self-report an LD while other, weaker readers do not do so? Is the difference the actual presence of an LD or is the difference most easily accounted for by examination of who is more willing to assume the burden of a diagnostic label such as an LD. A related question is what makes for poor readers if it is not an LD? Is it poor instruction or instruction that does not work for a particular individual? Is it simply lack of practice reading because of alternate ways of information acquisition such as through DVDs or YouTube? Or do college students have a range of reading abilities where a key percentage of them fall into weak categories? Moreover, it would be of interest to find out how students with an LD who have poor ARHQ-R scores become adequate readers on a reading comprehension test.

Extended Time

Disability service providers often struggle with the decision about which students with an LD should be given extended time on college tests and exams, which usually have both a speed and a power component. There is, however, no consensus on what basis this is to be done (see Ofiesh et al., 2005). The current approach is to provide students with accommodations based on a medical label, such as a diagnosed LD, instead of on functional limitations, such as poor reading comprehension. The present findings of large numbers of poor and very poor readers who did not report an LD suggest a move away from medical labels toward looking at functional limitations.

Our data, which show that students with and without an LD do not differ once they have an ARHQ-R classification, suggest that one possibility is to administer a screening measure such as the ARHQ-R and use its categories for decision making. This could *deny* extended time to approximately 20% of students with an LD who score as adequate readers on the ARHQ-R. Of course, before one could incorporate such a strategy, one would need extensive replication of our findings, a sophisticated *faking scale* for the ARHQ-R, and a large sample of students with a diagnosed LD who complete the ARHQ-R as well as multiple measures of reading speed and comprehension. One should also, of course, provide extended time to the up to 20% of students who score as very poor readers on the ARHQ-R but who do not indicate that they have an LD. There is also the issue of what is to be done with the close to 40% of students with an LD who are not registered to receive disability related services from their college.

Universal Instructional Design

As an alternate to decision making about accommodations, we suggest that wherever possible, colleges follow the tenets of universal instructional design (Barile, Nguyen, & Fichten, 2012; Burgstahler & Cory, 2008; Scott, McGuire, & Shaw, 2003) and provide *extended time* to all students when speed is not of the essence. This could provide adequate opportunity to demonstrate what they have learned not only for students with an LD but also for the substantial numbers of students in the college who are poor or very poor readers, as well as for second (and third) language learners who have not yet mastered the language of instruction at their college.

The large number of poor and very poor readers, the findings on the impact of extended time, the probable large number of students with an LD who do not have formal (expensive) documentation to guarantee them accommodations, and the interesting finding that a substantial number of students with an LD fell into the adequate reader category suggests a move away from the accommodations model to that of universal design of instruction. Exams that do not need a speeded component could be designed so that most students complete it in half of the time allocated. This would give all students *extended time*. Learning/tutoring centers can offer reading effectiveness workshops to *all* students. Those with poor screening test results could be encouraged to attend. These workshops could also provide instruction on information and communication technologies that can assist students to read more effectively. Of course, these technologies should be made available to all students in general use computer labs.

Reading is an essential skill for college success. Those who are at risk in this area need programs and resources made available as soon as they enter college to prevent subsequent difficulties. Let us continue to put all of the odds in the students' favor.

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585)

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**INCLUSIVE AND INDIVIDUALLY ADAPTED EDUCATION IN NORWAY
RESULTS FROM A SURVEY STUDY IN TWO MUNICIPALITIES FOCUSING THE ROLES
OF HEADTEACHERS, TEACHERS AND CURRICULUM PLANNING.**

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This article aims to throw light on how the intentions behind inclusive and individually adapted education in Norwegian compulsory schools are followed up in practice with regard to central aspects of the roles of headteachers, teachers and curriculum planning. The study was carried out as a postal survey of compulsory school teachers in two municipalities. When the results are viewed as a whole, it is evident that some of the teachers have positive assessments of their own practice with regard to various aspects of inclusive and individually adapted education. However, there are a large number of teachers who have not given such positive feedback. In the majority of cases, less than half of the teachers agree with the category to a large degree in their responses. Thus, there appears to be a clear need in the role of headteachers, teachers and curriculum planning for further development in order to gain understanding for and realise the intentions of inclusive and individually adapted education.

The education policy in Norway has a very long tradition in relation to the ambition to develop a school that can foster inclusive and individually adapted education. This is based on developing *one school for all* that can facilitate the conditions of learning for all children, regardless of their background and aptitudes (Nilsen, 2010). We also belong to an international community that has focused this way of thinking, and UNESCO, among others, has for a number of years flown the flag for these ideas under banners such as *education for all* (EFA) and an *inclusive school* (UNESCO, 1994).

The Norwegian Educational Act states in paragraph 1-3 that: *Education shall be adapted to the abilities and aptitudes of individual pupils*. This is the formal basis for Individually Adapted Education. This principle shall be maintained in an inclusive context. The principles of inclusive and individual adapted education are overarching and apply to all pupils. The latest Norwegian education system reforms (The Knowledge Promotion 2006) clarifies that inclusive and individually adapted education entails all pupils taking part in the academic, cultural and social community based on their abilities and aptitudes (Report no. 30 to the Storting 2003-2004). The education is primarily aimed at catering for the pupils' differences within the framework of the community. This means that the teaching must be differentiated to the diversity of the pupil community. Education in Norway is nowadays based on the understanding that everyone is of value to the community, and that all pupils have the potential to develop based on their abilities and aptitudes in a school for all.

As highlighted in the Education Act, the initial challenge is to adapt the ordinary education with a view to supporting the education of all pupils. Second, some pupils need greater support in their education through special education. Special education entails a more extensive adaptation than that normally provided in ordinary education with regard to the input of resources and expertise as well as differentiation of content. However, the implementation of centrally formulated intentions is a complex process, and is largely dependent on the teacher's interpretations of the intentions (Goodlad, 1979).

Research question

The main research question for this article is: *How do teachers characterise the situation in Norwegian compulsory schooling with regard to realising the intentions of inclusive and individually adapted*

education? This research question is limited to cover compulsory schooling in two municipalities in Norway. Furthermore the research question is broken down into three sub-questions, which cover the realisation of the intentions of inclusive and individually adapted education in the areas of the role of the head teacher, the teacher's role and curriculum planning. For each of these areas, the study is further specified into central sub-aspects. These sub-aspects are explained in more detail in the next section covering each area, and are followed up with the presentation of findings and discussion.

The empirical analysis shows the percentage of teachers who selected the most positive responses to the questions relating to the three areas and the sub-aspects therein. The objective is to establish a picture of how the situation is to gain practical success in carrying out the intentions in these areas.

Headteacher's Role in Inclusive and Individually Adapted Education

If the Knowledge Promotion is to have the desired effect, teachers and headteachers need to realise the intentions behind the reform. Headteachers have a special responsibility here to safeguard the overall perspective of the efforts to develop optimum differentiated education for all pupils, as imposed by the Education Act. Headteachers face challenges with regard to administrative management, which includes effective routines and quality assurance systems, as well as professional educational leadership that ensures continuous improvement in line with the school's objective (Shiba and Walden, 2001; Skogen, 2004). If, for example, the special education is to work well in relation to the intentions for optimum differentiated education for all, a great deal is required of the headteachers with regard to the organisation and evaluation of processes that lead to individual resolutions, as well as the planning, execution and evaluation of the special education itself.

International research has focussed on a number of conditions that must exist in order for a successful innovation process of this kind to be realised. One such condition is that all professionals who are involved have a conscious *focus on the primary user*, which in this context is the pupil (Shiba & Walden, 2001). This requires the professionals, i.e. teachers and headteachers, to have a concrete and common understanding of what they need to do as individuals and as a group (Kotter, 2002; Skogen, 2006). It is also of vital importance that those involved have a clear understanding of the perspective *continuous improvement*, and are not lured into believing that a one-off improvement will suffice (Shiba & Walden, 2001; Skogen, 2004). Additionally, the professionals need to have faith in the suitability of the new practice, in other words they must take a degree of ownership of the change. This ownership is best developed through an optimum balance of participation in discussions and decisions; something that requires continuous and active cooperation and interaction between headteachers, teachers, pupils and parents/guardians where appropriate (Skogen, 2004; Skogen, 2005). A coordinated effort is also required with complementary roles that enable a *holistic* input. Headteachers face major challenges here in relation to facilitating, managing, evaluating and improving processes that safeguard the relevant success factors. Furthermore, the realisation of a new practice will always require a high standard of *competency* at the work place, thus making it necessary to develop a learning organisation (Senge, 1990). The main characteristic of such a learning organisation is that the parties involved use their practical experiences as a basis, and process these experiences by reflecting on their own practice and through learning dialogues between cooperation partners (Evensen & Hmelo, 2000).

Teacher's Role in Inclusive and Individually Adapted Education

Teachers play a significant role in inclusive and individually adopted education to implement the intentions behind the in the Knowledge Promotion reform (2006). A central issue in inclusive and individually adapted education is to entail a higher level of correlation between the teaching and the pupil's learning abilities and aptitudes within the framework of a learning community (Vygotsky, 1978). A study of teachers' practice of inclusive and individually adapted education in Norway concludes that there are major differences between the pupils and the teachers' perceptions of the degree to which the teaching is adapted to the individual pupil's needs (Imsen, 2003). Other research shows similar tendencies with regard to the lack of coherence between what the teachers say they do and what they actually do in practice (Arnesen, 2008; Dale & Wærness, 2003). This implies a need to improve practice in relation to the intentions of inclusive and individually adapted education in Norway. The dynamic assessment and pupils' responses to the teachers' interventions (methods and organisation) are a two sided coin and are central for the pupils' learning process and outcome (Grigorenko, 2009). This paper sets out the various challenges that teachers are faced with in realising the intentions of inclusion and individually adapted education connected to three sub-aspects; dynamic testing and assessment, methods adapted to pupils' different needs and organising an inclusive learning community.

Teachers' dynamic testing and assessment are important in order to identify the individual pupil's abilities and aptitudes and which conditions foster learning. In accordance with the Knowledge Promotion reform, teachers have an obligation to monitor each pupil's learning process and development and report any need for special education. This requires the teacher to have knowledge of each pupil's abilities and potential in academic as well as social areas. Teachers' dynamic testing and assessment will form the basis for facilitating teaching that corresponds to the pupil's learning aptitudes (Vygotsky, 1978; Buli-Holmberg, 2008). Through dynamic testing and assessment, the teacher can establish a basis for selecting suitable methods meeting each pupil's learning preferences and for aptitudes to participate in a learning community. Dynamic testing and assessment are therefore key factors in the teacher's facilitation of inclusive and individual adapted education, and can help to provide an insight into individual differences and systemic factors that underpin every pupil's learning process and development.

Teaching methods adapted to pupils' different needs is described in the national curriculum as variations in the use of work tasks, curriculum content, working methods, teaching aids and in the organisation of and intensity of the teaching. This entails the teacher enabling differences and variations in their methodological approach. Finding from a study in Norway indicates that the pupils seldom experienced individual variations in the education or were offered differentiated volumes of work and tasks with varying degrees of difficulty, while the teachers themselves claimed that they adapted the teaching to each pupil's needs to a large degree (Imsen, 2003). Other research supports this, and implies that the teaching is still characterised by one-way communication and has a limited element of dialogue and differentiation (Klette, 2003; Dale & Wærness, 2003). A review of a number of studies shows that the traditional classroom solution is most common in Norwegian schools, and that the degree of flexibility and variation in methods and organisation is related to the teachers' expertise and experience (Backmann & Haug, 2006). Various and differentiated teaching methods based on the result from the dynamic testing and assessment is therefore a central issue in inclusive and individually education (Grigorenko, 2009; Vygotsky, 1978).

Teachers' organising of inclusive learning community is another sub-aspect in the Knowledge Promotion reform that highlights the teachers' obligation to work actively to foster equal psychosocial learning environment in order to give each pupil the opportunities to experience a sense of security and social belonging. Schools organise inclusive education differently. Result from a study of inclusive education in Norway indicated that the most used practice to organise the teaching were in classes of 20-30 pupils, with opportunities for pupils to work together in small groups or work individually, and special education was organised in small groups, while one-to-one teaching and extra teachers in the classroom were used to a lesser extent (Buli-Holmberg & Vogt, 2011). Another study concludes that the most common ways to organise within the classroom were that the pupils worked in pairs, on their own, and in small groups (Buli-Holmberg, Guldahl & Jensen, 2009). A central issue to realise the intentions of inclusive education is to build an inclusive learning community and to establish flexible ways of organising the teaching.

Curriculum Planning in Inclusive and Individually Adapted Education

Curriculum planning is defined for these purposes as the teachers' planning of the education based on the national curriculum, with a view to supporting pupils take part in a social, academic and cultural community and to catering for the differences in their abilities and aptitudes. Norwegian national curricula have focused on a combination of governing and freedom, by laying down common frameworks and guidelines whilst also providing the latitude for local and individual adaptation (Bjørnsrud & Nilsen, 2011). They may be regarded as providing a curriculum potential (Ben-Peretz, 1990). Current curricula specify goals for competency that are common to all pupils, but also give the schools a large degree of freedom to choose the content. The potential is dependent on the teachers' ability to interpret and execute the curriculum in a way that finds the right balance between the consideration to communality and the adaptation of the education. Such considerations in planning are essential to follow up the intentions of the formal curriculum toward an implemented curriculum (Goodlad, 1979).

Devising an individual education plan (IEP) is pivotal to special education planning and constitutes an important phase in the chain of actions aimed at securing the right to special education (Nilsen & Herlofsen, 2012). An IEP specifies the educational goals and the adaptations that the school will make to facilitate the pupil's learning. Although IEPs are relatively widespread in Norwegian schools, the planning process and the actual plans both seem to vary considerably (Nordahl & Hausstätter, 2009). It is

crucial here that teachers do not perceive the IEP work as a waste of paper (Cooper, 1996) but as a practical aid in different phases of the education. It can be used to map pupils' learning aptitudes, formulate goals for learning and devise measures. IEPs are also aimed at helping to execute and assess the special education.

The study covers three different sub-aspects of curriculum planning. First, we have studied how the teachers *emphasise both individual and communal considerations* in their planning. Such considerations may be considered as essential to ensuring differentiation and inclusion (Clark, Dyson & Millward, 1995). This is tied to nationally formulated intentions requiring teachers to contemplate and weigh up both the consideration to individual adaptations and communality in the differentiated education, either through ordinary or special education. Differentiated education is aimed at catering for the diversity in individual aptitudes and is primarily undertaken within the community (Norwegian Directorate for Education and Training, 2009). Focus has therefore been given to the interplay between the IEP and the plan for teaching in the classroom ever since proposals were made to establish the IEP by law (Odelsting Proposition no. 46 1997-1998).

The second sub-aspect of the curriculum planning is the degree to which teachers *perceive the IEP to be an aid*. In accordance with the Education Act, all pupils that receive special education must have an IEP. The plan should stipulate goals, content and how the education is to be managed. In principle, the national curriculum – and its goals for competency – also applies to special education where this is appropriate. Once an individual resolution on special education has been issued, the IEP, as a link in the chain of actions in special education, is intended to act as an aid for the planning, execution and assessment of the special education (Norwegian Directorate for Education and Training, 2009).

The third sub-aspect relates to the teachers' *cooperation with others when planning*. Collaborative curriculum planning is an important element to ensure the support and adaptations most appropriate for diverse learners (Carter et al., 2009). Cooperation is clearly emphasised in the national curriculum, and is essential for planning both the ordinary education with regard to classroom adaptations and special education through the IEP. The teacher's role includes an expectation to learn from each other through cooperation in such areas as planning. The staff shall function as a community of practice (Wenger, 1998) who share responsibility for the pupils' development. The Education Act also clearly emphasises cooperation with the home, particularly in relation to special education. Securing such cooperation is an essential component of the IEP process (Margolis, Brannigan & Keating, 2006). Furthermore, the Act places a focus on the pupils' influence in special education, and recommended guidelines stipulate that the headteachers have a responsibility to facilitate effective planning (Norwegian Directorate for Education and Training, 2009).

Method

The study was carried out as a postal survey of teachers in compulsory (primary and lower secondary) schools in two municipalities, which were selected by discretionary sampling (Befring, 2004). One municipality is an urban municipality and the other is a rural municipality. Teachers in all schools within the two municipalities were invited to take part.

Permission to carry out the study was granted first by the municipal school administration and subsequently by the headteachers of the schools involved. Participation by the teachers was on a voluntary basis. The study covers 433 teachers, which corresponds to a response rate of 60%. The non-response was primarily due to a number of schools choosing not to take part. The main reason was that it would be too time consuming for teachers. No pattern is apparent in the non-response that separates these schools systematically from the other schools. Nevertheless, certain reservations must be made, which means that generalisations of the results must be made with caution (see Table 1).

The questionnaire was made up of a series of questions aimed at throwing light on our three areas and the associated sub-aspects related to the work on inclusive and individually adapted education. Questions and responses were tested beforehand in a preliminary study and adjusted on this basis. For each question, response options were given on a scale of 1-8, where the teachers had to indicate the degree to which they believed the conditions they were asked about manifested themselves or were significant. The scale varied from *to a very small degree* to *to a very large degree*. This article analyses and reports on the percentage of teachers that gave the most positive responses to the different aspects of inclusive and individually adapted education covered here. For this reason, and in order to simplify the analysis, we have limited our analysis to responses 7 and 8, which we have merged. The frequency distributions, as

presented in the tables in the appendix, show what percentage of the teachers report that the condition they were asked about manifests itself *to a large degree*. The total share of teachers whose response was within the other values thus constitutes the difference between 100% and the response given for the value *to a large degree*. The variables are measured at ordinal level, and data is analysed using descriptive statistics (Befring, 2004).

Despite the differences in context that the sample represents, the analysis shows that the same main pattern characterises the distributions of data in both municipalities. We have therefore opted to present the frequency distributions for both municipalities combined.

Descriptions such as *to a large degree* represent an uncertainty since the respondents may have different perceptions of the various degrees. Additionally, the self-reporting of practice and experiences on which the data is based contains in itself a risk of a *gold-plating effect*. This relates to the possibility of teachers, partly based on their knowledge of legislation and the curriculum, having varying degrees of assumptions as to what is considered to be the norm for good practice, and consequently demonstrating a propensity to report on their practice in line with this. There is therefore reason to assume a risk that the frequency distributions are positively skewed in the sense that they show a somewhat higher reporting of practice in line with the norm than the actual reality. The frequency distributions for the general questions seem to be most at risk of such a *gold-plating* tendency. When, on the other hand, various aspects of the practice are investigated in a more specific and indirect way, this tendency appears to dissipate, and the teachers' responses are more in line with reality.

The data does not give a basis for a statistical generalisation of the population of teachers at Norwegian primary and lower secondary schools; it gives a picture of how the situation is in two municipalities in Norway. The fact that there are no major differences in the results between the two municipalities leads us to ask if this may be the situation in many more places. This needs to be determined through a considered and analytical generalisation, with the reader/user of the study considering what transfer value the results have in their own context. This will depend on the degree of similarities that the reader experiences between central characteristics of the study and their own situation (Gall, Gall & Borg, 2007).

Results

We present below the results of our research question on the situation concerning the realisation of the intentions of inclusive and differentiated education in three areas: the headteachers role, the teachers role and curriculum planning.

Headteacher's role in relation to Inclusive and Individually Adapted education

The first area covered by the research question is the role of the headteacher. The empirical findings in our study provide a basis for a number of indications concerning headteachers, with regard to how the practice relates to the political intentions and to the theory referred to above. In general, it may appear that the teachers are reasonably satisfied with their headteachers. As regards the four sub-aspects of the role of the headteacher; focus, continuous improvement, totality and competency, however, the teachers believe there is a clear need for improvement. The results from the survey are presented in Table 1.

Focus

The teachers would like to see a clearer and more specific expectation in relation to their work at the school. Headteachers can and should take more responsibility for developing and highlighting guideline quality criteria for the work at the school, and show more initiative. This is particularly interesting when we consider it together with the fact that the teachers do not express displeasure in relation to pedagogic development work, but instead value pedagogic development work both in general and in relation to the Knowledge Promotion in particular. There is an expressed wish for headteachers to take greater responsibility to improve planning at the school in relation to the development of differentiated education in general and in relation to special education in particular. The headteachers' expectations and requirements of the teachers can seem rather general and vague (see Table 1.1).

Continuous improvement

With regard to the Knowledge Promotion, differentiated education and special education, there is an expressed wish among the teachers for the headteachers at the relevant schools to place more emphasis on developing themselves as leaders. The teachers' responses indicate that the headteachers have a relatively large potential for development when it comes to ensuring that the school's overall efforts to

improve the differentiated education for all are continuously moving in the right direction. It appears that the headmasters should concentrate more on prioritising the pedagogic and professional leadership at the school. The teachers regard the headteachers' drive to improve as relatively general, with the greatest emphasis on an unspecified expectation to comply with the Knowledge Promotion, and with somewhat less drive in relation to differentiated education, and even less direction with regard to special education specifically (see Table 1.2).

Table 1: Sub-aspects of the headteacher's role and inclusive and individually adapted education.

Percentage that responded that the conditions described manifests itself to a large degree (N=433)

Aspects of the Headteacher's role	The conditions manifest itself to a large degree
1.1. Focus on the pupil	
Headteachers convey <i>clear expectations</i> concerning the <i>Knowledge Promotion in general</i>	39
Headteachers convey <i>clear expectations</i> concerning differentiated education in the Knowledge Promotion	36
Headteachers convey <i>clear expectations</i> concerning <i>special education</i> in the Knowledge Promotion	21
1.2. Continuous improvement	
Headteachers take <i>special responsibility</i> for realising the <i>Knowledge Promotion in general</i>	32
Headteachers take <i>special responsibility</i> for realising differentiated education in the Knowledge Promotion	25
Headteachers take <i>special responsibility</i> for realising <i>special education</i> in the Knowledge Promotion	17
Headteachers <i>should improve</i> in relation to the work on <i>differentiated education</i> in the Knowledge Promotion	20
Headteachers <i>should improve</i> in relation to the work on <i>special education</i> in the Knowledge Promotion	19
1.3. Totality	
Headteachers <i>coordinate previous and current development projects</i> with the Knowledge Promotion	15
Headteachers <i>should improve</i> in relation to <i>educational leadership</i>	17
Headteachers <i>should improve</i> in relation to <i>administrative management</i>	15
1.4. Competency	
Headteachers have <i>plans for developing competency</i> in line with the need in the <i>Knowledge Promotion in general</i>	13
Headteachers have <i>plans for developing competency</i> in line with the need connected with differentiated education in the Knowledge Promotion	11
Headteachers have <i>plans for developing competency</i> in line with the need in connection with <i>special education</i> in the Knowledge Promotion	7
Headteachers have an overview of the <i>teachers' competency</i> relevant to the <i>Knowledge Promotion in general</i>	36
Headteachers have an overview of the <i>teachers' competency</i> relevant to differentiated education in the Knowledge Promotion	33
Headteachers have an overview of the <i>teachers' competency</i> relevant to <i>special education</i> in the Knowledge Promotion	40
The teachers need more <i>support from the headteacher</i>	29
The teachers need more <i>support from the PPT</i>	30
The teachers need more <i>support from colleagues</i>	24

Totality

Headteachers and teachers alike have a considerable potential for improvement with regard to the concrete understanding of the intentions of the education policy, and with regard to the understanding of the content of key terms such as inclusion, differentiated education and special education. In general, there appears to be a wish for a clearer and more holistic leadership. A need is indicated for headteachers to take more explicit responsibility for the totality and cohesion in the school's overall effort to realise the school's objectives. For example, the headteacher should play a greater role in coordinating the

various activities and projects at the school so that the cohesion is more visible and the teachers get help to identify the overarching objectives behind individual resolutions (see Table 1.3).

Competency

The teachers report that they have not received enough help in connection with upgrading their skills in relation to realising the intentions of the Knowledge Promotion for better differentiated education for all. There seems to be a desire for the headteachers to play a more active role and take special responsibility in relation to developing competency at the school. Limited competency will, without a doubt, always be a barrier to improving quality. The teachers appear to want more support from colleagues, the Educational and Psychological Counselling Service (PPT) and the headteacher in connection with the work on differentiated education. However, they give a higher priority to support from the headteacher and their own colleagues than from the PPT in connection with developing better differentiated education. Generally speaking, it may be said that the headteachers should to a greater degree map the need for competency at their school, utilise their teachers better according to their competence, and organise a systematic and targeted upgrade of skills both formally and informally (see Table 1.4).

Teacher's Role in Relation to Inclusive and Individually Adapted Education

The second area covered by the research question is the teacher's role divided into the three sub-aspects; dynamic testing and assessment, methods adapted to pupils' different needs and organising inclusive learning community. The results are illustrated in Table 2.

Dynamic testing and assessment

The first sub-aspect, the dynamic testing and assessment of each pupil's learning abilities and aptitudes, does not appear to be given any particular emphasis by many teachers (see Table 2.1). The study shows that only around a quarter of the teachers' report that they do dynamic testing of how the pupils are performing academically as the basis for individual adaptation to a large degree. Even fewer, around 15%, report testing the pupils' preferences for learning and preferred way of working to a large degree. With regard to assessing individual pupils' learning outcome, approximately 15% of the teachers purport to emphasise this to a large degree.

Methods adapted to pupils' different needs.

In relation to the second sub-aspect of the teacher's role, concerns the methods of adapting the teaching in line with the pupils' different needs, a fifth of the teachers say that they practice this to a large degree (see Table 2.2). Almost a quarter of the teachers report that managing to achieve cohesion between their teaching and the pupils' learning aptitudes to a large degree. Methodical approach is a key instrument in facilitation of inclusive and individually adapted education, and fifteen per cent of the teachers report that they adapt the methods to the individual pupils' aptitudes and needs and guide the pupils in their learning process to a large degree. One third of teachers use varied methodical approaches and verbal forms of presentation in their teaching. Eighteen per cent of the teachers say that they use learning aids to adapt both the learning activities and working methods to the pupils' different needs. As regards the use of work plans, around a fifth of the teachers report differentiating these to a large degree. Standard classroom text books are used to a large degree by a quarter of the teachers. A tenth of the teachers use digital teaching aids to a large degree, and just as many report adapting the teaching aids in order to differentiate the teaching.

Organising of inclusive learning community

The third sub-aspect relates to the teachers' organisation of education as a gateway to inclusion (see Table 2.3). With regard to the standard education, around a third of the teachers report that the pupils have the opportunity to work on their own to a large degree, and a fifth say they give the pupils the possibilities to work in pairs and a sixth say they work in small groups. Less than half the teachers believe that they facilitate the inclusion of pupils with special needs to a large degree. However, 10% of the teachers report organising the teaching as one-to-one teaching to a large degree. Just as many say that they organise the special education with an extra teacher in the classroom. Less than half report organising the special education in small groups to a large degree. These results indicate that small groups are used as a form of organisation for special education to a greater extent than one-to-one teaching and extra teachers in the inclusive classroom.

Curriculum Planning in Relation to Inclusive and Individually Adapted Education

The third area covered by the research question is curriculum planning. This is further divided into three sub-aspects. The results from the survey are presented in Table 3.

Table 2: Sub-aspects of the teacher's role and inclusive and individually adapted education.
 Percentage that responded that the conditions described manifests itself to a large degree (N=433)

Aspects of the Teacher's role	The conditions manifest itself to a large degree
2.1. Teachers dynamic testing and assessment:	
Teachers are testing individual pupils' learning aptitudes	27
Teachers are testing the pupil's strong learning preferences	16
Teachers are assessing the suitability of the method	6
Teachers are assessing the pupil's learning outcome	10
2. 2. Teaching adapted to pupils' different needs:	
There is a cohesion between my teaching and the pupils' learning aptitudes	21
Teachers are guiding the pupil's in their learning process	15
Teachers are using verbal forms of presentation in the classroom	32
Teachers are using varied methods	35
Teachers are adapting methods to individual aptitudes and needs	15
Teachers are doing adaptations for the pupil's preferred method of working	18
Teachers are doing individual adaptations of learning activities	18
Teachers are using text books in their teaching	25
Teachers are using digital aids to adapt teaching	13
Teachers are doing individual adaptations of the learning aids	10
Teachers are using individual adapted work plans for each pupil	20
2.3 Teachers organising of inclusive learning community	
Teachers are facilitating for pupils to work on their own	29
Teachers are facilitating for pupils to work in groups	14
Teachers are facilitating pupils to work in pairs	22
Teachers are facilitating inclusion for pupils with special needs	41
Teachers opinions are that special education is organized one-to-one teaching	14
Teachers opinions are that special education is organized in small groups outside the classroom	43
Teachers opinions are that special education is organized with extra teachers in the classroom	9

Consideration to individuality and communality in the planning

As regards the first sub-aspect of curriculum planning, which deals with highlighting the consideration to individuality and communality in the teachers' planning, the impression is mixed (see Table 3.1). If we first consider the planning of the *teaching in the classroom*, around a quarter of the teachers report that a large degree of consideration is given to the need for differentiated education. Consideration to the fact that some pupils have special education in the classroom is given a corresponding focus by around a fifth of the teachers. With regard to the consideration to communality, there is a weak tendency for a slightly stronger emphasis. Around a third of the teachers report that, giving a large degree of consideration to the need for communality between the pupils in the planning of differentiated education in the classroom. However, the majority of the teachers report that they do not give much emphasis to the consideration to individuality and communality when planning the teaching in the classroom.

With regard to the planning of *special education* for individual pupils through IEPs, we are aware that individual considerations play a significant role. However, what about the consideration to communality with the other pupils? A quarter of the teachers report that this is also given a large degree of focus. Nevertheless, this is a slightly lower share than was the case for the planning of teaching in the classroom. Another indication of the consideration to individuality and communality in the planning is the teachers' coordination of IEPs with plans for the class. Here, almost a third of the teachers say that

IEPs are to a large degree coordinated with the teaching planning for the classroom as a whole. However, in relation to special education, the majority of the teachers also say that the consideration to individuality and communality is not given much emphasis in the planning.

Table 3: Sub-aspects of curriculum planning and inclusive and individually adapted education.

Percentage that responded that the conditions described manifests itself *to a large degree* (N=433)

Aspects of curriculum planning:	The conditions manifest itself to a large degree
3.1. Consideration to individuality and communality in the planning	
Planning in the classroom takes account of the need for differentiated education	24
Planning in the classroom takes account of pupils with special education	19
Planning in the classroom takes account of communality between the pupils	32
Planning of special education (IEP) takes account of communality between the pupils	25
IEPs are coordinated with the plan for teaching in the classroom	31
3.2. IEP – aid for planning, executing and assessing?	
IEPs act as an aid for mapping the pupils' need for support and adaptation	38
IEPs act as an aid for drawing up goals	73
Goals for competency in the national curriculum are emphasised when IEPs are drawn up	19
There is a need for exceptions from the goals for competency when IEPs are drawn up	25
The goals for competency hinder the consideration to different learning aptitudes	14
IEPs act as an aid for planning the content	54
IEPs act as an aid for planning the organisation	51
IEPs act as an aid for executing the special education	48
IEPs act as an aid for assessing the special education	51
There is a need to improve the planning of differentiated education in the classroom	25
There is a need to improve the planning of special education (IEP)	23
There is a need to develop competency in order to plan differentiated education in the classroom	40
There is a need to develop competency in order to plan special education	43
3.3. Cooperation and planning	
Teachers are cooperating in order to draw up IEPs	44
Teachers are cooperating to plan differentiated education in the classroom	30
The pupils provide input when drawing up IEPs	2
The pupils provide input in the planning of differentiated education in the classroom	3
The parents provide input when drawing up IEPs	24
The parents provide input in the planning of differentiated education in the classroom	7

IEP – aid for planning, executing and assessing?

In connection with IEPs, we have also – as the second sub-aspect – examined how the teachers perceive such plans as aids for planning, executing and assessing the special education (see Table 3.2). An IEP often starts with a pedagogic mapping process. Almost 40% of the teachers report that IEPs are helpful to a large degree when mapping the pupils' needs for support and differentiated education.

When the mapping is complete, conclusions can be drawn and a plan devised for a suitable education for the pupil. The first part of the plan normally entails considering and formulating *goals* for the education. The understanding of the significance of IEPs is clearly positive here. Almost three quarters of the teachers believe that IEPs to a large degree are an aid when drawing up goals for the special education.

An interesting finding also emerged in relation to the goals for competency in the national curriculum, which is to be given focus together with the mapped individual learning aptitudes when drawing up the

IEP. Around a fifth of the teachers report that the goals for competency are given a large degree of focus. However, even more (a quarter) believe to a large degree that there is a need for exceptions from the goals of competency when drawing up the IEP. It further transpired that around 15% of the teachers regard the requirement to achieve the common goals of competency as an obstacle to the consideration to individual learning aptitudes to a large degree.

With regard to the goals that are formulated in the IEP, which stipulate the competency one will help the pupil to develop, it is easy to see these in correlation with which *measures* should be initiated. In particular, this applies to two important areas: content and organisation. The teachers generally have a very positive view of the IEP's role in both these areas. A good half of the teachers believe that the IEP to a large degree helps with the planning of the content in special education, and almost as many believe this to be the case for planning the organisation.

The purpose of planning is to lay a foundation for better *implementation*. The positive view of the IEP is also reflected here. Almost half of the teachers believe that the IEP to a large degree acts as a support in the execution of special education. Over time, the special education is *assessed*. These assessments are carried out during term time and as a six-month summary. A positive view is also evident here, with almost half of the teachers believing that IEPs to a large degree act as an aid in the assessment of special education.

Although a large number of teachers have a positive perception of the IEP as an aid, their views on the planning situation are rather different. Other results show that the teachers believe there is a clear need to improve the school's planning practice. This primarily relates to the way the planning of differentiated education in the classroom is carried out, with a quarter of the teachers reporting a need for improvement to a large degree. This also applies to the planning of special education, where almost as many believe there is a need to improve the practice. In order to develop a better planning practice, many teachers call attention to the need to develop competency. Both with regard to planning differentiated education in the classroom and special education, around 40% of the teachers report a need to develop their competency to a large degree. These results indicate a clear need for improvement in the planning practice.

Cooperation and planning

The final sub-aspect of curriculum planning relates to the teachers' cooperation with others when planning differentiated education and special education (see Table 3.3). In this study, more than 40% of the teachers report that plans for special education (IEPs) are devised to a large degree in cooperation between the *teachers*. With regard to planning differentiated education in the classroom, almost a third say that they work together with other teachers to a large degree. In both of these areas – the regular teaching in the classroom and the special education for individual pupils – a large part of the planning seems to take place as cooperation between the teachers. However, it should also be noted that the majority of the teachers report less extensive cooperation among teachers.

Another important group for cooperation is the *pupils*. Here, however, the tendency is rather different. The study shows that only 2-3% of the teachers report that the planning is carried out in cooperation with the pupils to a large degree. This applies to drawing up IEPs as well as planning differentiated education in the classroom.

The *parents* make up a group that is in an intermediate position with regard to the extent of cooperation. Seven per cent of the teachers report that the parents are involved in relation to planning differentiated education in the classroom to a large degree. The cooperation, on the other hand, appears to be more widespread with regard to IEPs. Around a quarter of the teachers say here that the parents are involved in drawing up the plan to a large degree.

Discussion

The discussion shows the results we have presented in relation to official intentions for inclusive and individually adapted education in two municipalities in Norwegian compulsory schooling. This entails the practice reported by the teachers being weighed up against how the practice ought to be according to education legislation, the national curriculum and the theory frameworks.

Headteacher's Role

With regard to the headteacher's role in relation to inclusive and individually adapted education, as perceived by the teachers, it seems as if the headteachers are well aware of their responsibility and that, to the best of their abilities, try to help realise the intentions of the Education Act as they interpret them. According to the teachers, the headteachers understand pretty well that the pupils are the school's primary users and that their learning needs to be in *focus*. However, there may be a substantial potential for improvement as regards the ability to create a concrete and common understanding of the teachers' goals and working methods in this area.

Because the expectations of the headteachers are sometimes rather general and not entirely clear, according to the teachers, the thrust towards a targeted process of *continuous improvement* of the teachers' practice can appear to lack momentum. This may of course also be due to the headteachers having no clear understanding of their role as leaders of change, instead perhaps viewing themselves more as operations managers, administrators or bureaucrats.

Although the headteachers cannot readily demonstrate any concrete or clear understanding of the intentions of the education policy they are helping to implement, they do appear to be aware of their responsibility to protect the *totality* of the running of the school. Perhaps a slightly unclear understanding of the broad and overarching intentions of the Education Act is a key reason why the schools' internal improvement process does not move as quickly as teachers and headteachers would like.

The link between quality on the one hand and upgrading skills and competency management on the other is generally understood by teachers as well as headteachers. However, it would appear that the headteachers' strategy for safeguarding the need for *competency* in general may be somewhat lacking. The teachers and head teachers however, seems to agree on the criteria for quality stated earlier in this article and which are based on international research in the field (Shiba and Walden, 2001; Skogen, 2004).

The possible weaknesses that are highlighted above may be related to the headteacher training being too fragmentary, too focused on administrative management and on a more abstract and sociological perspective. A greater focus on change management and putting the intentions of school policy into more concrete terms would be beneficial.

Teacher's Role

Although the teachers have made good progress in realising the intentions of inclusive and individually adapted education they still have the potential to develop with regard to adapting the teaching to the pupils' different needs in an inclusive learning community.

The results from dynamic testing and assessing the pupils' learning abilities and aptitudes, show that there is a minority of teachers who practice this to a large degree. There were also similar results with regard to the teachers' assessment of the pupils' learning process and outcome. This implies that the cohesion between political intentions and practice is not extensive enough with regard to testing the pupils' learning aptitudes and assessing their learning outcome. There is therefore a need to further develop the teachers' dynamic testing and assessment as an instrument to help achieve inclusive and individually adapted education to a higher level (Vygotsky, 1978; Grigorenko, 2009).

Concerning methods adapted to pupils' different needs, it seems as if the teachers use an extensive degree of traditional classroom teaching, as verbal forms of presentation in the classroom and standard text books for the relevant class year. These teaching approaches do little to facilitate varied methods related to pupils' different needs. Adapted teaching aids and learning activities are used to a limited extent, which is an indication that more flexibility and variation in these areas is needed. These are fundamental factors in the facilitation of inclusive education in relation to pupils' different needs, and the results imply that practice does not correspond to the intentions to an adequate degree (Backmann & Haug, 2006; Klette, 2003).

The results from the organisation of inclusive learning community indicate that pupils in standard education have the opportunity for their work to be based on different forms of organisation, and that they can vary whether they work on their own or with others. As regards special education, this is mainly organised in small groups. Pupils' different needs in relation to working on their own and/or with support from a teacher in the classroom do not appear to be met to the same degree. This is an indication that the

organisation is not varied enough and does not adhere to the principle of inclusion and individually adapted education to a sufficient degree (Vygotsky, 1978; Imsen, 2003; Dale & Wærness, 2003).

Curriculum Planning

When it comes to curriculum planning, we first looked at the attention to individuality and communality, which may be considered as an important aspect of ensuring differentiation and inclusion (Clark, Dyson & Millward, 1995).

Compared to the intentions, it must be regarded as a mark of quality that a number of teachers place emphasis on both individual and community considerations in their planning. The teachers' efforts to coordinate the adaptation of the classroom teaching and special education in their planning are also in accordance with the intentions. This can be viewed as an important contribution to ensuring that special education is not excluded as a special measure. However, the results also indicate that many teachers do not seem to be sufficiently aware of the significance of emphasising and balancing individual and community considerations in their planning, which necessitates a need for improvement. This is a crucial factor in the further development of inclusive and differentiated education.

The second sub-aspect of curriculum planning relates to the IEP as an aid for planning, executing and assessing the special education. In relation to the IEP being decreed by law for all pupils with special education, it must be regarded as positive that so many teachers have a constructive opinion of the IEP as an aid. This applies to planning different parts of the education – goals, content and organisation – and to executing and assessing it. This is an indication that the IEP is not regarded as a waste of time (Cooper, 1996), but as having a practical pedagogic utility value. Nevertheless, there are a large number of teachers who are not as positive about the IEP as an aid. This implies that there is a need to further examine how such plans are devised and used.

The results also indicate a somewhat problematic relationship between the IEP and the national curriculum's goals for competency in the planning of special education. The tension between uniform goals and varying aptitudes is central, and indicates that the teachers believe that common standards for teaching restrict the latitude for adaptation (Ben-Peretz, 1990; Bjørnsrud & Nilsen, 2011). Although planning is regarded as important and is considered of value, the picture is complex. The results further indicate a perceived need to improve the planning practice both with a view to differentiated education in general and special education in particular. The teachers therefore feel they need to develop their competency in both areas.

With regard to the third sub-aspect; cooperation in planning differentiated education and special education, this appears to have several marks of quality in relation to centrally determined guidelines. This particularly applies to the cooperation between teachers, which is given a strong emphasis as an intention. Notwithstanding, the teachers still express a need for more cooperation with colleagues than is currently the case. A community of practice (Wenger, 1998) between teachers in regular and special education seems crucial. Cooperation may increase the awareness of the interplay between individual factors and factors related to teaching-learning processes and conditions when special educational needs are defined and IEPs are developed and implemented (Isaksson, Lindqvist & Bergström, 2007). Developing a collaborative school culture seems important to meet the needs of all pupils, including those with special needs (Waldron & McLeskey, 2010).

Cooperation with and involvement of the pupils, on the other hand, does not seem to be very extensive in relation to the intentions. This applies to the planning of the adaptation in the classroom as well as IEPs for individual pupils. The cooperation with parents also appears to have been modest. This does not accord well with the intention for pupil's voices to be heard and for parents to have a final say when the educational offer for the pupil is being drawn up.

Conclusion

The results as a whole indicate that the situation in the participating primary and lower secondary schools is characterised by a number of the teachers having positive assessments of their own practice with regard to different aspects of inclusive and individually adapted education. As such, many of the teachers seem to have developed a practice that corresponds reasonably well with the intentions in this area. However, simultaneous to this, there are also a large number of teachers who are unable to give such positive feedback. In the majority of cases, less than half of the teachers agree with the category *to a large degree* in their responses. Thus, there appears to be a clear need in the role of headteachers,

teachers and curriculum planning for further development in order to gain understanding for and realise the intentions. This further development will pave the way for improving the quality of inclusive and individually adapted education, via both ordinary and special education.

In relation to the headteacher's role, the results indicate that the current headteachers maintain too low a profile when it comes to educational leadership, perhaps due to certain democratisation ideals. This could be a serious warning sign when juxtaposed with the tendency towards an increasing bureaucratisation of the school's activity. Clearer educational leadership seems to be a key factor for quality development. It appears that the headteachers have a potential for improvement in relation to putting the policy intentions into more concrete terms, emphasising and supporting the upgrading of skills and development work, and coordinating the school's work with a view to broad participation.

As regards the teacher's role, the results indicate that the situation is in some ways good in realising the intentions of inclusive and differentiated education. Nevertheless, there is still a potential for improvement in relation to mapping and assessing, adapting goals for learning, method adaptation and choosing suitable forms of organisation. There appears to be an obvious need to upgrade teachers' skills in the area of inclusive and differentiated education, both at an individual level and for the staff as a whole.

With regard to curriculum planning, despite a number of teachers indicating that they already carry out a great deal of important planning work, it must be recognised that there is still a major need for improvement. A more systematic approach to the planning work is needed, both in relation to differentiated teaching in the classroom and special education for individual pupils, and with regard to the interplay between the ordinary and the special education. The cooperation function also needs to be strengthened between various parties in the schools, including between pupils and teachers, and between the school and the home, in order to improve the correspondence between the practice and the intentions.

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PERSPECTIVES OF COLLEGE OF EDUCATION STUDENTS IN TURKEY ON AUTISM SPECTRUM DISORDERS

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This study addressed the autism awareness of College of Education students in two universities in Turkey. The main purpose of this research study was to conduct a needs assessment to learn more about Turkey's College of Education students' knowledge and awareness of autism. The Autism Awareness of College of Education Students in Turkey questionnaire was used to collect the data. The survey statements were designed to answer the research questions and provide considerable information on College of Education students' awareness and attitudes about autism. Participants for this study were randomly selected from among the students in the College of Education at two different universities in Turkey: Gazi University, Ankara, and Karadeniz Technical University, Trabzon. The data from the questionnaire were analyzed with descriptive statistics to understand attitudes, beliefs, and thoughts of College of Education students in Turkey. Results generally demonstrated that College of Education students' knowledge of autism was limited; however, they realized they need more classes and preparation in order to effectively work with children with autism.

Introduction

As autism awareness is raised all around the world, educating children with autism and preparing their teachers becomes more important because of the proven effectiveness of early educational intervention for a child with autism spectrum disorders (ASD). There are different programs for educating children with autism, therefore, there should be different teacher training programs to develop highly effective teachers to work with this population.

Around the world in-service and pre-service teachers have concerns about their knowledge and effectiveness of their teaching strategies on their students (Pasco, 2011). This study focuses on College of Education students in Turkey to learn their knowledge, awareness, and concerns about autism to help design evidence-based teacher training programs in Turkey. In Turkey, Colleges of Education do not offer any teacher training programs about autism. Without receiving any special training about autism, what do College of Education students in Turkey know about autism, the educational needs of a child with autism, and how do College of Education students feel about teaching children with autism in their classrooms?

Teachers' attitudes and understanding about autism is an important factor for the child's education. Attitude is defined as *manner, disposition, feeling, position etc. with regard to a person or thing; tendency or orientation, especially of the mind* (<http://dictionary.reference.com>). Attitudes are shaped by observational learning, parent and peer behaviors, and interactions between past experiences and the person's environment (Park, Chitiyo, & Choi, 2010).

Teachers' beliefs and thoughts affect outcomes of students, teachers' instructional skills, and their activity choices for their class. There are studies which show that teachers' knowledge about a specific disorder has a massive influence on the teaching process and the children achieving their goals (Siu & Ho, 2010). Teachers' understanding about the subject they are teaching and their students' strengths, weaknesses, and disabilities influences students' achievement levels (Bishop, Brownell, Klinger, Leko, & Galman, 2010). Teachers who believe in students' achievement are more effective than the teachers who do not support student achievement. If teachers have high expectations, they inspire better

performance (Mehring & Dow, 2001). This emphasizes the importance of the educators' knowledge about autism.

Teachers who work with children with autism should have the content knowledge, general pedagogical knowledge, curriculum knowledge, knowledge about learners and their characteristics, knowledge of educational context, and knowledge of educational purposes and values (Mehring & Dow, 2001). According to the Council for Exceptional Children (as cited in Mehring & Dow, 2011), teachers must know philosophical, historical, and legal foundations of special education, assessments, diagnosis, evaluation, instructional content and practice, planning teaching activities, managing the teaching and learning environment, managing student behavior and social skills, communication and collaboration, and partnership, professionalism, and ethical practices (Mehring & Dow, 2001). Siu and Ho (2010) stated that some teachers do not feel confident enough to teach students with autism. Teachers think they need more training, equipment, knowledge, and skills to work with children with autism.

Park and colleagues (2010) noted that people who know somebody with autism, whether it is a friend or relative, tend to have more positive attitudes towards others with autism. Students who are in inclusive educational settings had more positive behaviors. Teachers' attitudes towards children with autism affect their expectations of the students and play important roles in student's self-image development and academic performance.

Teachers should know about autism in order to effectively help children with autism. There are not many research studies and surveys conducted on teachers' attitudes toward autism and students with autism. Park et al., (2010) found that teachers' attitudes can affect their expectations about students which also affect students' self esteem and academic performance. Additionally, teachers with negative attitudes towards students with autism have significant negative impacts on students. Teachers can develop negative attitudes towards children with autism because of their lack of understanding of autism. Park and colleagues also mentioned the importance of attitudes of pre-service teachers towards children with autism; focusing on pre-service teachers' attitudes may help to develop teacher training programs.

Teachers should consider evidence-based teaching programs such as applied behavior analysis, video modeling, and visual support to be effective teachers. Evidence-based teaching programs depend on subject areas, grade levels, students' developmental levels, cognitive and psychological characteristics, and students' learning outcomes. Teachers should be aware of those key factors to design effective lessons for their students (Mehring & Dow, 2001).

Early childhood educators play important roles in early autism diagnosis and working with any kind of disabilities. Teachers should be able to identify irregular developmental patterns displayed by the children who may need testing to determine a disability. Like diagnosticians, teachers should have special skills and training on how to conduct progress evaluations (McGee & Morrier, 2005). Children with ASD generate a heterogeneous population. Their different levels of skill and intelligence make it more difficult to train autism specialists. Autism specialists have to know how to assess and intervene with this wide range of developmental abilities (McGee & Morrier, 2005).

Teachers, like all other providers who work with children with autism, should have close relationships with the families of the students with autism (McGee & Morrier, 2005). Teachers should be aware of cultural differences of families to effectively help them and their children. Educators and families should work together to know the child's unique strengths and weaknesses (Rodriguez, 2009). This knowledge about informing families and collecting data can be provided by giving the teachers appropriate trainings about disabilities and special education services.

Successful special education teachers have the ability of displaying humor, enthusiasm, fairness, empathy, flexibility, and self-control (Bishop et al., 2010). Besides that, successful special education teachers are the ones who can differentiate their teaching to meet each student's needs, depending on topic, instructional method, and teaching goal (Mehring & Dow, 2001). Teachers should know that students with autism need a special curriculum which promotes independent skills. Goals should focus on helping children develop independent play and work skills, and managing their own behavior. Students with autism have difficulty with organization, sequencing, and generalization, even though they may have obsessions about organization. They can manage organization and generalization problems with the help of interventions which are designed to address the child's strengths (Hume & Odom, 2006).

Autism in Turkey

More attention has been focused on ASD principally because of the increase in numbers of children who are identified and diagnosed with autism. The media has affected the understanding about needs of individuals with autism (Pasco, 2011). Autism in Turkey is also impacted by media. Turkey has attended the United Nations' Autism Awareness Day and Autism Awareness Month activities in April since 2008. Most of the activities are held by Tohum Otizm Vakfi, which is the largest foundation about autism in Turkey. The foundation's mission is raising awareness and helping children who have autism and other developmental disabilities to be a part of society. Tohum Otizm Vakfi was established in 2003 to serve that mission. Tohum Otizm Vakfi uses media to increase autism awareness. They also have a school specifically for children with autism.

Educators in Turkey are following educational trends in the United States. Inclusive education began in Turkey in 1983 with the regulation regarding children with special needs. Even though there are legal requirements about special education services and inclusive education, there are not enough people trained to provide those services and there are not well designed educational environments for inclusive education (Nal & Tuzun, 2011).

According to Tohum Otizm Vakfi's report on Autism Spectrum Disorders and Special Education in Turkey (2010), students with special needs were 0.7% of Turkey's student population. Depending on the information from the Ministry of National Education, during the 2008-2009 school year there were 2,582 students in the public school system with an autism diagnosis. In the 2010-2011 school year, the number of students with autism was 2,932; 339 of those students were in Vocational Training Centers for Autistic Children, and 1,593 of the students were in Training Centers for Autistic Children (www.sgb.meb.gov.tr). Training Centers for Autistic Children serve the students between the ages of three and 15 who are able to benefit from the special education curriculum. Vocational Training Centers for Autistic Children serve the students between the ages of 15 and 21 who are not able to earn a degree or diploma from a traditional educational environment. Vocational training centers are designed to help individuals with autism learn life skills, job skills, and social orientation. In 2009, 10,811 students were diagnosed with autism; however, all of these students did not receive services in the public school setting. When the number of students with autism who are receiving educational services is compared to the number of children being diagnosed, the necessity of a specialist for autism can be seen easily. Turkey's biggest problem in providing special services is not having enough professionals to work in special education fields.

The College of Education students take classes on teaching skills, general culture classes, and content knowledge. Students are able to take some elective classes to improve their teaching skills and content knowledge. All College of Education students take classroom experience and teaching practice classes one day a week after their sixth semester. Classroom experience class includes one hour of theory and four hours in public schools. During those four hours students have to complete some activities which are prepared by the Ministry of National Education and College of Education professionals. Students have to write their weekly reports each week. In the one hour theory class those reports are discussed by the students (Kulekci & Bulut, 2011).

Teaching practice class is also one full school day every week in the public schools for one semester. Student teachers have to spend at least 24 hours teaching to children in class. Student teachers' grades are based on their performance and reports (Kulekci & Bulut, 2011). As mentioned by Bishop et al. (2010) beginning special education teachers learn while they are working with children with disabilities. Teachers' beliefs about instruction, roles in helping students with disabilities, abilities of reflecting their instruction, and confidence while working with children influence teachers' learning. To influence teachers' learning there should be more classes involving teacher-student interaction.

None of the Universities in Turkey have a program which can prepare teachers and specialists for students with ASD, because there are not enough university professionals who can prepare the teachers who will serve students with autism in special education and inclusive settings. Students with autism are provided education by the teachers who get their degrees from special education departments in teaching for children with intellectual disabilities at eleven universities in Turkey. Even though those universities have special education programs, they do not have enough professionals to prepare special education teachers and autism specialists (Tohum Otizm Vakfi, 2010). Turkey needs professionals who work on autism and education to develop college training programs. If College of Education students were offered training, they would be more interested in becoming a professional in the area of autism with the ability

to train more people which would provide additional help for children with autism. Mehring and Dow (2001) stated that teacher training programs should not start and end with training at a university campus for a couple of years. Effective teacher training programs should continue after a college education while the teachers are teaching. According to these authors, professionals who have specialized training or previous work experience with children who have autism should serve students with autism.

Teachers who work with the children with autism need to be educated on both general education and special education because of the trends on educating children with autism in inclusive educational settings (McGee & Morrier, 2005). In 2006, all teacher training programs in Turkey were required to add special education and inclusion classes to their programs. Even though the requirements are in place, universities in Turkey cannot solve the problems about providing special education university professionals to prepare teachers (Tohum Otizm Vakfi, 2010).

Tohum Otizm Vakfi and the National Ministry of Education in Turkey worked together to train 1,250 medical personnel and 2,000 teachers for identifying children with autism who did not get the diagnosis until 2010, since Tohum Otizm Vakfi was established in 2003. According to the Ministry of National Education Formal Education Statistics (2011), 43 Training Centers for Autistic Children and seven Vocational Training Centers for Autistic Children have been serving students who have autism. There is a new program which is a web portal started by Tohum Otizm Vakfi. The portal includes 20 modules to educate people who do not have basic knowledge of ASD and want to help children with autism. The modules include information about how to interact with children with autism, which skills to teach a child with autism, which methods can be used to teach a child with autism, and basics to understand autism spectrum disorders (Tohum Otizm Vakfi, 2011).

The purpose of the study was to learn about what College of Education students in Turkey know about autism, their awareness about autism, and the educational needs of a child with autism, along with their feelings about being prepared to teach children with autism in their classrooms. This study was a survey study which was conducted in Turkey with College of Education students. Participants' responses were analyzed to answer the following research questions: (1) What do College of Education students know about autism? (2) Are College of Education students in Turkey aware of autism and the educational needs of a child with autism? and (3) Do the College of Education students in Turkey feel prepared to teach children with autism in their classrooms? This information will be used to improve the current teacher training programs and design more effective programs in Turkey. The study will also help to plan future classes, lectures, and teaching activities in College of Education classes.

Methods

This is a survey study designed by the first author based on the reviewed literature about autism and teachers' attitudes and the importance of education for a child with autism. Participant responses were based on a 5 point Likert scale. The survey was created by the first author specifically for this study. The Autism Awareness of College of Education Students in Turkey questionnaire was used to collect the data. The survey was available in both Turkish and English.

Participants

Participants for this study were randomly selected from among the students in the College of Education at two different universities in Turkey. Two-hundred- seventeen participants were from Gazi University, Ankara and 334 participants were from Karadeniz Technical University, Trabzon, for a total of 551 participants. The survey was distributed during class hours. Subjects were eligible to participate in the survey if they were currently enrolled in any program in the College of Education at the two specified universities and were at least 19 years old. There were 19 surveys excluded because the participants did not meet the criteria for inclusion the study.

Table 1 Gender of Participants

	<i>N</i>	Percent
Male	134	24.30
Female	417	75.70

As shown in Table 1, approximately 24% of the participants were male, and 76% of the students were female. Female students were over represented in the study because of their high population in College of Education programs.

The minimum age to participate in the study was 19, but there was no upper limit for the older participants. The oldest participant was 32 years old and the average age of participants was 20.50, as shown in Table 2.

Table 2 Age of Participants

Minimum	Maximum	Mean	St. Deviation
19	32	20.55	1.64

Table 3 Class Levels of Participants

Class Level	<i>N</i>	Percent
1	138	25.00
2	140	25.40
3	158	28.70
4	115	20.90

Participants were randomly selected from different class levels and different fields of studies. As shown in Table 3, approximately 28 % of the subjects were in their third year of study, and 21% of the subjects were in their last year of their bachelor degree. Almost 25% of the students were in their freshman year and the last 25% of the students were attending their second year in the College of Education.

Participants were randomly selected from any program in the College of Education. The 551 participants were from ten different programs in the College of Education. Forty-eight percent (48%) of the participants (*N*= 266) were in elementary school teacher training programs. On the other hand, just seven participants were in math teacher training programs. Table 4 provides more detailed information on the fields of study for participants in the study.

Table 4 Field of Study of Participants

Field of Study	<i>N</i>	Percent
Intellectual Disabilities	26	4.7
Computer-Based Technologies	40	7.3
Science	69	12.5
Elementary School Teaching	266	48.3
School Counseling	42	7.6
Deaf and Hard of Hearing	31	5.6
Arts and Crafts Teaching	17	3.1
Math Teaching	7	1.3
Social Sciences Teaching	27	4.9
Early Childhood Education	26	4.7

Survey Instrument

The Autism Awareness of College of Education Students in Turkey questionnaire includes two parts. The first part of the survey was to gather the participants' demographic information. Questions were asked to learn the participants' gender, age, university, field of study, and class level.

The second part of the questionnaire included twenty statements where participants had to rate their opinions for each statement using the five point Likert scale where a response of 1 meant strongly disagree and a response of 5 meant strongly agree. The survey questionnaire was constructed based on a review of the literature. Attitudes and knowledge of autism were found highly essential for teachers to be highly effective. The complete questionnaire is contained in the Appendix section in both languages, Turkish and English. The Turkish version of the questionnaire was used because not all Turkish participants were fluent in English.

The subjects were asked to participate in the survey during their lecture hours and free time. Hard copies of the questionnaire were provided by the first author. The first author went to different classrooms on campus and handed the questionnaires to the participants. All of the subjects were informed and read and signed the consent form before they started. Participants were given 20 minutes to rate the survey statements.

The first author was available to answer the questions about the study while the subjects were rating the statements. She also answered questions about autism after the questionnaires were completed.

Results

Descriptive Statistics

The data from the questionnaire were analyzed with descriptive statistics to determine the mean and standard deviation of the College of Education students' evaluations of the Likert scale rated statements. A five point Likert scale indicated responses from *1-Strongly disagree* to *5-Strongly agree*. The survey statements were designed to answer the research questions and provide considerable information on College of Education students' awareness and attitudes about autism. Descriptive statistics were computed for all statements which are presented in Table 5.

Table 5 Rating Scale for Each Statement

Statements	Mean	Std. Deviation
Autism is a developmental disability	3.97	1.03
Know somebody with autism	1.97	1.47
Take 1 class about autism	2.42	1.67
Able identify and understand autism	3.05	1.19
Experienced teaching during practicum	1.47	1.09
Able to give information to parents	2.85	1.32
Place in inclusion classroom	3.27	1.25
Need communication support	4.41	0.84
Need behavioral support	4.44	0.80
Support to improve social skills	4.50	0.78
Able to plan a lesson for children with autism	2.30	1.12
Education of needs of a child with autism	1.91	1.26
Able to integrate new teaching strategies	2.27	1.17
Deal with classroom management issues	2.48	1.16
Placed in special education classroom	3.85	1.17
Visual support helps	4.28	0.87
Placed in general education classroom	2.77	1.27
Enough education about autism	1.80	1.09
More classes about autism	4.09	1.01
Spending money education and training	1.82	1.35

One of the main purposes of this study was to learn about Turkey's College of Education students' knowledge about autism. Some of the statements were designed to answer the question *What do College of Education students know about autism?* The mean score of the first statement ($M=3.97$, $SD=1.03$) shows that most of the participants know that autism is a developmental disability which can be improved through education. Four-hundred-twenty-four (76.9%) of the College of Education students agreed and 55 (10%) of the students did not agree to the statement. In addition to that, 77 (13.1%) of participants reported they were neutral about this statement. On one hand, 159 (28.8%) disagreed and 196 (35.6%) agreed that they were able to identify and understand the characteristics of autism ($M=3.05$, $SD=1.19$). One-hundred-ninety-six (35.6%) participants were not sure. Participants showed that they were not confident about their understanding of autism (See Table 6 for complete statistics for each statement).

Two-hundred-twenty-three (40.5%) participants admitted they were not able to give information about autism if parents asked ($M=2.85$, $SD=1.32$). One-hundred- ninety-seven (35.8%) students thought that they could provide information when parents asked. One-hundred-thirty-one (23.8%) students were not sure about providing any information to the parents. The results presented for each statement suggested

that College of Education students have the general idea of autism, but they do not have more in depth information to explain it to parents or anyone who needs some information about autism.

Participants who were in the College of Education in Turkey have general knowledge about autism. They knew autism is a developmental disability that can be improved through education. On the other hand, they were not sure they could identify and understand the characteristics of autism or give information to anyone if they were asked. These results suggest College of Education students need to be better informed about autism.

The second research question was *Are College of Education students in Turkey aware of autism and the educational needs of a child with autism?* Statements two and five showed that most of the participants did not have any chance to meet an individual with autism. For the second statement the computed mean score is $M=1.97$ ($SD=1.47$). Four-hundred-twenty (66.2%) students reported they did not know anyone with autism. One-hundred-eight students (19.6%) had a relative, friend, or student with autism. There were 23 participants (4.2%) who were not sure if they knew somebody with autism. Participants also stated that they did not experience teaching a child with autism during their practicum hours. Four-hundred-ninety-three (89.5%) participants chose *strongly disagree* or *disagree* for statement five ($M=1.47$, $SD=1.09$). Only 11 (2%) students reported they were not sure about it and 47 students (8.5%) agreed that they had a chance to experience teaching a child with autism during their practicum hours.

Statements eight, nine, ten, and sixteen asked about the participants' opinions and beliefs about the educational needs of a child with autism. More than 90% of the participants reported that students with autism need communication support ($M=4.41$, $SD=0.84$), behavioral support ($M=4.44$, $SD=0.80$), and social skills support ($M=4.50$, $SD=0.78$). Eighty-six percent (86%) of participants agreed visual supports help students who have autism. Four percent (4%) of the participants disagreed with the need for communication support and behavioral support, and 3% of the participants disagreed with the need for social skills support. Furthermore, 4% of participants reported that visual supports do not help students with autism.

Four-hundred-fourteen (75.1%) participants thought they had not received any education about the needs of a child with autism ($M=1.91$, $SD=1.26$), while 87 students (15.8%) thought they had received education about the needs of a child with autism. Fifty (9.1%) students were not sure about the level of education they had received regarding a child with autism.

In addition to statement 12, statement 18 asked the level of education participants had received about autism. Approximately 75.8% of participants did not think they had received enough education about autism, and 26.7% of the participants thought they had received enough education about autism ($M=1.80$, $SD=1.09$). Fifteen percent (15.1%) of the participants were not sure if they had received enough education.

Statements seven, fifteen, and seventeen were designed to get opinions about the placement of a child with autism in educational settings. Statement seven ($M=3.27$, $SD=1.25$) suggested students with autism should be placed in inclusion classrooms. Two-hundred-forty-one (43.7%) participants agreed, and 131 (23.7%) participants disagreed. One-hundred-seventy-nine (32.5%) participants could not decide whether the students with autism should be placed in inclusion classrooms.

On the other hand, 371 (67.3%) participants agreed that students with autism should be placed in special education classrooms ($M=3.85$, $SD=1.17$). Seventy-four (13.4%) participants did not agree with that statement. Two-hundred-fifteen (39%) participants did not agree that students with autism should be placed in general education classrooms. However, the mean score for statement seventeen is 2.7 ($SD=1.27$); 189 (34.3%) participants were neutral regarding general education placements. Results of those three statements showed that most of the College of Education students who participated in the study thought that students with autism should be placed in special education classrooms.

Participants' responses answered research question two. Even though participants did not receive enough education about autism or knew anybody with autism, they were aware of autism and the educational needs of a child with autism. Most of them thought children with autism should not be placed in general education classrooms; they should be in special education settings or inclusion classrooms.

The third research question was *Do the College of Education students in Turkey feel prepared to teach children with autism in their classrooms?* Thus, the important information to determine this data was learning about the participants' classes about autism. Three-hundred-fifty (63.5%) of the participants reported that they disagreed with the statement three. Eighteen students (3.3%) were neutral about taking any class which covered information about autism and the educational needs of a child with autism. One-hundred-eighty-three (33.2%) out of 551 participants took at least one class related to autism. Four-hundred-thirty-eight (79.5%) participants agreed that the College of Education should have more classes about autism ($M=4.09$, $SD=1.01$). Only 42 (7.6%) students disagreed with statement nineteen which was in support of College of Education students receiving more classes about autism.

Statements eleven, thirteen, and fourteen were about the College of Education students' feelings of their ability to teach a child with autism. Three-hundred-five participants (55.4%) did not think that they were able to plan a lesson which involved appropriate learning activities for a child with autism ($M=2.30$, $SD=1.12$). Also, 294 (53.4%) participants did not think they were able to integrate new teaching strategies in a classroom which contained a child with autism ($M=2.27$, $SD=1.17$) and 266 (48.2%) participants did not know how to deal with classroom management issues for a child who has autism ($M=2.48$, $SD=1.16$).

Answers for the third research question were determined by analyzing the responses of participants. The statements suggest that College of Education students in Turkey did not feel they were ready to teach a child with autism.

As additional information, the last statement was about the government's spending money on educating students with autism and training their teachers. Three-hundred-ninety-five (73.5%) participants thought that the governments' spending money is necessary ($M=1.82$, $SD=1.35$). Fifty-eight (10.5%) participants were neutral about this issue. Eighty-eight (16%) stated that they thought government's spending money on educating students with autism and training their teachers was unnecessary.

Table 6 Frequency and Percentages for Each Choice

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Stmnt 1	22	4.00	33	6.00	72	13.10	235	42.60	189	34.30
Stmnt 2	333	60.40	87	15.80	23	4.20	27	4.90	81	14.70
Stmnt 3	273	49.50	77	14.00	18	3.30	59	10.70	124	22.50
Stmnt 4	75	13.60	84	15.20	196	35.60	126	22.90	70	12.70
Stmnt 5	433	78.60	60	10.90	11	2.00	10	1.80	37	6.70
Stmnt 5	119	21.60	104	18.80	131	23.80	132	24.00	65	11.80
Stmnt 7	68	12.30	63	11.40	179	32.50	130	23.60	111	20.10
Stmnt 8	12	2.20	10	1.80	27	4.90	188	34.10	314	57.00
Stmnt 9	10	1.80	11	2.00	19	3.40	197	35.80	314	57.00
Stmnt 10	10	1.80	8	1.50	17	3.10	174	31.60	342	62.10
Stmnt 11	173	31.40	132	24.00	173	31.40	52	9.40	21	3.80
Stmnt 12	306	55.50	108	19.60	50	9.10	51	9.30	36	6.50
Stmnt 13	202	36.70	92	16.70	178	32.30	59	10.70	20	3.60
Stmnt 14	149	27.00	117	21.20	178	32.30	83	15.10	24	4.40
Stmnt 15	33	6.00	41	7.40	106	19.20	165	29.90	206	37.40
Stmnt 16	11	2.00	11	2.00	57	10.30	203	36.80	269	48.80
Stmnt 17	120	21.80	95	17.20	189	34.30	81	14.70	66	12.00
Stmnt 18	307	55.70	111	20.10	83	15.10	32	5.80	18	3.30
Stmnt 19	21	3.80	21	3.80	71	12.90	208	37.70	230	41.70
Stmnt 20	376	68.20	29	5.30	58	10.50	40	7.30	48	8.70

Discussion

ASD encompasses a wide range of disabilities. Every child with ASD experiences the disability in different ways depending on his/her skills, abilities, and cognitive level. These differences between the students make it difficult to adequately train and prepare teachers for children with autism. Teachers should be able to serve all of the students with ASD in their classes. The importance of the teachers' knowledge and understanding about autism directs the attention to the teacher training programs. Evidence-based teacher training programs about autism should be planned more carefully to provide the necessary education for children with autism.

The purpose of this study was to learn about Turkey's College of Education students' knowledge about autism and the educational needs of a child with autism. Learning their knowledge about autism is important to justify their feelings about teaching a child with autism. These key components were determined by using the questionnaire prepared for this study by the first author.

According to the questionnaire results, College of Education students in Turkey knew that autism is developmental disability that can be improved through education, but they were not sure they were able to identify and understand the characteristics of autism. College of Education students in Turkey thought that they could not provide any information about autism when they were asked, because they did not take any classes related to autism. Colleges of Education in Turkey do not offer any classes about autism. College of Education students did not have in-depth knowledge of autism, but they also knew children with autism need communication support, behavioral support, and social skills support. The college students in Turkey also stated that visual supports help students with autism. These results showed that College of Education students in Turkey believed they have the basic knowledge about autism. Identifying and understanding the characteristics of autism requires more in-depth knowledge, which emphasizes the lack of appropriate training about autism.

If the College of Education programs have classes about autism, the students would be able to have the knowledge and share it with other people who need help. All College of Education students should have knowledge to help their students with autism. Education of children with autism is not only the responsibility of the special education teachers, it is the responsibility of all teachers because the law requires placing students with ASD in inclusive educational settings as appropriate based on their skills and abilities. All teachers should have in-depth knowledge about autism, because they will have students with ASD in their classes whether they are general education or special education classes.

Most College of Education students did not know any individuals with autism, and they have never experienced teaching a child with autism during their practicum hours. They have the basic knowledge about autism but have never experienced it first-hand. College of Education students stated they knew children with autism needed behavioral, communication, social skills, and visual support help to be successful, which showed they were aware of some of the educational needs of a child with autism.

This study showed College of Education students in Turkey thought students with autism should be placed in special education or inclusion classrooms. Students with autism need special instruction which is designed for them, thus they should not be placed in general education classrooms without any support or training for the receiving teacher. College of Education students knew they needed special classes to acquire knowledge about autism. They did not think they received enough education about autism. College of education students agreed that Colleges of Education should have more classes about autism.

The survey generated enough data to answer the research questions. College of Education students in Turkey were aware of autism and the educational needs of a child with autism. They admitted a child with autism needed specialized instruction to improve their skills, and teachers needed to be more educated about autism to provide that specialized instruction. Besides that, College of Education students knew they did not receive the necessary training to help children with autism.

College of Education students in Turkey did not take any classes which were related to autism and they thought they did not receive enough education about autism, thus they did not think they were able to plan a lesson which involved appropriate learning activities for a child with autism. College of Education students also did not think they were able to integrate new teaching strategies in a classroom which contains a child with autism. The responses of those statements showed College of Education students in Turkey did not feel prepared to teach children with autism in their classes because they did not receive enough education and they did not have the knowledge to teach children with autism.

Limitations

There are some limitations about the study and the data collection procedures. The data for this study was collected from two Universities' College of Education students because of the permission restriction. The first author received permission to conduct research from two universities in Turkey. Between these universities 551 students participated. Their responses cannot be generalize to all of the universities in Turkey, but it still provides a representation of what the College of Education students in Turkey know about autism.

The second limitation of the study is the reflection of gender in the field of education. One-hundred-thirty-four (24.3%) male, and 417 (75.7%) female College of Education students participated in the study. More female students were represented in the study; therefore, the results of the study may change depending on the participants' gender. Based on this sample, patterns of male/female attitudes and knowledge cannot be determined.

Elementary school teaching program's students were also over represented in the study because elementary school teaching programs' classroom populations were higher than the other programs. Elementary school teaching programs are popular among the teacher training programs in Turkey. This popularity affected the population of the students in College of Education and in this study. This may count as a benefit for the study because the results are dependent of the elementary school teaching program's students who are more likely to be the first teachers of the students with autism with or without diagnosis in their classes. It was good to know the ideas and knowledge of the future elementary school teachers.

The last limitation for the study was data collection. The data were collected in 20 minute sessions during the lecture hours. If participants had been able to use more time to think about the statements, they may have given more thoughtful answers. Questionnaires could have been handed out for one day and participants could have been asked to hand them in the next day, but the number of participants would not be the same if the students were asked to return the questionnaires later. Additionally, the first author's time was limited in Turkey to be able extend the time for data collection. All of the data were collected in two days, one day for each university. Even though there are limitations to the study, the collected data was enough to determine the statistical results and provide useful information for teacher training programs.

Educational Implications

Important findings of this study showed the importance of the teacher training programs for educating a child with autism. Previous research (Bishop et al., 2010, Mehring & Dow, 2001, Park et al., 2010, Siu & Ho, 2010) has emphasized the importance of teachers' attitudes and knowledge on a child's ability to reach his/her educational goals. Improving teachers' knowledge about any disability is best accomplished while they are in college; however, teachers need to continue learning to keep up on the latest research and teaching techniques. Teachers stated that they learn more about the disabilities while they are working with children (Bishop et al., 2010). Teachers' knowledge and attitudes about autism can be improved while they are in college and while they are taking their classroom experience and teaching practice classes.

Colleges of Educations in Turkey should offer more classes about special education and autism. Those classes should not be just theoretical classes; College of Education students should be taking classroom experience or teaching practice classes in special education or inclusive educational settings. At least during one semester every College of Education teacher should experience teaching in a classroom which contains students with disabilities because it may not be possible for every College of Education student to experience teaching a child with autism. When the College of Education students experience teaching a student with disability, they learn how to plan, differentiate, and manage their teaching activities.

In Turkey, before training College of Education students, the Ministry of National Education and Universities should focus on professionals' training about special education and autism. There are some scholarships and programs for professionals' training, but the study results showed there were not enough professionals who can provide that training at the college level. Even the law requires Colleges of Education to offer classes about special education; however, there are not enough faculty to lecture for those classes.

Future Research

This study can be used as a base to design other studies to compare different universities programs and students' knowledge depending on the responses of questionnaire statements. This study also can be expanded to other universities in Turkey to evaluate improvement of College of Education programs in areas of special education and autism. This study can be replicated to compare students' knowledge and awareness about autism, which show the programs improvement.

In summary, College of Education students in Turkey showed their knowledge and understanding about autism is limited. However, they have the basic knowledge. They need to be better educated to use evidence-base practices while they are teaching to students with autism. College of Education students do not feel prepared to teach a child with autism in their classes. The study showed that teacher training programs in the Colleges of Education in Turkey should modify their programs to give better education about special education and autism. The study results showed students in College of Education in Turkey did not take any classes related to autism, thus they do not have in-depth knowledge about autism. Colleges of Education in Turkey should offer more classes about special education and autism and those classes should be mandatory for every student who enrolled in any program in the College of Education.

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Appendix A**Demographics:**

Gender: Male_____ Female_____

Age: _____

University: _____

Field of Study: _____ Class_____

I would like you to choose one of the numbers from 1- 5 to identify your situation and beliefs about autism.

1: Strongly disagree, 2: Disagree, 3: Neither agree nor disagree, 4: Agree, 5: Strongly Agree

Statements:

1. Autism is a developmental disability that can be improved through education.
1 2 3 4 5
2. I know somebody (relatives, friends, students) who has autism.
1 2 3 4 5
3. I took at least 1 class which covers information about autism and educational needs of a child with autism.
1 2 3 4 5
4. I am able to identify and understand the characteristics of autism.
1 2 3 4 5
5. I have experienced teaching a child with autism during my practicum hours.
1 2 3 4 5
6. I am able to give information about autism when the parents ask.
1 2 3 4 5
7. Students with autism should be placed in inclusion classrooms.
1 2 3 4 5
8. Students with autism need communication support.
1 2 3 4 5
9. Students with autism need behavioral support.
1 2 3 4 5
10. Students with autism need support to improve their social skills.
1 2 3 4 5
11. I am able to plan a lesson which involves appropriate learning activities for a child with autism.
1 2 3 4 5
12. I have received education about the needs of a child with autism.
1 2 3 4 5
13. I am able to integrate new teaching strategies in a classroom which contains a child with autism.
1 2 3 4 5
14. I know how to deal with classroom management issues in a class with students with autism.
1 2 3 4 5
15. Students with autism should be placed in special education classroom.
1 2 3 4 5
16. Visual supports help students who have autism.
1 2 3 4 5

17. Students with autism should be placed in general education classrooms.
1 2 3 4 5
18. I have received enough education about autism.
1 2 3 4 5
19. College of Education should have more classes about autism.
1 2 3 4 5
20. Government's spending money on educating students with autism and training their teachers are unnecessary.
1 2 3 4 5

Appendix B**Bilgiler:**

Cinsiyetiniz: Bay _____ Bayan _____

Yaşınız : _____

Devam etmekte olduğunuz üniversite : _____

Bölüm: _____ Sınıf : _____

Aşağıda belirtilmiş 1’den 5’ e kadar derecelendirmiş olan durumlardan size uygun olanını işaretleyiniz.

1: Kesinlikle Katılmıyorum, 2: Katılmıyorum, 3: Kararsızım, 4: Katılıyorum, 5: Kesinlikle Katılıyorum

1. Otizm gelişimsel bir bozukluktur ve eğitim yardımı ile etkileri azaltılabilir.
1 2 3 4 5

2. Otizmlili birini (akraba/arkadaş/ öğrenci) tanıyorum.
1 2 3 4 5

3. Otizm ve otizmlili öğrencilerin ihtiyaçları ile ilgili bilgileri içeren en az 1 ders aldım.
1 2 3 4 5

4. Otizmi ve özelliklerini anlayabilir ve tanımlayabilirim.
1 2 3 4 5

5. Okul deneyimi derslerim sırasında otizmlili bir öğrenci ile çalışma fırsatım oldu.
1 2 3 4 5

6. Öğrencilerin aileleri istekte bulunduğu takdirde onları otizm hakkında bilgilendirebilirim.
1 2 3 4 5

7. Otizmlili öğrencilerin kaynaştırma sınıflarında eğitim almaları gerekir.
1 2 3 4 5

8. Otizmlili öğrencilerin iletişim konusunda destek almaları gerekir.
1 2 3 4 5

9. Otizmlili öğrencilerin davranışları konusunda destek almaları gerekir.
1 2 3 4 5

10. Otizmlili öğrencilerin sosyal ilişkilerini geliştirebilmek için destek almaları gerekir.
1 2 3 4 5

11. Otizmlili öğrenciler için uygun öğrenme aktivitelerini içeren bir ders planı hazırlayabilirim.
1 2 3 4 5

12. Otizmlili öğrencilerin ihtiyaçları konusunda eğitim aldım.
1 2 3 4 5

13. Otizmlili öğrenci bulunduran bir sınıfta yeni eğitim öğretim stratejilerini uygulayabilirim.
1 2 3 4 5

14. Otizmlili öğrenci bulunduran bir sınıftaki sınıf yönetimi sorunlarını giderebilirim.
1 2 3 4 5

15. Otizmlili öğrencilerin özel eğitim sınıflarında eğitim almaları gerekir.
1 2 3 4 5

16. Görsel destek (resimler, fotoğraflar, görselleştirilmiş takvimler) otizmlili öğrencilere yardımcı olur.
1 2 3 4 5

17. Otizmlili öğrencilerin genel eğitim sınıflarında eğitim almalarını gerekir.
1 2 3 4 5

18. Otizmle ilgili yeterli eğitim aldım.

1 2 3 4 5

19. Eğitim fakültelerinin otizmle ilgili daha fazla ders vermeleri gerekir.

1 2 3 4 5

20. Otizmli öğrencilerin ve bu öğrencilerin öğretmenlerinin eğitimlerine ayrılan devlet bütçesi gereksizdir.

1 2 3 4 5

PREPARING SPECIAL EDUCATORS FOR COLLABORATION IN THE CLASSROOM: PRE-SERVICE TEACHERS' BELIEFS AND PERSPECTIVES

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Inclusion of students with disabilities in general education classrooms and programs continues to be a focus in the international field of special education. In the USA where the history of inclusion is over three decades old, current special educator's professional standards clearly expect that certified special educators will enter the field with adept collaboration and co-teaching skills in order to optimize services for students with disabilities in inclusive settings. Coursework in collaboration for pre-service special educators is a common mechanism for providing this training within the United States (McKenzie, 2009). This qualitative case study (n=12) conducted over a semester of coursework on collaboration in a distance education format utilized grounded theory, through document analysis and interviewing (n=5), to build a better understanding of pre-service special educators' perceptions and beliefs about collaborating with general educator partners in school settings. Five themes emerged from over 300 participant quotations: 1) definitions of collaboration, 2) outcomes of collaboration, 3) collaborative behaviors between teachers, 4) challenges to collaboration, and 5) preparedness to collaborate. These pre-service special educators most often commented on the challenges they experienced in school settings. Implications for teacher education programs worldwide and future research are discussed.

A global movement towards inclusion of students with disabilities in typical classrooms and schools has intensified focus on skills teachers need to meet the unique demands of this challenging equal educational opportunity. Diverse countries such as Canada (Jordan, Schwartz, & McGhie-Richmond, 2009; Philpott, Furey, & Penney, 2010), Trinidad (Johnstone, 2010), and Turkey (Gurgur & Uzuner, 2011) are identifying the strengths and weaknesses of their respective teaching forces and the necessary supports, including teacher training, for effective collaboration between special educators and general educators. Collaboration, the interaction style between school professionals, is defined as two or more equally certified or licensed professionals implementing shared teaching, decision-making, goal setting, and accountability for a diverse student body (Friend & Cook, 2009). Collaboration, though often represented as synonymous with co-teaching, rather includes co-teaching as one subset of skills needed to effectively and jointly educate students with disabilities in twenty-first century schools. Collaboration between special and general educators has been a key topic in education in the United States since the early 1970's when seminal legislation for students with disabilities mandated considering least restrictive environment in which students with disabilities would receive their education in an environment as close to their non-disabled peers as possible while still experiencing academic success, and not in separate classrooms or schools as was traditionally considered the appropriate setting for all students with disabilities. Since that time, discourse on collaboration between general and special educators including the workings of this professional partnership, the impact on professional roles and responsibilities, and the affect on student achievement has permeated special education literature (e.g., Cook & Friend, 1995; Keefe & Moore, 2004; Mastropieri, Scruggs, Graetz, Norland, Gardizi, & McDuffie, 2005; Murawski & Swanson, 2001; Nevin, Cramer, Voigt, & Salazar, 2008; Rea & Connell, 2005; Rea, McLaughlin, & Walther-Thomas, 2002; Scruggs, Mastropieri, & McDuffie, 2007).

Recent national policy in the USA, specifically, the re-authorization of The Individuals with Disabilities Education Improvement Act (IDEA, 2004) regulations (which serve as the blueprint for the delivery of special education services in USA public and private schools) continued to delineate what should be considered when determining each students' appropriate *least restrictive environment*. Currently, considering *least restrictive environment* for students with disabilities in the United States requires considering students' full participation in the general education curriculum delivered in the general education classroom and then considering more segregated settings only after it is determined that the student is not successful in the general education curriculum and classroom without more restrictive supports or specialized instruction (Office of Special Education Programs, 2006, sec. 614). In addition, high stakes testing and increased teacher accountability, requirements embedded in the No Child Left Behind Act (NCLB; U.S. Department of Education, [USDOE], 2002), resulted in more students with disabilities receiving their instruction in the general education class (Turner, 2003). According to the 29th annual report to congress on IDEA implementation during the 2007 school year, 54% of students with disabilities (ages 6-21) received instruction in general education settings for 80% of the day (United States Department of Education, 2010). Thus, twenty-first century classrooms have become epicenters for collaboration between special educators, general educators, related service professionals, and other school support personnel.

In addition to public policy, professional teaching standards have emphasized effective collaboration as a vital skill and knowledge domain in teaching. *What Every Special Educator Must Know: Ethics, Standards, and Guidelines for Special Educators* (2009), the Council for Exceptional Children's guidelines for preparing professional special educators worldwide included collaboration as a stand alone domain area in which special educators should show competence prior to entering the teaching field. These standards provide guidance in *developing and revising policy and procedures for program accreditation, entry-level certification, professional practice, and continuing professional growth* (p.11). According to the Council for Exceptional Children, collaboration as a professional practice includes multiple partners such as parents, teachers, related service providers, and outside community agencies. By working in tandem with these partners in a culturally responsive manner, *special educators are viewed as specialists by a myriad of people who actively seek their collaboration to effectively include and teach individuals with exceptional learning needs* (p.48). Furthermore, indicators of a special educator with strong collaboration skills include: a) modeling strategies for consultation and collaboration, b) building respectful and positive relationships with professionals, c) coordinating the inclusion of students with disabilities into a variety of school settings, and d) using co-teaching methods to increase student achievement in the classroom. Additionally, the National Board for Professional Teaching Standards *What Teachers Should Know and Be Able to Do* (2007) specifically addresses the necessity of collaboration between special educators and general educators due to increased inclusion in schools. Finally, the National Council for Accreditation of Teacher Education (NCATE, 2007), the professional accrediting body for teacher preparation programs throughout the USA, includes standards on teacher preparation programs evidence of providing the pedagogical and professional knowledge and skills required by teacher candidates in all professional settings: *They have a thorough understanding of the school, family, and community contexts in which they work, and they collaborate with the professional community to create meaningful learning experiences for all students* (NCATE, Standard 1c).

However, teacher preparation programs which are beholden to the aforementioned standards are often faulted for insufficient training in collaboration skills for special educators (Austin, 2001; Billingsley, 2004; Cook & Friend, 1995; Deiker, 2001; Friend, 2000; Greene & Isaacs, 1999; Keefe & Moore, 2004; Keefe, Moore, & Duff, 2004; Laframboise, Epanchin, Colucci, & Hocutt, 2004; Lovingfoss, Eddy, Molloy, Harris, & Graham, 2001; McKenzie, 2009; Otis-Wilborn, Winn, Griffin & Kilgore, 2005; Turner, 2003). Researchers have proposed that teacher education programs fail to equip special educators with the unique skills necessary for co-teaching (e.g. Alvarez & Daniel, 2008; Austin, 2001; Keefe & Moore, 2004). Colleges have been accused of a *do as we say, not as we do* attitude toward teaching instructional and behavioral techniques for the inclusive classroom (Greene & Isaacs; Kluth & Straut, 2003). In addition, programs often perpetuate the phenomena of segregated disciplinary roles and isolated practice (Bullock, Park, & Snow, 2002; Cook & Friend, 1995; Greene & Isaacs; Quinlan, 1998; McKenzie, 2009). According to Otis-Wilborn et al., 2005, teacher education failed to deliver *strategies for clarifying roles and building collaborations in formal and informal ways with general education teachers* (p.149). These programs produce teachers bound for professional placements feeling unprepared and inexperienced (Keefe & Moore, 2004; Thompson, 2001). Conversely, possessing developed collaboration skills may support the induction and retention of special educators in the field

(Billingsley, 2004). Special educators who feel prepared for the complexities of collaboration in their daily career may avoid being overwhelmed by these demands.

Suggestions for teacher education program reforms include the common thread of building better collaboration skills not just for special educators, but for general educators as well. Repeatedly, researchers called for higher education to initiate changes resulting in successful collaboration skills (e.g., French & Chopra, 2006; Griffin & Pugach, 2007; Thousand, Villa, & Nevin, 2006; Villa, Thousand, & Chapple, 1996). Specifically, the proposed solutions for this dilemma included: (a) integrated programs with other disciplines such as elementary education, school psychology, or a specific content area (Griffin & Pugach, 2007; Miller & Stayton, 2006; Otis-Wilborn et al., 2005; Turner, 2003); (b) classes designed to teach collaboration skills (Arthaud et al., 2007; Austin, 2001; Lovingfoss et al., 2001; McKenzie, 2009); (c) co-teaching during practica or student teaching (Alvarez & Daniel, 2008; Van Laarhoven et al., 2007; Wilson Kamens, 2007); and (d) modeling co-teaching in the higher education classroom (Bakken et al., 1998; Cook & Friend, 1995; Duchardt, Marlow, Inman, Christensen, & Reeves, 1999; Greene & Isaacs, 1999; Kluth & Straut, 2003; Miller & Stayton, 2006; Waters & Burcoff, 2007).

Although coursework in collaboration is recommended, there is scant research on how pre-service special educators view their collaboration skills while completing coursework and prior to entering the teaching field (Bradley & Monda-Amaya, 2005; Gallagher, Vail, & Monda-Amaya, 2008). Without building this knowledge, it continues to be difficult to assess how coursework, as a mechanism for preparing special educators in collaborative skills and knowledge, influences pre-service teachers' beliefs and practices. A better understanding of preservice teachers' experiences with collaboration may provide valuable information on relevant content, activities, and assignments that focus on collaboration between school professionals.

Method

The purpose of this study was to gain further understanding of pre-service teachers' beliefs and perceptions about collaboration between special educators and general educators while completing coursework on collaboration and in their future professional practice. Due to the descriptive nature of the research questions asked, a qualitative case study design was used. The research questions were:

1. What are pre-service special educators' beliefs and perceptions about collaboration as a professional practice?
2. What challenges do pre-service special educators report as obstructing collaboration in their school environments?
3. After completing coursework in collaboration, how prepared to collaborate do these educators feel?

Context of the Study

Pre-service special educators were beginning their second and final year of a distance education undergraduate degree program in special education at a large southeastern university in the United States. The course on collaboration was designed to cover the wide array of collaboration that occurs in schools. Requirements for the distance education course matched the face-to-face version. Participants were concurrently spending approximately 20 or more hours a week as part of their practicum requirement. The 13 objectives in the course syllabus are aligned with professional preparation standards outlined in *What Every Special Educator should Know and Do* (Council for Exceptional Children, 2009). Course objectives cover: (a) the history and theory behind collaboration, (b) communication skills for working with families and professionals, (c) relationship building with families, (d) ethical practices, (e) team roles and responsibilities in planning an individualized education plan, and (f) collaborative teaching techniques including instructional delivery, planning, and assessment. Assignments for the course included attending a school team meeting, periodic reflective journal entries, and interviewing a parent of a child with a disability.

Participants

Purposeful sampling was used. Twelve participants volunteered: 11 females and one male. All participants agreed to submit their assignments for analysis, and five agreed to conduct a post-course interview. The gender breakdown reflects the overall breakdown of men (12%) to women (88%) in this distance education undergraduate special education program. Participants' ages ranged from 24 to 55 years. All of the participants could be considered nontraditional undergraduates (National Center for

Educational Statistics, 2003). The majority of participants currently worked as paraprofessionals; the target population of this federally funded grant program for teacher certification through distance education in special education. The remaining participants completed their field placement through a practicum arrangement. Three participants worked in elementary settings, four worked in middle schools, and five worked in high schools. Fifty-eight percent worked in urban school districts while 42% worked in rural districts.

Participants reported working in a variety of special education program models. Four participants taught in a co-taught/collaborative classroom, four taught in a resource setting, three worked in an inclusion class, and one participant taught in a self-contained class. Therefore this sample offered a diverse range of educational experiences (e.g. elementary, middle, and high school) in a variety of program settings (e.g. co-taught, resource, self-contained) within diverse school districts.

Data Collection

Multiple data collection methods were used during the semester. Documents collected for the study included: reflective journals (5 per participants), a team meeting observation assignment, and a parent interview assignment. The semi-structured post-course interview protocol consisted of questions about participants' perceptions of collaboration, their beliefs of their self-efficacy in collaboration; and attitudes about experiences with collaboration now and in the future. Interview transcripts from five interviews lasting 21-46 minutes were analyzed. Prior to data-analysis, transcripts were given to participants for member checking (Brantlinger et al., 2005; Marshall and Rossman, 2006).

Data Analysis

Data were analyzed using a seven-phased inductive approach (Marshall & Rossman, 2006). For each piece of data, initial coding consisted of creating *in vivo* codes, or codes containing verbatim utterances from participants. These were then reviewed and compared across multiple pieces of data and multiple sources resulting in the identification of themes on collaboration for these pre-service teachers. Coding was checked for substantive significance (Patton, 2002) and triangulation across participants and documents before final themes were determined.

Findings

Data analysis of 84 assignments and interviews revealed five themes related to collaboration among teachers: (a) defining collaboration, (b) outcomes of collaboration, (c) collaborative behaviors among teachers, (d) challenges to collaboration, and (e) preparedness to collaborate. Contained within themes were data categories as shown in Table 1 that more precisely describe commonalities from the data. The most salient categories will be discussed.

Defining Collaboration

How someone defines collaboration suggests their beliefs about collaboration as a professional skill and their expectations of how collaboration should work. Participants primarily defined collaboration in one of two ways a) as people coming together to resolve differences or b) as people working together towards a common goal. The participants who described collaboration as *blending differences* expected that collaboration would include different ideas and opinions. For example, Angela wrote, *Often times, you will have to bring your different opinions together in order to make a decision about something. Sharing these ideas and coming up with something that works for everyone is a great example of collaboration at work.* Lillian commented, *Each teacher who sees a particular student may see different facets of his/her personality, different strengths and weaknesses and different ways to reach him or her.*

Secondly, some gave *working together* as the definition of collaboration. Anne stated, *To me, collaboration is when two or more people work together towards a common goal, by sharing ideas with each other that could be used to assist them in reaching their particular goal.* Rhonda provided a school example to illustrate her definition of collaboration: *I work with several teachers at school to help our students understand concepts being taught and helping student reach their goals. We work as a team to accomplish this.* In contrast with the category *blending differences*, these participants' definitions described collaboration as people who are in agreement or are on the proverbially *same page* with each other about a decision. These definitions did not suggest differences of opinions sorted out by collaboration.

Table 1 Themes and Categories about Collaboration

Code Theme	Categories Included	Frequency
Definitions of collaboration	Working together	21
	Blending differences	11
	Collaboration is common	9
Outcomes of collaboration	Positive outcomes	21
	Student success	19
	Extra attention	6
Collaborative behavior between teachers	Shared professional responsibility	29
	Co-teaching models	20
	Teacher behaviors	13
	Shared planning	10
	Shared resources	9
Challenges to collaboration	Power	44
	One teach one assist	25
	School-wide recognition of collaboration	17
	Time/schedule	12
	Failure to share responsibility	9
Preparedness	Belief in performance	30
	Critical look at collaboration	29
	Coursework	14

Outcomes of Collaboration

When individuals combine their knowledge and expertise, a positive and pleasant learning environment will be created for all to learn and be successful in the school setting. (Tanya)

Participants believed that *student success* was achieved through collaboration. Anne wrote, *The better the collaboration is among its members, the more successful the school district. Furthermore, the students will be more successful.* Tanya declared, *Collaboration should be a process of giving and taking for a child to learn and succeed academically.*

Besides student success, participants believed that collaboration meant *greater academic assistance* for students in the classroom. Two teachers could deliver more individualized support to an individual student in their classroom. Roger commented, *More students are reached and given the free appropriate education they deserve. Students that are not reading at grade level or students having a difficult time with the school life are helped.* Isabelle wrote, *In a collaboration classroom the students have not one teacher but two teachers to ask for assistance.*

Collaborative Behavior between Teachers

Participants described teachers' behaviors in school settings that to them exemplified positive effective collaboration. Participants voiced that teachers and other school professionals who were collaborating did so by *sharing professional responsibility*. This category included descriptions of teachers making commitments: to jointly educate students, to jointly prepare and present information on students in meetings, and to jointly uphold each teacher's unique responsibilities for a student. Participant quotes suggested that with shared professional responsibility students with disabilities belong to both teachers. For example, Angela, when discussing her own performance in the classroom stated, *I work in three different inclusion classes during the day, and in all three classes there is rarely a time when I can sit down. Both teachers are constantly helping students.* Tanya's journal entry included a classroom exemplar of sharing professional responsibility:

One teacher was going over the vocabulary words that were on the board. The other teacher made sure the students were writing the terms and knew how to pronounce and define each term. The special education teacher could break the terms down so that the special needs students could understand the work. The teachers also distributed graphic organizers to the students that had problems with writing. Both teachers cared about all of the students.

Participants also noted that shared professional responsibility was at work when teachers met informally to problem solve about a student or when they met in a more formal context such as an IEP meeting. Shared professional responsibility for students was considered a positive representation of collaborative

behavior between teachers.

The majority of the participants reported that *co-teaching models* were in use as the primary instructional delivery model in their settings. Comments described observing and utilizing four co-teaching models with general educators in classrooms settings. The most common co-teaching model reported, one teach-one assist, was associated with challenges in the collaborative partnership between teachers and therefore will be discussed under that theme. Participants reported seeing: a) parallel teaching, where the group of students are split and taught the same content; b) one teach and one remediate, where one teacher provides main instruction and one provides individualized help; and c) team teaching, where both teachers are actively teaching and supporting throughout the lesson. Participant comments on these models focused on classroom examples. Roger wrote, *The special education and regular education teacher are actively involved in the co-teaching model. They decide what strategies to use and who will teach each part of a lesson. Some days involve flip flopping each period on who's teaching.* Tanya reported seeing, *One such good partnership was in a biology classroom; a regular education and special education teacher were working together. The two teachers taught like wrestlers. They worked like a tag team.*

An additional positive tenet of collaboration was identified as teachers who *shared planning time and resources* in order to educate students. Participants wrote of teachers swapping instructional activities, and mapping curriculum as a collaborative effort. One participant noted that she provided her general education partner materials for a student behavior plan. Angela commented on the outcome of shared planning and resources: *Since the general education and special education teachers plan together on a weekly basis, it eliminates the possibility of the special education teacher feeling like an outsider or intruder in the general ed [sic] teacher's classroom.*

Challenges to Collaboration between Teachers

This theme contained the highest number of quotes from participants. Increased reference to challenges may have been influenced by course assignment guidelines in which participants were ask to think critically about collaboration in their schools. The participants witnessed some challenging situations while other situations directly involved the participant as a collaborator. The most salient categories under this theme were: power, one teach-one assist, and school-wide recognition of collaboration.

With increased collaboration in schools and higher percentages of teachers co-teaching, teachers now experience different *power dynamics* in the classroom. This category of codes describes participants' reactions to unequal power between teachers. Frequently, participants described co-teaching arrangements where power was a problem. Gail reported on a co-teaching pair she witnessed:

From what I have observed, the general education teacher is the primary teacher, and the co-teacher tries to step in and help explain to the students different ways to measure angles, and chimes in to help answer questions, etc. The general education teacher is obviously bothered and somewhat *put out* by the co-teacher. As a matter of fact, four or five weeks ago, she pulled him aside and told him that he was being much too loud in her classroom. Furthermore, she mentioned to him that he needed to be quiet during her lecture. He was highly offended by her remarks, and went and sat in the back row of the classroom.

Teachers who were not willing to relinquish power and control were seen as very difficult to collaborate with. Diana reported, *She (the general education teacher) definitely demonstrated it was a big power thing. She didn't like the fact that I wanted to go in there and teach the class.* Lastly, Mary Ann offered her opinion on this challenge: *It (co-teaching) is more about a power play and showing who has more control than the other one. Power and control is not why I want to be a teacher.*

Next, participants' descriptions highlighted challenges of the co-teaching model, *one teach- one assist*. Typically in this model, the general educator provided the majority of instruction while the special educator assisted students. For example, Angela wrote, *Co-teaching means that two teachers work together as two teachers in one classroom, not a teacher and a secretary.* Overall participants expressed dislike for the one teach- one assist model of co-teaching that they witnessed and participated in at their schools. Some reported that this was the most prominent model in their school such as Lillian who said, *What they call co-teaching is basically either using the special education teacher as a paraprofessional or using the special education teacher to run from one class to another.*

Finally, participants reported that when *school recognition of collaboration* was lacking, the ability to collaborate was challenged. This challenge included the administration having a narrow view of collaboration, such as accepting the one teach one assist model of co-teaching as the primary model of instructional delivery in co-taught classrooms. Mary Ann commented on this challenge: *At the school I work at I often here [sic] the term inclusion/collaboration but I do not feel that is being done the way I have been taught... and read about in different textbooks and articles.*

Preparedness to Collaborate

According to Bandura (1997) self-efficacy is a social cognitive theory that posits that a person's belief in their performance influences their actual performance and their ability to attain certain outcomes. These beliefs influence a person's course of action and their perseverance when faced with challenges. It is a relationship between belief of performance and attainment of desired outcome. Those who believe they will be successful are successful; as are they more determined, more resourceful, and less discouraged (Bandura). For collaboration in particular, participants' *belief in their collaborative skills* helps to situate the learning they did in their coursework and their school settings.

In this category quotations from participants described their personal evaluation of their performance during a collaborative event in their school setting. The evaluation was most often positive in nature and connected to an experience where the participant was satisfied with the outcome of the collaboration. Ten out of 12 participants noted their beliefs in their performance at least one time throughout their coursework, and several included their beliefs in their ability to collaborate across multiple assignments. Several participants commented on their performance within a formal meeting. For example, Rhonda wrote, *It was good that I attended this meeting because I played an active role in the decision making process.* In addition, Barbara said, *I was able to be an active participant of this meeting when she (the mother) brought her concern about the lunch line.*

Participants remarked on instances where their experiences led to better collaboration. When describing a co-teaching situation in which the participant and the general education teacher were struggling to work together, Roger noted his course of action: *After a couple of days with no improvement, I decided to use the valuable information I learned in my college textbook and put consultation service to work. Later in his writing, Roger commented that, having this experience gave me a great deal of confidence in the collaboration process.*

Not all participants' personal evaluations were positive. After an intensive meeting with parents where the parents and school expectations did not match, Rhonda felt defeated by the collaboration process: *Looking back at the meeting, I felt as though all of us failed the child. We gave into the parents' demands.* Anne described a situation in which while acting as a paraprofessional in the special education teacher's classroom, she was subjected to aggressive arguments from the lead teacher in the room. She chronicled a pattern of behavior in which when frustrated the teacher would yell at her and at students. In thinking back on her behavior, Anne is clearly disappointed in her collaborative performance, *I was wrong for not taking the proper steps to confront the conflict occurring in the classroom. I should have demanded respect for myself and the students; instead I engaged in avoidance.*

Discussion

Findings suggested differences in how these pre-service special educators defined collaboration. The distinction becomes interesting when considering the number of challenges between collaborative members that participants identified. If conflict within collaboration is seen as negating collaborative efforts, then participants are at risk of taking an unrealistic definition of collaboration into the school environment. Friend and Cook (2009) warn, *both conflict and resistance are natural occurrences in collaboration, but depending on your response to them, they can either enhance collaboration or impede it* (p.290).

According to these pre-service educators, collaboration between teachers led to increased student success. In addition, when a general education teacher and a special education teacher worked together, more individualized instruction and increased academic support were provided. Although participants' expressed the belief in collaboration to produce this outcome, they made few references to specific instances in which a collaborative teaching team made instructional modifications or provided additional assistance to students. More importantly, the evaluation of student success was never mentioned in their writings. In other words, these pre-service teachers believe that collaboration produces increased student success but are not reporting evidence that this outcome occurs, or that it is being measured at their

schools. Murawski and Swanson's (2001) meta-analysis of co-teaching yielded little evidence of co-teaching increasing student success. With special education demanding evidence-based practices to be used in classrooms, it remains unknown as to whether collaboration between teachers, often demonstrated through co-teaching, affects student achievement.

Perspectives of collaborative behavior between teachers partially coincided with Friend and Cooks' (2009) defining characteristics of collaboration: a) collaboration is based on mutual goals, b) collaboration depends on shared responsibility, c) collaborative partners share resources, and d) collaboration includes shared accountability for students (pp. 9-11). Participants felt that collaboration occurred when teachers performed behaviors such as sharing resources and professional responsibility in order to teach all students. However, Friend and Cook's first tenet of collaboration, that it is voluntary, was not identified as part of the collaborative paradigm by participants. This may be due to the role these pre-service educators played at their school, either acting as paraprofessionals or as student interns, which may not have allowed them access to how collaborative partnerships emerged. The research has emphasized that voluntary collaboration, particularly with co-teaching, is fundamental to the success of the partnership (Mastropieri et al., 2005; Scruggs et al., 2007).

Most frequently noted in assignments and interviews, were challenges to collaboration. When discussing collaboration between teachers, the unwillingness of two teachers to share space, instructional responsibilities, and students was seen as representing a power struggle among the educators. Some general education teachers were presented as demanding that special educators assume a submissive or *back seat* role in class. Difficulties in negotiating power within the co-teaching relationship are well documented (e.g. Keefe et al., 2004; Mastropieri et al., 2005; Walsh & Jones, 2004). In addition, participants saw that the overuse of the one teach-one assist model of co-teaching perpetuated the power differential between general educators and special educators. Based on their reactions, it may be prudent to remove this model from the co-teaching paradigm, instead focusing on models that by the very nature of the environmental arrangement suggest a more equal power dynamic. For example, in parallel teaching, each teacher takes a heterogeneous groups of students and teaches the same content to their group. This requires active teaching and preparation for both co-teachers.

Finally, participants reported that after completing coursework they felt prepared to collaborate and confident in their ability to do so in the future. They reported positive self-efficacy beliefs around collaboration. Reflecting about collaboration resulted in their being more aware of the collaboration around them, and more apt at critically assessing collaborative work. These findings support that coursework in collaboration prepares pre-service teachers for the collaborative aspects of their profession. Yet, due to these participants providing vague and general answers about the skills they learned throughout the course and applied in their school settings, this interpretation should be cautiously adopted. Rarely mentioned by participants were any of the specific nuanced skills necessary for effective collaboration (i.e. problem solving models, conflict resolution, and meeting agendas).

Limitations

Generalizability of the findings reported here is limited by the unique small sample and focused geographical location (i.e. southeastern United States). However, this limitation was minimized by participants' varied placements along the continuum of special education service delivery models, grade levels, and classification of school district (i.e. urban). This research provides a specific building block to the greater understanding of collaboration as a professional practice of special educators. Case studies can be considered as a whole to develop consistent themes or ideas about a topic (Flyvberg, 2006) and generalizability is achieved when readers for whom the topic is of interest are offered a detailed description of the findings as those reported herein (Merriam, 2002). A second limitation was my dual role as both instructor of the course and researcher of this study. Although my students were guaranteed verbally and in writing that their responses would in no way affect their performance in the class, my holding this position of power may have caused students to be more guarded and less candid in their responses. This was minimized through the use of grading rubrics and member checking.

Implications for Practice and Research

The research questions answered here may be of particular importance to countries newly including students with disabilities in typical school settings for example, Cyprus (Bekirogullari, Soyuturk, & Gulsen, 2011), and currently developing policies for training and teacher preparation. First, teacher preparation in special education should provide training in both the pedagogical knowledge around collaboration and the pedagogical skills necessary to collaborate. Second, the design of collaborative

training should be considered carefully. Recommendations from the literature include a growing research base on collaborative cohorts of general and special pre-service educators who complete coursework and field placements in matched pairs (Griffin & Pugach, 2007; Van Laarhoven et al., 2006; Ross, Stafford, Church-Pupke, & Bondy, 2006; Smith, Frey, & Tollefson, 2003; Villa, Thousand, & Chapple, 1996; Kamen, 2007). Van Laarhoven et al., (2006) used both a shared curriculum as well as shared field experiences for 84 special education and general education students, and compared their experiences to a control group of student teachers taking course work alone. Longitudinal outcomes favored the group of teachers who had completed field experience and practiced planning and presenting a co-taught lesson. These teachers reported feeling that the training they received improved their ability to collaborate with other school professionals. Using this type of model for the training of collaboration may promote the learning of the nuanced collaborative skills that these participants did not discuss after coursework alone.

Third, the content of the training should be considered. These participants' overwhelming representation of challenging experiences in collaboration highlight the need for teacher preparation to focus on conflict and its resolution as a key skill when collaborating with other school professionals (Bradley & Monda-Amaya, 2005; Gallagher et al., 2008). Power struggles in the classroom between teachers were strongly implicated as a challenge to collaboration. Disagreements were seen as detrimental to collaborative practices, and not as a naturally occurring part of collaborative events. Participants rarely reported constructive conflicts in which, *a problem is solved, when the relationship among those involved is strengthened, and when the people involved increase in their ability to resolve conflicts in the future* (Villa, Thousand, & Nevin, 2004, p.98).

Lastly, coursework on collaboration should emphasize positive student outcomes as the result of collaboration between school professionals and between schools and families. Educators' beliefs that collaboration, and specifically co-teaching, is beneficial to the students does support inclusion of students with disabilities in the general education classroom. Teachers must be trained on how to document students' academic and behavioral progress so that the effects of their collaboration are empirically noted. Models of student progress monitoring emerging from the Response to Intervention initiative could be used to document the affect of teacher behavior on student growth. Activities and assignments should be designed wherein the types of instructional strategies, adaptations to curriculum, and use of accommodations are paired with ongoing data collection. Collaboration skills training needs to expand to consider the collection and use of data in planning instruction and designing materials by both special educator and general educator, as well as the sharing of this information with parents.

Lastly, this study explored the link between pre-service special educators' experiences with collaboration and their perceived self-efficacy of future professional practice. Expanded research on the construct of teacher efficacy should include collaborative behaviors and scenarios between teachers. Gibson and Dembo (1984) found that teacher beliefs in their ability to promote learning in students despite mitigating challenges conformed to Bandura's (1977) theory of self-efficacy. Teachers who believe they have the skills to promote positive learning experiences structure their classrooms differently than teachers who have low efficacy beliefs (Allinder, 1994; Gibson & Dembo, 1984, 1985) and are less susceptible to teacher burnout (Brouwers & Tomic, 1999). Evidence shows that teachers with high efficacy rates have better performing students (Bandura, 1997). Teacher efficacy has traditionally been examined using rating scales developed around student-centered events. Bandura (1997) recommended, *the assessment of teachers' perceived efficacy should be broadened to gauge its multifaceted nature* (p. 243). New developments in measuring this construct which include statements regarding teachers' beliefs in their collaborative skills would succeed in diversifying the many roles and responsibilities of a teacher in today's classroom and provide a more comprehensive view of this social learning construct. The findings presented here could aid in the construction of such a measure.

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REHABILITATIVE LEARNING: EDUCATION DURING PSYCHIATRIC HOSPITALIZATION

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This article presents a case study of a school designed for youth hospitalized for mental disorders, aiming to reveal the educational approach of such a school, a topic on which nothing has been written so far. The study, which lasted a year, employed qualitative techniques: observations, document collection and interviews. The study has found that the school not only provides education to the hospitalized youth, but also functions as an active factor in expediting their recuperation. This significant educational approach is composed of five main principles: (1) Maintenance of a normative atmosphere, (2) Providing the students with a feeling of personal value, (3) Students' responsibility for recovery, (4) Staff's containment of students, and (5) Flexibility. This approach actually endows new meaning to learning, considering it a rehabilitative process.

Introduction

Charting an educational pathway for a school of youth hospitalized for mental disorders is challenging. Mental disorders are usually disruptive to scholastic performance: naturally, students who suffer from mental disorders such as mood disorders, anxiety disorders, eating disorders or personality disorders, are not emotionally available for learning, and find it difficult to function as students. All the more so when it comes to cases of severe and persistent mental disorders, where hospitalization is required and maximum attention is given to treatment, while education is considered to be less important at this point.

This article aims to reveal the educational approach of a school designed for youth hospitalized for mental disorders. Thus, this article will describe and define the educational concept applied at the Ziv School, which recently won the District Education Award of the Israeli Ministry of Education. Ziv School is situated within the Ziv Medical Center, which is located in the Israeli northern city of Safed. The hospital, a government medical center founded in 1910, currently containing about 300 hospital beds, serves residents of Safed and the surrounding communities. Among a variety of units and wards, there are also mental health in-patient departments and out-patient clinics. Ziv School is designed for youth hospitalized in the in-patient (closed) youth psychiatric department.

Ziv School was founded in 1995, when the youth psychiatric department of Ziv Hospital was opened. The school has a team of forty teachers, including secondary school teachers, special education teachers, therapists and assistants. The number of students, which is constantly changing, ranges from 20 to 30. Most students are aged 12 to 18, although some older, and most students have attended a school before hospitalization, although some have not attended on a regular basis. The students' academic level is very diverse, and period of stay of a student at Ziv School is not predictable – from a few days to many months. Some students are hospitalized against their will, under order of a judge, and sometimes there is only partial contact with students' parents. The school runs six days a week, throughout most of the year. There is no data on number of students who reconnected with previous school successfully following treatment.

The educational approach of schools designed for youth hospitalized for mental disorders is a topic on which nothing has been written. One may hypothesize that this lacuna reflects the insufficient attention given to the question how we can better normalize the inpatient experience, as well as youth's transition from treatment back into the community. This article aspires to contribute to the evolving knowledge in this field.

Background

Mental disorders

What is a mental disorder? Apparently, the answer should be found in the Diagnostic and Statistical Manual of Mental Disorders (DSM) which aims to provide a common language in, and standard criteria for, the area of mental disorders. However, the DSM itself emphasizes the difficulties involved in accurately distinguishing between normality and psychopathology. Different situations call for different definitions, thus the concept of a mental disorder cannot be easily or precisely defined. The DSM-IV (American Psychiatric Association, 2000) defines a mental disorder as a clinically significant behavioral or psychological syndrome or pattern, which is associated with present distress or disability or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. DSM-V (American Psychiatric Association, 2013) defines a mental disorder as a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation or behavior that reflects a dysfunction in the psychological, biological or developmental processes underlying mental functioning, usually associated with significant distress in social, occupational, or other important activities.

According to the DSM there are hundreds of mental disorders, although some have criticized it for creating too many diagnostic categories (Van-Praag, 2000). The more common types of mental disorders are various types of depression and anxiety, which cause appreciable emotional distress and interfere with daily functioning, though usually not affecting insight or cognition (McManus, Meltzer, Brugha, Bebbington & Jenkins, 2009).

The World Health Organization (World Health Organization, 2000) considers the mental disorder category to be one of the most burdensome of all classes of disease, in part because of its high prevalence: over a third of people in most countries report, at some time in their life, of encountering problems which meet the criteria for the diagnosis of one or more of the common types of mental disorders. In Australia about 45% of adults will experience a mental illness at one stage or another (Australian Bureau of Statistics, 2008), and about half of all USA residents will meet the criteria for a DSM-IV disorder sometime in their lives (Kessler, Berglund, Demler, Jin & Walters, 2005).

Mental disorders among adolescents

Mental health is essential for normal adolescent development, and when the mental health of adolescents is affected, the adolescents themselves, their families, their communities, and society as a whole carry a heavy burden (Kapphahn, Morreale, Rickert & Walker, 2006). Researchers have found that approximately 20% of adolescents across the globe suffer from a disabling mental illness (Belfer, 2008). Depressive symptoms are common in adolescents: over 9% of adolescents in U.S. reported depressive symptoms (Rushton, Forcier & Schectman, 2002), and suicide is the third leading cause of death in adolescents, affecting all ages, races, genders and socioeconomic groups, although some groups seem to have higher rates than others (National Adolescent Health Information Center, 2006).

Mental disorders are often lifelong illnesses that begin in childhood or adolescence. Up to 50% of all adult mental disorders have their onset in adolescence (Belfer, 2008; Kessler, Berglund, Demler, Jin & Walters, 2005). The onset of mental disorders at an early age is one of the reasons the World Health Organization considers mental disorders among the most burdensome of all types of diseases (World Health Organization, 2000).

The prevalence of mental disorders in adolescence has been increasing with each successive generation. A major factor which might explain this is that adolescence is now a longer period of time than it was in the past: puberty has been occurring progressively earlier, particularly in developed countries, and at the other end, full-time work and marriage now occur later in life (Parent et al., 2003). Other changes have also taken place over time in the nature of adolescence, and the environments in which adolescents find themselves may also be responsible for this (Evans et al., 2005).

Hospitalization for mental disorders

A common form of treatment for many mental disorders is psychiatric medication. Psychotherapy is also widely used. In some cases, usually in those of severe and persistent mental disorders, hospitalization is required. Modern mental hospitals have evolved from, and eventually replaced, the old lunatic asylums, where treatment was brutal at times, and focused on containment and restraint (Porter, 2006). Several decades ago, psychiatric patients were often hospitalized for extended periods of time, sometimes even for many years, while currently people receiving psychiatric treatment are more likely to be seen as

outpatients. However, in recent years hospitalization rates among teens in the United States have increased, going from 683 per 100,000 in 1996 to 969 per 100,000 in 2007. During this period of time hospitalization rates among adults have increased at a slower pace, from 921 to 995 per 100,000. Among the elderly the rate has declined, going from 977 to 807 per 100,000 (Blader, 2011).

Focusing on adolescents, James, Clacey, Seagroatt and Goldacre (2010) found that hospitalization rates in England have increased substantially with increasing age, from 20 per 100,000 per year aged 10 years to 220 per 100,000 aged 19 years. In Israel the average number of youths (age 12–17) hospitalized between 1998 and 2007 per year was 620 (of about 700,000), of which 80% were hospitalized voluntarily, while others' hospitalization was compulsory. Of those 620 patients, 330 were males and 290 were females, and the average length of stay was 90 days (Israeli Ministry of Health, 2009).

Hospitalized students' absence from school

Students hospitalized for a long period of time face not only the challenge of their mental health but also an educational challenge, as their extended absence from school usually involves the loss of important educational material and disengagement from the school community. Lindsey (1981) has studied a homeroom teacher's preparations for her pupil's hospitalization, noting that the teacher can help the child enter the hospital by preparing him or her for the anticipated period of absence through coordinating assignments with the hospital teacher, if any, as well as providing support for the parents. Lian and Chan (2003) identified the interruption of the pace of academic study as one of the major concerns of hospitalized children and their parents, and have thus provided recommendations for hospital schoolteachers.

To deal with hospitalized students' absence from school, Nisselle, Green and Scrimshaw (2011) described the learning opportunities that can be fostered within a hospital, highlighting how pedagogy may be apparent in a children's health setting as, for example, by displaying learning artifacts and holding dynamic learning activities on the premises, claiming that out-of-school learning environments such as hospitals provide opportunities for maintaining children's learning identities during absence from school.

Nisselle, Hanns, Green and Jones (2012) also described the use of laptop computers by hospitalized children and young adults, arguing that this technology could provide access to flexible learning and socializing opportunities for inmates. Cashin and Witt (2010) have examined the use of the Starbright World Program in a pediatric hospital. This program is an online social network for teens with life-threatening or chronic medical conditions through which they can connect with each other. The researchers have found that this program can be a beneficial addition to the services provided to pediatric patients, aiming to give them as many normalizing experiences as possible.

Re-entering school

Reintegrating into school after a lengthy absence is not easy. Researchers have engaged in examining this difficulty in various contexts, such as those of juvenile offenders (Goldkind, 2011; Toldson, Woodson, Braithwaite, Holliday & De La Rosa, 2010) or dropouts (Berliner, Barrat, Fong & Shirk, 2009; Brown, 2010; Whannell & Allen, 2011). In our case we are dealing with reintegrating into school after a long period of hospitalization.

Badger (2008) has provided a model which school social workers may use to facilitate the return from hospital to school of elementary school children whose appearances have been significantly altered as a result of illness or injury, by preparing classmates for the pupil's return. Shaw and McCabe (2007) have dealt with children with chronic illness, and noted that traditional plans for smoothing the transition from hospital to school may no longer be effective, since medical services have changed and now tend to reduce long-term hospitalization while instead increasing outpatient care. They describe the needs of the children concerned, as well as current hospital-to-school transition programs suited to the current health care system.

Focused on psychiatric hospitalization, Clemens, Welfare and Williams (2010, 2011) have found that reintegrating into school after discharge from psychiatric hospitalization can be overwhelming for many adolescents. Academic, social and emotional issues emerge as important areas of concern prior to and during the psychiatric-hospital-to-school transition. By interviewing mental health professionals regarding catalysts and hindrances to successful school reintegration of adolescents after

psychiatric hospitalization, they have come up with recommendations for educators and parents.

Ganz and Pao (1978) recommend that students hospitalized for psychiatric disturbances be allowed to re-enter school as soon as the acute illness stage has passed, since leave of absence following hospitalization does not ensure better re-adjustment. Simon and Savina (2010) have examined the role of special education teachers in the process of transition from psychiatric hospitals to schools, and found that the majority of special education teachers reported active involvement in the transition process through contact with parents and hospital personnel. They also presented reports about behavior problems upon children's return to school, and provided implications for research, training and practice.

Education of adolescents hospitalized for mental disorders

To avoid prolonged absence from the educational system of youth hospitalized for mental disorders, and to eliminate the need for re-integration, youth psychiatric departments sometimes run schools in their proximity. These schools are faced with several significant challenges. The main challenge lies, of course, in the fact that all the students have mental disorders. However, there are additional challenges, such as unusual differences between the students in age, culture, academic level and even language, constant changes in student body composition, and the sometimes-insufficient contact with students' parents. Ways of coping with these and other challenges are varied.

To date, no research has explored schools designed for youth hospitalized in psychiatric departments. The goal of this article is to describe a successful educational approach for such schools through the model of the Ziv School, situated within the youth psychiatric departments of Ziv Medical Center in Safed, Israel. As the approach implemented in this school has been found to work exceptionally well, this study describes, defines and conceptualizes its educational credo.

Method

Data collection

The case study strategy has been chosen for this research as it consists of an intensive analysis of what Stake (2008, p. 120) calls a *bounded system*, typically one of interesting and unusual circumstances, within its real-life context. One might figuratively say that a case study is like a detective story or a puzzle that has to be solved: it describes a situation to be understood by analyzing the information provided within it. Using Thomas' (2011) understanding of the terms 'subject' and 'object', the subject of this case study is Ziv School, through which the study's object, i.e. the educational approach of such a school, could be revealed and explicated.

Case studies usually involve a longitudinal examination of a specific case. The study presented here lasted one year, during which visits were made at the youth psychiatric department of Ziv Hospital at least three times a week, and usually four to six times a week, for at least two hours each time.

Case studies are not always necessarily qualitative; however, in our present case study, qualitative tools and techniques have been employed, due to their ability to provide rich descriptions and deep comprehension of a given phenomenon. As such, this research aimed to provide in-depth explanations of the characteristics of a specific situation, while taking into account its subjective meaning to its participants, being attentive to what they were experiencing at the moment. In qualitative research personal acquaintance with the subject matter is an advantage.

The main tool used here is participant observation, which consists one of the most common methods for collecting qualitative data. The observations' aim was to gain a close and intimate familiarity with a given group of individuals through intense involvement with them over a long period of time. This type of research requires the researcher to immerse him-or-herself in the activities and lives of his or her research subjects, while at the same time maintaining the professional distance necessary for adequate and objective recording of data. In this study the observations included many activities – all activities that comprise the school routine such as lessons, breaks, meetings, discussions, conversations, examinations and ceremonies. Life at the department was also observed as a whole, including components such as therapy meetings, dormitory routines and doctors' visits.

In addition, related documents were read, such as pupils' notebooks, the school's annual work plans, and publications for the internal and the external public, both printed and online. Interviews were held as well: both unstructured interviews, which were informal conversational encounters, and semi-structured interviews with specified themes to be explored, though they were still quite flexibly composed. The interviewees included school staff members, such as the school principal and teachers; psychiatric

department staff members, such as psychiatrists and therapists; and also pupils and their parents.

Data analysis

In this research data analysis has been done through four stages: condensing, coding, categorizing and theorizing. The first stage of data analysis was condensing, as explained Miles, Huberman and Saldaña (2014): *Data condensation is not something separate from analysis. It is a part of analysis. The researcher's decisions – which data chunks to code and which to pull out... are all analytic choices* (p. 12). In this stage portions of data, which in any way reflect the school's educational way, were sought. The second stage of data analysis was coding. In this stage each segment of data was marked with a code – a word or a short phrase that symbolically represented and captured one aspect of the school's educational way it expresses. To obtain intra-coder reliability (Altier, Horgan, & Thoroughgood, 2012), the data were coded at two different occasions, to ensure consistency. The third stage of data analysis was categorizing. After capturing the essence of segments of data in the previous stage, this stage clustered them together according to similarity, in order to generalize their meanings. Segments of data were grouped and regrouped together when their codes had something in common until satisfactory categories emerged. The fourth stage was theorizing, aiming to transcend the categories toward a conceptual construct.

Triangulation is a powerful technique that facilitates validation of data (Bogdan & Biklen, 2007). In this study we used two kinds of triangulation: data triangulation - findings considered as based when they were found in at least three antecedents; and methodological triangulation - using three different qualitative methods to study the research topic: observations documents and interviews were compared to see if similar results are being found. It should be noted, that the goal of the triangulation was not to arrive at consistency across data, because inconsistencies should not be seen as weakening the evidence, but as an opportunity to uncover deeper meaning in the data (Patton, 2002). Moreover, a member check was conducted with all the participants to evaluate the soundness of the data (Holloway & Wheeler, 2010). Transcripts were sent back to a quarter of participants, requesting that they evaluate their responses to the interview questions and, if needed, add or refine their responses. Only two interviewees changed their answers, clarifying their remarks and adding things they forgot to say.

Findings

Data analysis yielded five main principles that compose the educational approach of Ziv School: (1) normative atmosphere, (2) personal value, (3) responsibility for recovery, (4) containment, and (5) flexibility. The subsequent sections will explain and demonstrate each of these principles.

Normative atmosphere

Ziv School believes that inmates' mental health is enhanced by attending school. Hospitalization in a psychiatric department creates an uneasy feeling of being non-normative, and since the act of going to school is an expression of normative behavior, it strengthens one's feeling of being normative, which is both relaxing and healing.

In consistence with this belief, one of the major ways in which Ziv School strives to maintain a normative atmosphere is by connecting students to the normal rhythm of life through extra emphasis on preparing for and celebrating holidays. People who are hospitalized are naturally cut off from the outside world, and do not necessarily remember if or which holiday is coming up. Therefore reconnecting them to the large social collective to which they belong by emphasizing holidays and commemorative events means much more to them than to ordinary students or citizens. Thus, in Ziv School much attention is given to preparation for and celebration of holidays (respecting all students' religions) as well as observance of memorial days. These festive occasions are prepared for well in advance with the participation of all students, while medical staff is invited to take part in celebrations or ceremonies.

Along the same lines, the conclusion of the school year is celebrated with all due ceremonial detail, even though many students' entry to and exit from Ziv School do not coincide with this point in time. For most students at Ziv School, the end of the school year has no great significance, as they have joined the school somewhere along the school year, depending on when they were hospitalized, and will not complete the next school year in it. Nonetheless, Ziv School celebrates the end of the school year by holding a big party, includes all that is needed to put together a successful event, such as invitations, guests, rich refreshments and a full-length performance. This too is done with the intention of creating the feeling of a normative framework for the students.

From a broad perspective, Ziv School's goal to create a normative atmosphere is fulfilled predominantly by its emphasis on studying. The natural tendency regarding youth suffering from mental disorders is to reduce demands and pressures which might cause them further distress, and therefore minimize learning requirements until after recovery, while focusing on recreational activities, aiming to relieve boredom and provide fun. Ziv School holds a different and original viewpoint, claiming that studies create a feeling of being normative, thus contributing to inmates' wellbeing much more than various sorts of alternative activities. For this reason Ziv School seeks to maximize students' regular learning. Students' difficulties are to be considered, but it is important to get the students to learn as much as possible.

The subjects taught in Ziv School reflect this approach: not only fun subjects, such as drawing, music and games, but also mathematics, languages, civics, geography, history, Bible and literature are taught, as these are subjects that normative students of this age study. There is also a variety of art lessons, which are given not for their fun value but rather for the healing power of creative activity. Furthermore, Ziv School even encourages its students to take Matriculation Exams, instead of telling them, as one might expect, that due to their mental condition they should not be pressed to do them. This encouragement stems from the same viewpoint stated above, i.e., that if all students of the inmate's age group are engaged in preparations for the matriculation exams, he or she can do so too. The educational staff is composed accordingly: though being a special education school, Ziv school's teachers should seemingly be special education teachers, quite a few of them are not special education teachers but rather teachers who were trained to prepare students for Matriculation Exams, again – in order to promote the notion and feeling of normative progress. Ziv School's students are not generally expected to take the Matriculation Exams, due to their emotional conditions, and many of them actually do not, but the mere fact that there is an option to do so, and that some students do choose this option, reinforces the school's normative atmosphere.

The desired normative atmosphere at Ziv School is maintained not only through the subjects taught in it but also by its overall style of conduct, scrupulously maintaining external and technical elements such as lessons, breaks and classrooms. The state of long-term hospitalization, particularly in youth psychiatric departments, is not normative, so that maintaining a normative atmosphere at least in school increases the student's normative feeling, a feeling which supports recovery.

Personal value

Ziv School aims to facilitate its students' success, believing that the experience of success reinforces self-confidence and self-efficacy, thus supporting the recovery process. Some of Ziv School's students have experienced this feeling here for the first time in their lives, since they were used to being total failures, and having disappointed those around them they were often scolded, punished and rejected.

The most valuable success is that achieved through accomplishing normative tasks: effectively facing tasks faced by all peers creates a good feeling. For this reason, Ziv School seeks, first and foremost, to get its students to succeed in their studies. This is done by adjusting custom-made study programs for each student. There are two study tracks at Ziv – academic and vocational. Each subject may be studied on one of two levels, high or low; and each student enters the appropriate group for him or her, according to his or her level of knowledge and understanding. A teacher appointed to every single student is responsible for arranging that student's weekly schedule according to his or her needs. In addition, there are many thinking development lessons, aimed at measuring students' capabilities as well as enhancing them.

Ziv School enables its students to succeed not only scholastically but also behaviorally: a behavioral program is set for each student, with expectations according to his or her abilities, by means of which he or she can gain points and win prizes. The students make great efforts to behave well, although the prizes, which are purchased by the students themselves during shopping trips in which only well-functioning students participate, are very cheap, since what matters to the students is not the prize itself, but rather the feeling of success, which is new to many of them. The prize-buying budget comes from sales of ornaments that the students create, thus encouraging students to invest time and effort in producing such ornaments.

By employing these methods, the staff at Ziv School expresses its distinctive belief that there is no essential correlation between one's inner world and outer functioning. Even when the student's inner world is stormy or complicated, he or she can function well, win compliments and prizes, and thus improve his or her mental health.

But this is not all. Ziv School strives to create not only a feeling of success but also a feeling of value. For this purpose, the students engage in contributing to the community. Despite limitations due to their hospitalization in a locked department, the students contribute to the community in which they live through projects such as encouraging visitors to the hospital as well as patients to recycle used materials, or improving the hospital façade. A musical band of girls who suffer from eating disorders voluntarily appears in the hospital's pediatric department every week (without notifying the audience who the performers are, so that their eating disorders remain secret, of course), gaining these girls a feeling of being not only normative and successful but also valuable and significant to others. Thus, projects which are conventional for regular schools are pioneering and innovative when they take place at a school of youth hospitalized for mental disorders.

Responsibility for recovery

Aiming to encourage the inmates to take responsibility for their recovery, Ziv School's educational staff, together with other staff members of Ziv's youth psychiatric department – the medical staff, the nursing staff and the therapy staff – operate the level method, which is a fundamental methodology devised by Ziv's youth psychiatric department. According to this methodology, each inmate is assigned a certain level every week, while the possible levels range from A to E. The level chosen reflects the inmate's degree of functioning in a variety of aspects during the previous week, such as obeying the department rules, maintaining personal hygiene, respecting staff, eating properly, and avoiding violence. The level chosen implies a wide range of permits and limitations during the next week, such as places where the inmate is allowed to be – level A allows presence only in the dormitory, level B in the school as well, level C in the yard too, etc.; as for the degree of supervision required – from level B on, the inmate is allowed to leave the dormitory with only one on one supervision, while at level C the inmate may leave as part of a group too; at level D and H the inmate may go out without any supervision; as for vacations – level A allows no vacations, level B means vacation on Saturday, level C vacations continue on till Saturday night, etc.

The educational staff takes part both in determining the levels and in implementing the rights they imply. A representative of the educational staff takes part in a weekly meeting titled *levels discussion*, assembled to determine which level each inmate should get, and the entire educational staff takes part in implementing the decisions.

The logic of the level method is that the degree at which inmates function defines their degree of risk, and hence the degree of protection they require, resulting in rights such as leaving the dormitory building or being unaccompanied. At the same time, this method aims to reflect to the inmate his or her condition, and more importantly – to encourage improved functioning. The inmates gain from functioning better, and vice versa, which motivates them to take responsibility for their own recovery, because progress is in their own hands. Every week each inmate starts afresh and has a new chance to advance.

The level method actually replaces all dealings with discipline, which are usually quite a dominant part of standard school life. There is no need to preach, scold, punish or send students to the principal; the results of one's inappropriate behavior – such as impudence, vandalism or violence – are known in advance, discouraging inmates from opting for them.

Programs like the level method are used in many places, but using it among youth with mental disorders is probably quite uncommon, because their behavior is a result of their mental condition, and therefore one seemingly could not expect them to take responsibility for it. Ziv staff claims that although recovery from mental disorders does not depend solely on the patients' desire, using the level method does cause patients to take responsibility for their own progress and improve their functioning from week to week, contributing to their recovery process and accelerating it.

Containment

Ziv School's staff constantly works on containment – a psychological term which means broadening one's capacity to contain the feelings and hardships of others. The staff does its best to accept students as they are without any hint of judgment. This is perhaps the most important component in the constant professional development of Ziv School's staff.

A teacher of students with mental disorders can never know what kind of mood the student will come in with at any given time, due to frequent and radical mood swings. The teacher may be very disappointed

when, for example, he or she put much effort into preparing a certain student for a Matriculation Exam, just for the student to suddenly arrive in a bad mood and decide not to take it; or when the teacher has helped the student through a long process of creative art work, after which the student abruptly decides to throw it away. To face such challenges, the school staff must not be judgmental but accept the students as they are.

It should be noted that at Ziv School there is a clear separation between the educational and psychological realms. The teachers know that they are responsible for the learning aspect, and do not engage in discussions with students concerning their inner psychological worlds. When a student brings up a psychological issue in class, directly or indirectly, through a story or a drawing for example, the teacher clarifies that the suitable time for bringing up psychological issues is during psychotherapy meetings. Despite this separation, the teachers understand psychological terms, such as 'containment', for instance, and implement them.

Containment may seem to be a contradiction to the encouragement to function as normatively as possible mentioned above: The question arises: if you really accept the students as they are, how can you expect them to improve? However, Ziv School's staff holds the two seemingly-opposite approaches at the same time, dialectically incorporating the contrast: accept the students without judgment, and yet expect them to function better and better as time goes on.

Flexibility

The educational work of Ziv School is characterized by great flexibility, which is needed due to unceasing changes in both the students' population and their immediate needs. As mentioned above, the student population of Ziv School is constantly changing. Regular schools are usually attended by students for more than one year, whereas at Ziv School students more often than not leave school within less than one year. Moreover, quite a few students join Ziv School and leave it throughout the school year, depending on when they were hospitalized and then released, so that Ziv School's student body has little stability. In addition, each student's needs are constantly changing. The students' level of functioning, their willingness to cooperate, their moods and motivation levels rise and fall, and the educational work must be suited to these fluctuations.

The flexibility of Ziv School's educational work can be seen in the ongoing changes in each student's weekly schedule. In the beginning of each week the educator and student convene to check out the student's weekly schedule, examining which elements within it work and which do not, modifying it as needed. During the week too, the educational staff tailors study programs to students' needs, employing flexibility when necessary.

Flexibility is employed not merely as a solution to the challenge of incessant changes in students' population and needs; it is also a significant therapeutic principle. Mental disorders are often associated with rigidity, and for youth hospitalized for mental disorders it is very important to learn to be more flexible, i.e., to be able to adjust the appropriate tool or way of coping to a given situation, as well as to modify the tool from moment to moment as needed. The staff's flexibility serves as an example for the students, supporting their recovery process.

It is important to note that flexibility is not Ziv School's only guideline in dealing with its students; At certain times the opposite approach is implemented. Ziv School's educational work is thus characterized not only by flexibility but rather by a combination of flexibility and rigidity. Only after the patient has understood the framework and rules of the setting is flexibility possible. Looking deeper into this issue, it should also be pointed out that the educational approach taken towards a student depends on his or her specific condition and needs. Students with eating disorders, for example, usually suffer from excessive rigidity, and therefore need to learn to be more flexible. On the other hand, students who suffer from schizophrenia, for instance, which may experience hallucinations and delusions, need the opposite – not flexibility but rather stability and regularity. In other words, the educational approach appropriate for a student suffering from a certain mental disorder depends on his or her diagnosis.

Conclusion

Ziv School was founded with no clear guidelines from the Ministry of Education regarding the educational work of schools designed for youth hospitalized for mental disorders. There is also no existing research knowledge on this matter. The natural tendency towards youth suffering from mental disorders is to reduce expectations that might cause them further distress, minimizing learning

requirements and focusing instead on recreational activities.

Findings show, that Ziv School's educational approach is composed of five main principles: (1) maintaining a normative atmosphere; (2) providing the students with a feeling of personal value; (3) expanding students' responsibility for recovery; (4) working on staff's containment of students; and (5) taking a flexible approach. Due to this approach, Ziv School not only provides education to youth hospitalized in a psychiatric department but also functions as an active factor, together with the medical and therapeutic aspects provided by the department, in expediting its students' recuperation: thanks to its educational approach, Ziv School is a part of the student's recovery process.

Ziv School's educational approach advocates learning in a proper school as a healing activity for youth hospitalized for psychiatric disorders, an approach actually endowing a new meaning to learning, as it is considered to be a rehabilitative process. This sheds a new light on the treatment that Ziv Youth Psychiatric Department provides for its inmates: it includes not only medication and psychotherapy, but also learning at a proper school. Ziv School is not an attaché of Ziv Youth Psychiatric Department, merely responding to the need for education; in fact, Ziv Youth Psychiatric Department has two branches - the medical-therapeutic one and the educational one, both facilitating the healing process.

This study provides unique data compared to prior research; however, it has several limitations. As a case study it deals with only one school. Thus, it requires further replication elsewhere in the world, in various contexts, in order to substantiate the validity of the conclusions drawn from this particular case. Further research might also compare the educational approaches of schools for youth hospitalized for mental disorders with the educational approaches of schools or educational frameworks for youth in long-term hospitalization for other reasons. Generalization of the findings and further weighing of the most effective educational approaches for such schools may greatly contribute to the evolving knowledge in this field.

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SELECTED PRE-VOCATIONAL STUDENTS' EXPERIENCES OF SCHOOL IN BRUNEI DARUSSALAM

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There is a lack of studies on the school experiences of students in the pre-vocational programme in Brunei Darussalam. The aim of this study is find out what are the students' experiences at school, what they go through at school and so on. A qualitative approach was utilized whereby in-depth, semi-structured interviews were conducted with seven students from two local secondary schools. Some of the findings included overall positive views of school and the acquiring of daily living skills which they felt was important to them. It was found that success and happiness is associated with their favourite subjects and interests. It appeared that there is a good camaraderie between teachers and students indicating that friends and more importantly teachers play a vital role in their lives. Also, the students seem to have a strong sense of family and ambitions. The students encountered some problems related to bullying by classmates and other students and trouble-makers which affect them negatively. In addition, the students faced punishments and one student complained of negative teacher attitudes. It was concluded that lessening their problems could help make school more pleasant for them. Finally, there should be more emphasis on family involvement and that the importance of school to work transition to realise their dreams and ambitions should not be taken lightly.

Background

The pre-vocational programme in Brunei Darussalam has been implemented for just over 10 years. Though there have been some studies carried out in order to evaluate the programme as well as on the perceptions of the stakeholders involved, there has been little research regarding the actual school experiences of the students who are under the programme itself. It is crucial to know the students' thoughts and experiences of school because it is these students who are directly affected by it.

The purpose of this study aims at getting insights from the pre-vocational students themselves regarding their experiences about school which include what they learn, what they think about it and on friendship. In Brunei Darussalam, there have not been many studies done on the experiences of pre-vocational students' schooling life. By finding out their thoughts and experiences, it could be helpful in ways that may improve the students' experiences of school. It is vital to delve into the pre-vocational students' minds because it is they who are experiencing the pre-vocational programme that has been specially designed for them.

This study attempted to answer four research questions. They are as follows:

1. What do the students think about what they learn in school?
2. To what extent is their social participation in school with friends and teachers?
3. Do students have a positive view of school?
4. What abilities or skills have they acquired from their schooling?

Vocational training in other countries

Vocational training in many countries is focused on transition from school to work; it is to prepare students to work. In the US, the education system is geared to empower students with the skills needed for employment. In Finland, there is the Activity School of East Finland. According to Komonen (2002, p.45) it is defined as 'a project-type unit constructed within the framework of vocational education, in

which objectives related to education and life management are combined with the completion of a vocational qualification (as cited in Jahnukainen & Helander, 2007, p.473).

In Switzerland, according to Haefeli (2000, p.6) the predominant form of vocational education is the apprenticeship: on the job training in a firm which is accompanied by attendance at a vocational school (dual system) or by attending a vocational school and an introductory course (triad system). Similarly, in Liechtenstein, there is also a dual/triad system of initial vocational training. According to Josef, Dieter, Christoph and Karl (1997, p.13) the system is based on an interaction between practical training on the job and school lessons, which are more theoretical.

As cited in according to Fabian (2007) and Livelli (1999), due to the known positive outcomes associated with vocational training and transition planning for adolescents with disabilities, it has been hypothesized that preparation of students in the early grades for entrance into the work force when they are adults may be critical, potentially making students more likely to be productive members of society. According to Evers (1996) *...students with learning disabilities who receive some experience in vocational education or paid outside work during high school are more successful in the job market than those who had no vocational or work experience* (p.70). Additionally, Wagner (1991) stated that vocational training resulted in a compounded 8% chance of dropping out versus 15% for students who had not participated in vocational education (as cited in Jones & Williams, 2011).

Studies on the perceptions of students with disabilities on their schooling

There have been studies done on the perceptions of vocational training with parents, teachers and elementary special education students. In a study by Jones and Williams (2011) the students were asked specifically on their perceptions of the effects of their training on their knowledge, performance and self. According to the study based on Dutch primary school children, the majority of students have a satisfactory degree of social participation. However, when compared to students without special needs, a relatively large portion of students with special needs report difficulties in social participation.

Meanwhile, for students who are in secondary school, Newman (2007) has found that little is known about what (autistic) students experience in high school. Referring to the statistics from the US Department of Education, Newman (2007) stated that 77% of students with autism also take vocational courses. They are also more likely to take non-academic courses too such as Physical Education in a general education setting than to take academic or vocational courses.

The Pre-Vocational Programme in Brunei Darussalam

The pre-vocational programme is relatively new. According to Adanan and Wong (2006) the pre-vocational programme was originally designed to meet the needs of students with high support needs (HSN), but for the first few years, it was expected to be part of a rescue operation for over-aged children in primary schools. At that time, usually students who failed their primary school years were not promoted to the next year.

Wong and Mak (2007, pp. 9-10) stated:

The Pre-Vocational Programme is a programme designed to meet the needs of students with High Support Needs (HSN) in the secondary schools. The programme is designed to provide opportunities for these students with moderate to severe learning impairments to achieve their full potential and learn various independent living skills. The more able among this group of students may acquire some basic academic, living and social skills, basic vocational and work skills which will equip them for the world of life and work after school. The programme is delivered over a five year period with distinct goals for each year:

Year 1, 2 and 3: Career Awareness, Exploration and Preparation

Year 4: Career Placement

Year 5: Career Specialization and Follow-up.

Now, however, under the new SPN-21 education system, year 1 is now known as year 7, year 2 as year 8 and so on. All the students have their own Individualised Education Plans (IEPs) and an advantage of this program is that it is flexible and the curriculum depends on the students' level of abilities.

According to Adanan and Wong (2006), the programme aims to assist Pre-Vocational students to: a) develop their potential to acquire some basic academic, basic social, daily living, and pre-vocational skills; b) to prepare them for adult life; and c) to become useful, contributing members of society.

How are the lessons carried out? Adanan and Wong (2006) explained that the lessons are taught in an across-curriculum format and that the lesson plans are built on basic competencies in four main areas which are basic academic skills, basic vocational skills, life skills and social skills. One could see that the lessons are not based on a narrow and specific topic but incorporates a variety of skills and a holistic approach. Another advantage, which is probably the most important of all, is that the students study vocational skills, which will no doubt help them become more independent in the future and become more marketable. The fact that the pre-vocational programme is vocation oriented, is in line with Abosi and Koay's views which stated that *education of children with disabilities should aim at assisting the children to acquire survival skills* (Abosi & Koay, 2008, p.8).

Adanan and Wong (2006) stated that this programme has been in effect since 1998 and that even though an annual review and evaluation of the programme as a whole is carried out, there have been no comprehensive studies conducted specifically on the job training provided and its effectiveness in equipping the pre-vocational students with the necessary work skills. The same can be said about research done that focuses on the experiences of these students in the programme.

Generally, there is a definite lack of studies on the experiences of pre-vocational students at the local level. A study by Taibah Ahmad sought to assess the relevance of the local pre-vocational programme because as that time there had not been any evaluation of it yet. She conducted surveys and interviews with the parents, home-room teachers as well as the 33 students involved. The questions for the students were based on academic achievements, social skills, and perceptions about school, self-concept and pre-vocational skills. Generally, the results were positive.

A study was carried out by Adanan and Wong (2006) in which interviews with pre-vocational students were conducted to discuss the programme and the outcomes. The results were also mostly positive and included information such as they liked school and enjoyed the learning activities there. To the best of the researchers' knowledge, the two studies mentioned above are related to find out about these students' experiences of school. Since there are not many in-depth studies based on the pre-vocational students' experiences of school and seeing that it has been around for slightly over ten years, the researcher feels that this is an appropriate time to conduct such a study.

Methodology

Through conducting interviews and surveys, special education students in rural Kansas offered their views concerning the effectiveness of the special education services. Among the themes that emerged included life goals of independence, desire to participate in non-competitive school activities and sense of being different and misunderstood by both school personnel and other students.

Curtin and Clarke (2005) interviewed students with disabilities to find out their life stories particularly educational experiences and found that they had mixed views about their education, whereby participants who attended a mainstream school indicated positive and negative experiences compared to those who attended special schools who mainly reported positive experiences.

Shah (2007) used semi-structured interviews, with prompts and follow-up questions to generate accounts of the young, disabled people's educational experiences. His research shows the importance of the children's insights which can be used to better the system.

Lindstrom, Paskey, Dickinson, Doren, Zane & Johnson (2007) used in-depth interviews (including young adults with disabilities) to find out what makes the transition of students from school to work successful. Some of the recommendations based on the research were for the students to participate in career exploration and multiple work experiences during high school and to display motivation and persistence.

Francis and Muthukrishna (2004) used unstructured interviews to examine the life experiences of ten disabled students in a rural secondary school in South Africa. Among the information gathered were the students' perceptions of cultural attitudes towards disabilities and being included. Francis and Muthukrishna (2004) stated that one of the findings was that there is a critical need for a systemic

approach to inclusion, and the need to continually probe issues of curriculum, assessment, pedagogy and social relations in schools and communities (p.116).

De Schauwer, Van Hove, Mortier, and Loots (2009) also conducted a study that examined the experiences of inclusive education in Flanders. In-depth, semi-structured interviews and observations of 15 students aged 5-17, with varied disabilities were conducted. It was concluded that 'it is important to meet the children and find out their views about education' (p. 109). De Schauwer et al. (2009) also mentioned that working with children in a positive way on what they can and want to do can be an important tool (p. 109).

As mentioned above, most of the studies employed a mixed methods approach, usually consisting of both surveys and interviews. Koster et al. (2010) used instruments to measure self-perception and surveys to assess acceptance of classmates and they used the reciprocal friendship nomination to assess friendships. Koster et al. (2010) used observations in class to determine interactions of the students.

This study employs a qualitative approach. According to , the methods used by a qualitative researcher demonstrate a common belief that they can provide 'deeper' understanding of social phenomena when compared to purely quantitative data. The researcher feels that due to the nature of the research which seeks to be an in-depth study, examining students' thoughts and experiences, a qualitative approach would be most appropriate in order to collect relevant and accurate data. Mertens and McLaughlin (1995) stated that many of the criteria that establish the appropriateness of choosing qualitative methods parallel the conditions in special education. In special education, low incidence conditions, such as deaf-blindness, cause samples sizes to be either restricted or too small (p. 45).

Subjects

Seven students who are currently in various levels in the pre-vocational programme were interviewed from two secondary schools. Four students were from school A, whereas three students were from school B. Table 1 shows the background of all the students involved in the study.

Table 1. Background information of the students involved in the study

Name*	Gender	Year	School	Diagnosis
Aiman	Male	8	A	Noonan Syndrome
Hazim	Male	10	A	Hydrocephalus
Nawfal	Male	10	A	Cerebral Palsy and developmental delay
Fikri	Male	11	A	Down syndrome and speech impairment
Jasmine	Female	7	B	Severe slow learner, LD
Liza	Female	9	B	Down Syndrome
Najwa	Female	9	B	ADHD, speech delay

*Fictitious names

According to Table 1, all four male students are from school A whereas the three female students are from School B. All of the students are within the 14-18 years old age range.

How the students were chosen was quite tricky. explained that interviewing students with disabilities can be challenging because of their capabilities or communication needs of the respondents. Prior to the interviews, the researcher met the students from both schools and then discussed the interview questions (See Appendix 1) with the Home Room Teachers and to ask for their opinion on which students would be suitable candidates for the study.

Instruments

Semi-structured interviews were used for this study. Though semi-structured can be considered formal, the researcher took care in making the interviews as informal as possible. explained that semi-structured interviews start with a pre-determined set of questions, but allow some latitude in the breadth of relevance and that to some extent, what is taken to be relevant to the interviewee is pursued. Semi-structured interviews allow for room to talk about other topics which could be related to the purpose of the research but not foreseen by the researcher, whilst sticking to the questions that were set out in advance so as not to stray too far off topic.

Procedure

Prior to the study, a letter was sent to the Department of Schools, Ministry of Education through University Brunei Darussalam asking for permission to conduct the study. The letters were then sent to the principals of the schools involved. In the letters, the purpose of the study and the list of the schools involved were clearly stated. A personal letter was also written to the Head of the Special Education Unit detailing the purpose of the study and asking for permission for access to the relevant resources pertaining to the pre-vocational programme.

Also, consent forms were given to all the students involved as well as their parents. In the consent forms, the researcher indicated the purpose of the study, the researchers' contact details and assurance that all information given would be treated appropriately and that no real names will be used to protect the confidentiality of the participants. All the parents and the students signed the consent forms indicating agreement to participate in the study.

Pilot Study

The purpose of the pilot study was to see if the semi-structured questions could be easily understood by the students and to determine whether any difficulties could arise from the questions. Following the transcription analysis from the pilot study, some changes were made to the instrument. A few more questions were added to better address the research questions. There were also some added questions that reflected the curriculum for the pre-vocational programme, which would be related to the abilities and skills acquired from their schooling.

Main Study

After receiving the parents' consent forms and after the students signed their consent forms as well, the researcher asked the Home Room Teachers for a good time to conduct the interviews. Once that was agreed upon, the students were interviewed in a quiet place in the school. Prior to the interview, the researcher explained that their real names would not be needed and that the interview would have to be transcribed.

After each interview was conducted, transcriptions of each interview were translated to English where necessary and typed out. The transcriptions were then subjected to a content analysis where codes were listed out one by one and then carefully put into the appropriate categories. In referring to how this may be done, according to the researcher becomes very familiar with the descriptive information collected and allows categories to emerge as the analysis continues. Fraenkel and Wallen (2009) explained that one of the reasons a researcher may want to do a content analysis would be to formulate themes (i.e. major ideas) that help to organize and make sense out of large amounts of descriptive information. This was exactly what the researcher did. Recurring themes or key points were listed out and as the process of coding continued, these themes were listed under bigger themes or categories thus culminating into the different sections of the results.

Results and Discussion

After analyzing the data gathered from the interviews, there were 12 main themes that stood out. These are their abilities and skills, friendship, socialization, daily living skills, fears/problems, relationship with teachers, family, their achievements, their future, their likes, their thoughts about school and about the subjects learnt.

Abilities, skills and achievements

There is a wide variety of skills and abilities that the pre-vocational students have acquired from their studies at their respective schools. Many of these abilities and skills reflect their functional academics and curriculum that focuses on daily living skills. According to the pre-vocational curriculum, knowing how to use a calculator is one of the skills that these students need to acquire. Most of the students interviewed know how to use a calculator.

I can use a calculator. It can help with Maths. (Liza, year 9).

I know how to use a calculator. (Aiman, year 8).

In addition to that, most of the students are able to mentally compute basic mathematical equations like simple addition without the use of calculators.

Most of the students interviewed could read. Some of the slower readers employed a step-by-step approach by spelling out the words slowly first and then saying out the words as a whole. Their attitude shows that they do not give up, even though they cannot read fluently, they try by spelling out the words first, no matter how long it took. Liza can not only read but likes reading. She always reads storybooks particularly about the mouse, Geronimo Stilton. When asked what the book was about, Liza stated the main characters and what Geronimo does in the book. She also reads Malay novels and stories about Barbie.

Computers play a significant role in these students' school life. Most of the students know the basic knowledge about computers such as how to switch them on and off, typing out their names and so on. Najwa mentioned that she knows about the wiring too. Both Najwa and Liza stated that they know how to use the internet.

Part of the pre-vocational curriculum involves teaching students how to introduce themselves. Liza was able to introduce herself clearly, stating her name, her age, address, and her parents' names. Hazim was able to give his full name and even his nickname. When it comes to gardening, Liza stated that it is easy while Fikri stated that it is fun. It also appears that all the students do not take up gardening at home, adding that they only do gardening at school.

Jasmine is an athletic girl. She is good at running, discus throwing and long jump. She has participated in competitions and recently won first place in a relay running competition. Although Jasmine is a severe slow learner, she is an excellent athlete. She recently joined the sports day for the pre-vocational students. She participated in the long jump, 100-meter sprint and relay. She stated that her relay team consists of students from her school and other schools and they won first place. Jasmine was the first runner and her along with her teammates received medals. She also mentioned that she loves to exercise. She also participated in long jumps and discus throwing.

Friends and socialization

Having friends is normal for everyone and it is the same for the pre-vocational students. Overall, the students commented that the friends they have from the Home Room class are good people. Nawfal explained that he also has friends from the Religious School that he attends. However, almost all of the students apart from Jasmine stated that they do not have friends from other classes except the Home Room class. Jasmine pointed to one class near the canteen and listed out the names of the five friends that she knows from that class. When asked which friend she liked the most, Najwa listed out the names of three friends.

There also seems to be a 'helping' culture there with the students in the Home Room class. Hazim mentioned that he and his friends like learning and they help each other with cleaning and sweeping the room. Jasmine also mentioned that when it comes to gardening and cooking, they all help each other. She added that some help her to read, since she cannot read very well. Some of the students noted that their friends like to help them with their problems. Aiman, Fikri and Nawfal all mentioned about a particular classmate who likes to help them with maths.

If I don't know something, they will teach me. Sometimes for Maths, I'm not good at it, so they will help me. (Aiman)

The activities that these students like to take part in with their friends include playing tic-tac-toe, playing monopoly, telling funny stories to each other and eating together. Liza said, *we always tell stories*. When asked if the students look forward to seeing their friends every day, they all said yes. When asked why this was so, Fikri said that he was shy to answer the question. Liza's response was *They are good to me. They give me presents for my birthdays and my projects*.

Most of the pre-vocational students socialise only within the Home Room itself. Apart from one or two classmates who disturb them, the students appear to get along well with each other. It appears that at school A, there is more interaction among the students and teachers when compared to school B which seems to have less student-teacher interactions. Both Hazim and Fikri are friendly. Whenever Hazim meets his friends, he greets them. He does the same to his teachers. Hazim is also known for visiting his teachers' houses during *Hari Raya*. What is interesting is that at school A, the students jot down the name and contact number of the people they meet.

Jasmine has a unique opportunity to make new friends because she participates in track and field competitions. She has friends from other schools whom are members of her relay team. Upon meeting the researcher, Aiman was shy at first but quickly showed that he was friendly and talkative.

Daily living skills

The students are aware of general cleanliness. Aiman sweeps at home without anyone telling him to and cleans his room. When asked what happens if the floors are not swept he replied that it would be 'dirty'. Most of the students are able carry out to tasks like washing the dishes and cups, sweeping and so on. When asked if it was beneficial to learn about washing plates and sweeping, Hazim replied in agreement and that he helps his mother at home with the cleaning. In addition, activities like putting on socks, shoes and buttoning shirts are simple tasks that most of the students are able to do. Fikri is able to wear a tie by himself.

Cooking is a major theme that all the students identified with. The type of food that almost all the students are able to cook is foods that require frying. Other types of food that some of the students could cook are pizza, rice, nasi lemak, kebabs and breakfast food.

Jasmine, who seemed happy to answer the question and even showed the researcher pictures of the food she has cooked, excitedly answered in an air of confidence: *I can cook cucur, prawns, egg, chicken and I can cook pizza too.*

Jasmine also mentioned that they used the vegetables that they planted as ingredients in their cooking. Some of the students cook at home too. Najwa affirmed that she also is taught how to cook at home by her mother and sister. Aiman mentioned likeness for cooking but that he could only cook fried mee. When asked what he could cook, Fikri responded with Nasi Lemak, fried chicken and kebabs.

Some of the students, especially the girls, can sew material and sew beads. When asked if Liza could sew beads she said yes and that she could sew the hems of sleeves too. One student, Jasmine, is taught how to bead from her mother and even sew beads on to her own *baju kurung*. She also sells her beadwork: *I can bead in the shape of leaves and flowers. I sell them too* (Jasmine, year 7).

Fears/problems

As the interviews progressed, it became apparent that these students also experienced some problems or fears at school ranging from being told off for being late to school to classmates who got them into trouble. Liza explained that she sometimes was scolded by the teachers for being late for school. When asked if there was something that he could change about his school, Nawfal mentioned that he would like to be in the normal classes instead of the Home Room class. He could not give a reason why but when asked if it was fun being in the Home Room class he replied in agreement. Jasmine talked about the other students bothering her and also about bullying.

He likes to disturb people, he likes to eavesdrop on people during conversations (Jasmine, talking about a classmate)

There are good people in school but there are also mean ones too. There are some who bully people and say bad things (Jasmine)

Jasmine added that there were people who said bad things to her. When asked if she could change something about her school, she stated that because of the bullying she would want to change schools, to one where one of her relay team mates goes to.

One of Liza's problems was one that any teenage girl could relate to. Liza stated she did not like boys. She mentioned that boys did not want to look at her and that she did not like boys who were flirty. In her opinion, boys should pay attention to their studies instead of flirting with girls. In addition, Liza has a friend that frequently got her into trouble and was reprimanded by the teachers. On the matter, Liza stated:

Usually I go with Amy, but she always asks me to go to the canteen and sometimes when we are about to start class or during class...so we are reprimanded for that.

The same friend often got angry at her. This is what happened when Liza tried to tell their teachers about her situation.

Sometimes she gets angry at me if I lose some stuff. I can't do anything because I'm new here and she always pesters me. I go with her to the canteen during lesson time so the teachers get angry at me and her so I wanted to tell the teacher but Amy got angry at me, she wrote nonsense on my books and on my face. So I cried. (Liza)

Liza also feared that she would be told to stand outside in the sun. It seems that her and her classmates were told to stand outside in the sun because they were *walking around*. Due to his health problems, Hazim sometimes did not attend school and he mentioned not going to school recently because he had to go to the hospital for his blood test.

Relationship with teachers

Teachers appear to impact the students in positive ways. Most of the students described their teachers as good to them and viewed them highly and with respect.

Teachers A, B, C, D, E, F and G are the best teachers in this world and their subjects are important (Liza)

Teacher attitudes also came up from the interviews. Though most of the teachers showed positive attitudes, some did not. Najwa implied that some of the teachers were angry. When asked if she wanted the teachers not to get angry, she said "yes". When asked why school was boring, Najwa stated, "The teachers got angry". All students indicated that their teachers were helpful. Najwa listed the teachers who always helped her with her homework. Jasmine talked about how the teachers liked to help with cooking and gardening, that the teachers were nice, fun, help with important matters and that they laughed a lot. This suggests that Jasmine appears to get along very well with her teachers.

I like them too because they are fun. They are good to me (Jasmine)

From the researcher's point of view, it seems that the students at School A have better relationships with their teachers and vice versa. When asked about whom his favourite teacher was, Hazim gave the name of one teacher and said, "because he hugs me" and "he teaches me how to greet the other teachers and he teaches me sign language". This was particularly crucial for Hazim because apart from being hydrocephalic, he had some speech problems. Even through minor observations spent at school A before and after the interviews, the Home Room teachers and students seemed to act like one big family. The teachers got along well with their students and the students got along well with their teachers. Based on observations of the interactions of the teachers and the students, it was obvious that the teachers were really passionate about their work and genuinely cared about the students under their care. Another theme that emerged was that almost all the students identified their teachers were easy to talk to. Aiman has been known to call the Home Room teachers up to chat occasionally.

Family

Although no questions about family were included in the list of interview questions, information about the students' families came up often. For example, when justifying her reason for wanting to become a soldier, Najwa mentioned her sister who was a soldier. Hazim also explained about how he wanted to run a bakery business with his father.

Jasmine noted that not only did she learn beading at school, but that her mother taught her how to bead as well. Hazim also brought up how he helped his mother with cleaning. Liza spoke about playing Monopoly with her siblings. Najwa described her family fondly and told the researcher what she and her family liked to do, such as going to the beach, going swimming, buying books and going shopping with her mother and so on. It appeared that Najwa had a very strong bond with her family. Finally, Aiman told how his mother tended to the flowers outside their house.

Their future

The pre-vocational students had dreams and ambitions just like everyone else. Some of them also appeared to be sure of what they wanted to be in the future. Two of the students' ambitions were positively influenced by their family members. Najwa stated that when she would grow up she would like to be a soldier because she could wear a uniform just like her sister. Hazim very ambitious and had two things that he would like to do when he would grow up. He saw running a bakery with his father in the future and providing massage services on the side.

Making bread, at home with my dad (Hazim)

Hazim went on to describe the types of bread that he would like to make and how he would add chocolate to it. It seemed that he would like to run a home bakery. Besides that, he would like to massage people in order to earn money.

Yes, I want to massage people. I can do that. Sometimes I massage the teachers when they are tired and at my cousins house. I massage them (cousins) and then they give me money (Hazim)

On the topic of ambitions, Fikri replied something along the lines of a computer and that he wanted to work at the movies. Nawfal, who could cook and liked to watch cooking shows on television wanted to be a chef. His reason was that chefs have a big salary.

Jasmine would like to work with the navy, adding that working on a ship would be fun. When asked what kind of navy work she was interested in, she replied, "like writing anything, becoming a leader". Liza is interested in becoming a lyrics writer. Her fondness for the art of singing and music is clear from the way she talked about her favourite bands, artists and television shows. She wanted to be a lyrics writer because she liked songs. Aiman stated that he would like his future work to be something related to computers.

Their likes/interests

Many of the students interviewed expressed fondness for computers. Liza used the computer to go on the internet to search for her favourite artists. Fikri, Hazim and Aiman played games on the computers. Aiman added that what was nice about a computer were the games. Interestingly, Nawfal liked to lift weights at home while Fikri was a fan of football and enjoyed watching Manchester United play.

Liza liked to listen to music. She happened to like Science the most among all her subjects and got very excited about it, indicating that she always passed her Science exams. Jasmine loved exercising and exercised everyday at home by running. It was the researchers' belief that what these students liked might have significant implications as to how they could learn.

Thoughts about school

Many of the students indicated that they liked school and were excited to go to school. Overall, the students had a positive view of school and school was fun for them.

School is fun, there is a discipline teacher who teaches me between good and bad (Jasmine)

Although Jasmine liked school, she said that she did not look forward to it because sometimes she was told off by the teachers for being late for school. Hazim stated that school was important for learning and that he would not like it if he did not go to school anymore. When asked why Hazim liked school, he replied, "I can play the computer, we are taught how to cook and slice ingredients up".

Aiman answered a strong "yes" when asked if school was important and he said that it was because he learned a lot at school. Aiman also explained that he liked school because staying at home was boring. Fikri liked school and thought schools was fun because there were computers there. Nawfal said that he liked school because "we study, so we can be smart".

Liza liked school. When asked why, she replied, "because we learn important things that are important to me and this school has professionalism and learning things that suit me". When asked if school was fun, she stated, "yes, because I have a lot of good friends". Najwa, who looked forward to going to school, explained that school was fun because staying at home was boring.

Most of them liked their school just the way it was, except for Aiman who said he would prefer more pictures and Jasmine who implied that there should be more sports facilities.

Subjects learnt

The subjects that these students learned included science, home science, religious knowledge, physical education, English, art, ICT, mathematics, Malay, cooking, gardening and sewing. Liza's favourite subject was Science because she said it was important and because she passed science exams often. Liza

mentioned that she learnt about energy, about the human body and about health in Science and she explained that learning Science was essential for our health. Her least favourite subjects were Malay, religious knowledge and ICT, which she claimed, were hard subjects.

Most of the boys' favourite subjects were ICT (computer) because of the games that they were able to play on them. For Jasmine, gardening and cooking were the fun subjects. Aiman liked English and Malay but disliked mathematics as he said sometimes he was not so good at it. Nawfal disliked Malay because he said it was hard but he liked English, which was his favourite subject.

Discussion

The first research question was what the students thought about what they learned in school? Overall, the results showed that the students thought that learning was vital. They also associated success and happiness with their favourite subjects. Similarly, difficult subjects turned out to be their least favourite.

Secondly, the interviews revealed significant details about their social participation in school with friends and teachers thus answering the second research question. Most of them explained that their friends in the Home Room class were good to them but a few students noted that there were one or two students in the class who either disturbed them or frequently got them into trouble. Almost all of the students, except one, did not have friends from other classes. They were also aware of events like birthdays where one student indicated her happiness at receiving presents from her classmates and teachers.

The students liked to take part in activities such as playing tic-tac-toe, monopoly and so on. They also liked to eat together and tell funny stories. Most of them stated that they looked forward to seeing their friends every day.

There seemed to be a helping culture which applied to the students as well as the teachers. At school A, there was one classmate who stood out as he frequently helped his other classmates. At school B, the students also helped each other with reading and cooking among others. It was noted that school A seemed to have teachers who were less angry when compared to school B where two of the students mentioned that some of the teachers always seemed angry. Despite this, all the students noted that their teachers were easy to talk to and helpful. Some students even visited their teachers' houses during the festive season of Hari Raya. The students greeted their teachers when they met them and they did the same with their friends. Overall, it seemed that students at school A had a stronger bond and relationship with their teachers compared to the students at school B.

Do students have a positive view of school? This was the third research question. Many of them showed that they were excited to go to school and they liked it because they learned a lot there. Many of them also stated that what they learned was important. All of them mentioned that school was fun and some gave reasons, such as because there were computers, they had friends who were nice to them, staying at home was boring and so on. Overall, despite some of the problems that they experienced at school, they seemed to have a positive view of school.

Fourthly, what abilities or skills have they acquired from their schooling? Most of them knew how to use a calculator, cook simple food, especially fried food, clean the dishes and sweeping, gardening, introducing themselves, the basics of how to use a computer, basic math, spelling and reading, writing and so on. All the girls could sew material and beads together. One of the students had unique abilities such as being very athletic. The results showed that these students had a wide variety of abilities and skills, which reflected their curriculum, which was more focused on functional academics and daily living skills.

Besides knowing how to clean, they were aware of what cleanliness is. Some of the students realized what would happen if they did not know how to cook, clean and so on. Some of them even helped with the cleaning at home. Despite gardening being a part of the syllabus just like cooking, none of them took up gardening at home unlike cooking where some students expressed that they cooked at home.

A key finding was the emergence of themes that were unexpected but came up from the interviews and what the students felt were significant to say. Family was one such theme and it was frequently cited by almost all the students indicating that they saw family as a crucial part of their lives and that being with their family was something that they enjoyed. Their problems were another theme. These students faced problems such as bullying, getting into trouble because of their classmates, being told off by the teachers

for being late, being reprimanded, loss of school time due to illness and so on. When it came to one of the students, her achievements of winning first place in a relay competition were valuable and that made her and her team mates happy.

Their future was important and many of them were quite ambitious. They liked to talk about their future especially those who seemed sure of what sort of job they would like to have in the future. They also mentioned their likes and interests which could help improve how they learn at school.

Some of these findings were similar to those of Primer and Brown's (1995) study where the students expressed life goals such as getting a good job, making money and being independent which mirrored the life aspirations of average youths.

Conclusion

The students seemed to enjoy school and liked it very much in spite of the problems that they experienced. They looked forward to school because they got to learn there and they met their friends. These students were keen to take part in activities with their friends and they liked to help each other. They also acquired daily living skills needed for independent living now and in the future. Getting along with friends and teachers was normal for them, although almost all of them did not have friends from other classes. The teachers were very helpful, dedicated to their work, enjoyed fun, easy to talk to and caring. School A was more like a big, happy family. They also believed that what they learned was important.

There was a variety of problems that these students experienced at school. The ones that stood out were their classmates who got them into trouble, being scolded by teachers and angry teachers. These were some of the negative factors. School would have been more pleasant if they did not have to face these issues at school.

Their family, achievements, likes and their future were very meaningful to them. Many of their answers included snippets of their parents or siblings. Their achievements certainly made them happy. What they liked reflected a lot about themselves. Their ambitions were something that they looked forward to and liked talking about. The next section looked at the implications from the findings of the study.

Implications

The findings have led to the discovery of some notable implications. What they liked could be used as tools in their learning process. Their interests could be incorporated into their syllabus or even their daily lessons. De Schauwer et al., (2009) explained how the students' interests and talents can be connected in their learning process and could help to make choices, add content to subjects, give direction to their study and spare time. Computers were significant in their lives, so computers should be incorporated a lot more as part of their activities. They were also fond of games like monopoly and tic-tac-toe and they enjoyed telling stories to each other. Through playing monopoly, for instance, they could be taught about the use of money, paying rent as well as paying bills, which could improve their math skills. When it comes to the teaching of English language, they could take turns telling stories to the whole class. This could also be applied to the Malay language. Students are more likely to enjoy what they learn if it is through an activity or something that they like to do. Since students associate difficult subjects with failure, and easy subjects with success, more opportunities should be included for the students to succeed in the subjects which they find difficult. Likewise, there should be more recognition of their achievements for the subjects that they do well in.

Being scolded and being told off is normal at schools especially with students who have discipline issues. The pre-vocational students however, stated that they do not like being punished and it is one of their problems or fears at school. They also complained about teachers being angry. Perhaps some of the teachers are frustrated as they do not know how to take care of these children. They could benefit from special education teacher courses.

The fact that they liked to talk about their family indicated that family is of great value to them. The implications for this are equally imperative. This information suggests that there should be more family involvement in the pre-vocational programme. Perhaps their family members could be invited to participate a lot more in their activities. Specific days could be allocated for the family members to come over and take part in the various activities conducted at the Home Room class. Family members could help the students with cooking or gardening. Once in a while, competitions could be held and this may

serve as an incentive to increase family involvement and commitment to being a part of their children's school life. Needless to say, it would also facilitate to foster ties between the school and parents. Parents could also be invited to come along to the job placements more often or even discuss about their children's future ambitions in order to make them a reality.

This leads to another significant implication which has to do with their future. These students speak with great ambition when it comes to talking about what they would like to be when they grow up. Hence, their dreams and desires for their future should not be taken lightly especially since many of these students find it difficult to find jobs once they leave school. To reduce the likelihood of the difficulty in securing employment, there should be a lot more emphasis on the transition between school and work. Although now there already is some form of liaison between the schools and workplaces, the researcher feels that there should be more effort and continuous communication between the schools and the prospective workplaces or companies. By establishing a network within the working community, this could help these students realize their dreams.

Becoming a chef, soldier, working with the navy and even having a bakery were some of these students' ambitions. Frequent visits to these places or even inviting speakers who are in those respective professions could not only prove beneficial for the students but it shows them that the community care about their future and recognize their potentials.

Limitations

A limitation to this study is that the results and findings do not reflect the whole population of students who are involved in the pre-vocational programme in Brunei Darussalam. This is simply because this study only involved some students from two schools that currently have the pre-vocational program in place. Hence, generalizations could not be made. Despite this, the findings offer interesting insights in to how these students experience school.

Recommendations

A recommendation for future research would be to interview more students with various disabilities from many other schools that offer the pre-vocational programme. For example, the sample for this study did not include students who are hearing impaired, autistic, visually impaired and so on. Perhaps it would be wise to interview pre-vocational students from all four districts in Brunei Darussalam.

The Home Room teachers should also be interviewed as they could provide additional and valuable information about these students since they would have known them longer than the researcher. Collecting information by means of observations could also be done or even by way of case studies in order to see how the students experience school, first hand. Finally, finding out about how these students feel about their job placements and attachments as well as their experiences of the job attachments could be another important topic for further research.

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SUPPORTING SOCIAL COMPETENCE AMONG SECONDARY STUDENTS IN HONG KONG: TEACHERS' BELIEFS ABOUT SCHOOL-WIDE INTERVENTIONS

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To examine the key factors that lead to effective implementation of school-wide behavior interventions, this study examined the extent to which school-wide behavior interventions were implemented in four Hong Kong schools. The study also explored Hong Kong teachers' beliefs about behavioral and social skill programs for secondary students with social, emotional, and behavioral difficulties. Findings indicated that the adoption of behavioral and social skill programs were common practices in schools and that the majority of participants in the present study believed that behavioral and social skill programs should be implemented in schools at an early stage. Furthermore, findings suggested that it is important to consider the interrelationship of professional, strategic, contextual, and attitudinal factors that support students' social competence and minimize their challenging behavior.

Social and behavioral problems of children have become a very important educational issue in many countries in the world. Teachers consistently report that poor social skills and classroom discipline have been primary concerns of schools (e.g., Corso, 2007; Department of Education National Center for Education Statistics, 2007; Ross, Romer, & Horner, 2012). In the context of Hong Kong, the public media often report cases of students with social and behavioral difficulties. For instance, in November 2010, in an elite secondary school in Tai Po, Hong Kong, two male students were reported to have distributed 40,000 Hong Kong dollars (about 6,000 USD) and eight Smart Phones to their classmates. Although their purpose was to gain attention from their peers—especially their female classmates, by showing off their wealth, their behavior had caused unrest in the school. One of the boys was then reported to have chronic social, emotional, and behavioral difficulties (SEBD; Cheng, 2010).

How can teachers support the social competence development of students with SEBD? Many researchers and practitioners have noted that by providing social skills interventions, the school can become an optimal setting that fosters the development of social competence in students with behavioral problems. In view of the potential educational outcomes for all students, as proposed by some researchers (e.g., Algozzine & Algozzine 2005, Algozzine & Kay 2001, Lane, Wehby, Robertson, & Rogers 2007; Upreti, Liaupsin, and Koonce 2010), school-wide behavior interventions have been recommended as an effective strategy to promote inclusive education, prevent the development of problem behavior, and reduce the impact or intensity of problem behavior occurrences.

Literature Review

A significant number of studies concerning the effectiveness of various behavioral interventions have been documented over the past 10 years (e.g., Baker, Lang, & O'Reilly, 2009; Chen & Estes, 2007; Greenhalgh, 2001; Gulchak, 2008; Poon-McBrayer & Lian, 2002; Regan, 2009; Richardson & Shupe, 2003). However, there has also been both uniformity and inconsistency with regard to the essential constituents of supporting social competence and preventing challenging behavior among students.

Effectiveness of school-wide interventions

Effective school-wide interventions that meet the needs of all students have been recognized as crucial in ameliorating educational outcomes for students, and especially those with SEBD (Algozzine & Kay, 2001). Bradshaw, Koth, Bevans, Ialongo, and Leaf (2008), Clough (2005) and Kirk (2009) further argued that students with SEBD are at high risk of failing in school and often fall behind because they do

not receive appropriate interventions at an early stage. Algozzine and Algozzine (2005) emphasized that one of the key features of proactive school-wide behavior interventions is the inclusion of all students in schools that emphasize a three-level intervention framework (i.e., primary, secondary and tertiary interventions) and address a wide range of needs across the three groups (Algozzine & Algozzine, 2005). Similarly, Lane, Wehby et al. (2007) promoted the implementation of school-wide interventions by claiming that this framework provided *a systematic approach to preventing the development of new behavioral problems, while providing the necessary level of support to manage existing behavioral concerns* (p. 3).

Although many other educators consider that individualized tailored interventions are necessary for students with SEBD, some educators and psychologists have contended that whole-school interventions are by no means less significant than individualized tailored interventions, and are therefore highly recommended to be adopted in the education field (e.g., Algozzine & Algozzine, 2005; Lane, Wehby et al., 2007; Rogers, 2005; Royer, 2001; 2005 White, Algozzine, Audette, Marr, & Ellis, 2001; Upreti et al., 2010). In particular, findings of White et al. (2001) and Upreti et al. (2010) indicated the potential efficacy of universal prevention strategies to reduce the development of new incidence and current prevalence of school-related problems. Similarly, the data presented in Corkum, Corbin, and Pike's (2010) and Wu, Lo, Feng, and Lo's (2010) studies indicated that certain typical universal or primary level school-wide interventions (e.g., violence prevention, conflict resolution, and social skill programs) are vital in monitoring student progress and identifying students in need of more intensive prevention efforts.

A complementary approach to the adoption and maintenance of school-wide interventions

Similar to Algozzine and Algozzine's (2005) and Bradshaw et al. (2008) studies, which emphasized the three-level intervention system, Siegel (2008) and Sugai and Horner (2006) proposed a three-tiered prevention continuum of positive behavior support. However, Sugai and Horner's (2006) prevention continuum not only showed the categorization of interventions into three levels (i.e., primary, secondary and tertiary interventions), but it also indicated that generalized interventions, when implemented with a high degree of integrity, are a prerequisite to increasing the success of individualized interventions. This is consistent with Corkum et al. (2010), Upreti et al. (2010) and Wu et al. (2010) studies on the potential student outcomes of effective pre-interventions. O'Neill and Stephenson's (2010), Siegel's (2008) and Sugai and Horner's (2006) studies also highlighted the vital importance of systems-level supports, such as funding, and visibility and training, to promote social competence and desired goal-related behaviors.

Teaching models that promote school-wide interventions

The framework of school-wide interventions presented above provided a foundation for educators and psychologists working with students with SEBD. Corso (2007) and Fox et al. (2003) described similar teaching models for promoting students' social-emotional development and preventing and addressing students' challenging behavior with respect to the school-wide interventions framework. The models were designed to promote the social-emotional development and behavior of all students, including those with and without SEBD. The four levels of practice in their teaching models (i.e., Level 1: building positive relationships; Level 2: implementing classroom preventive practices; Level 3: using social and emotional teaching strategies; and Level 4: planning intensive individualized interventions) were designed in a way that corresponded to the goals of school-wide interventions, as proposed by Algozzine and Algozzine (2005), Siegel (2008) and Sugai and Horner (2006).

Thought-provoking issues concerning practices to promote school-wide interventions

While positive teacher-student relationships appeared to be associated with aspects of students' social and behavioral adjustment in Corso's (2007) and Fox, Dunlap, Hemmester, Joseph, and Strain's (2003) studies, it might also be important to develop a better understanding of how negative teacher-student relationships affect students' social and behavioral adjustment. Murray and Murray's (2004) study showed that conflict in teacher-student relations was more strongly associated with students' internalized and externalized SEBD. Similarly, Doumen et al. (2008) study on the reciprocal sequence of interactions between teachers and students around disruptive behaviors in classrooms illustrated that the aggressive behavior of students (e.g., noncompliance, negative response or student leaves) was highly related to the constant negative teacher responses (e.g., commands or reprimands) to disruptive behavior.

Corso (2007) and Fox et al. (2003) elaborated on the practice of social and emotional teaching strategies by presenting different sets of strategies (e.g., describing, modeling and rehearsing) that had been

deemed effective in teaching social emotional literacy skills in classroom contexts. Other researchers (e.g., Arritola, Breen, & Paz, 2009; Bullis, Walker & Sprague, 2001) suggested that social skills are best acquired within classroom settings where the behavior normally occurred. However, more recent studies have shown that it is beneficial to incorporate social skills in a digital environment in the repertoire of socialization strategies taught to students. Klein's (2008) and Richardson's (2007) studies, for instance, reported that social networking sites (SNSs) played a pivotal role in the inclusion of students with SEBD in the general population. The main reason being, compared to real life situations, digital academic and social environments have less space, time and social constraints, therefore students with SEBD are more willing to participate in such environments.

Since most of the studies mentioned above were conducted in Western countries, it appears that more effort should be devoted to improving current social skill interventions practices and to identifying more proven strategies in the Asian context. While there have been studies that illustrated the effects of social skills interventions and services on students in Singapore and Taiwan (Chen & Tan, 2006; Cheng, 1998; Hung, 1998; Lim & Nam, 2000; Tam, 2004), it seems that there has been a lack of research in Asia and in particular, little emphasis has been put on evaluating the effectiveness of school-wide behavior interventions in Hong Kong. The present study aimed to examine the extent to which school-wide behavior interventions were implemented in Hong Kong secondary schools and to explore Hong Kong teachers' beliefs about (a) the implementation of behavioral and social skill programs within school contexts, and (b) the provision of a supportive learning environment in schools. More specifically, the present study aimed to bring new insights into the concept and significance of school-wide behavior interventions and to determine the key factors that lead to effective social skills interventions.

Methodology

The following research questions set the direction of the study:

1. What are teachers' general beliefs about the extent to which school-wide behavior interventions had been effectively implemented in their schools?
2. To what extent is there a match or a mismatch between Hong Kong secondary school teachers' beliefs and Corso's (2007) and Fox et al. (2003) teaching models?
3. What are teachers' beliefs about the key factors that hinder or support teachers in facilitating students' social competence with respect to school-wide behavioral interventions?

Participants

To select schools that had implemented school-wide interventions for students with SEBD, the authors conducted an online search of schools that had specific programs for students with SEBD (In Hong Kong, the term SEBD is not a formal diagnosis, and thus there are no well-defined guidelines for its use. Most typically, when a child or adolescent is described as having a SEBD, this means that he or she has a diagnosed—or diagnosable—emotional/behavioral disorder). As a result, more than 20 school websites and school annual plans were reviewed. Schools that used school-wide interventions were invited to participate in the study. Four schools (labeled A, B, C, and D to protect the schools' privacy) responded in a timely manner and were therefore selected as the target schools. Teachers from the four schools were invited to participate in the study, and a total of 60 teaching staff agreed to be involved (approximately 15 individuals from each school). Nineteen of the 60 teachers (approximately five individuals from each school) also agreed to participate in follow-up interviews. All participants were involved in the implementation of school-wide behavior interventions, or had been members of the counseling or discipline teams of the schools.

Procedures

In order to examine the beliefs of teachers about school-wide interventions supporting social competence among secondary students in Hong Kong, a questionnaire (developed by the researchers) was sent to each participant. The questionnaire presented participants with 30 statements reflecting various beliefs about school-wide interventions and asked them to rate the extent to which they agreed with these statements on a five-point scale ranging from *strongly disagree* to *strongly agree*.

To test the content and concurrent validities of the instrument, three teachers (who did not subsequently participate in the main study) were asked to review and give suggestions for improving the pre-test form of the questionnaire. Statements in the questionnaire were then revised and retested until they were understood accurately by each pre-test participant. Finally, the revised questionnaire was sent to two experts in the field for further review and refinement. To ensure that all participants could understand

terms used in the questionnaire (e.g., social competence, school-wide interventions), a glossary was provided for each participant.

To elicit further information about teachers' beliefs concerning school-wide interventions for students with SEBD, follow-up interviews with 19 teachers were conducted using a semi-structured interview guide. The content and question flow of this guide were exploratory in nature. The exact use of the interview guide differed based on each participant's specific experiences. As the teachers' comments during interviews matched the majority of answers on the questionnaire, data collected from the interviews revealed insights and perspectives that could not be obtained from the questionnaire, and this enhanced the reliability of the study.

Findings and Discussions

Research question one: What are teachers' general beliefs about the extent to which school-wide behavior interventions had been effectively implemented in their schools?

Several of the statements in the questionnaire (i.e. Statements 1, 7, 11, 15, 18, 21, 24, and 28) focused specifically on teachers' general beliefs about school-wide interventions and the extent to which school-wide behavior interventions had been implemented in their schools. The purpose of these items was to examine participants' beliefs about and attitudes towards the structure and effectiveness of the intervention implemented in each school. Table 1 showed the mean responses of each school to the aforementioned statements in the questionnaire.

Table 1. Teachers' General Beliefs about the Extent to which School-Wide Behavior Interventions had been Effectively Implemented in their Schools

Statement	School A	School B	School C	School D
1 Behavioral and social skill practices have been effectively implemented in our school	4.33	4.47	4.00	4.27
7 School-wide intervention practices that meet the needs of ALL students are important for improving educational outcomes for students.	4.87	4.80	3.73	3.87
11 Behavioral and social skill interventions have been adopted in our school to meet the needs of ALL students	4.73	4.80	3.60	3.80
15 Some specific behavioral and social skill intervention programs have been adopted and implemented in some classes/forms	3.93	4.07	4.13	4.27
18 Specific behavioral and social skill intervention have been planned for individual students	3.53	3.53	3.73	3.60
21 Behavioral and social skill interventions implemented in our school are only for some individuals or groups of individuals, rather than for all students in our school	1.20	1.40	2.40	2.67
24 Behavioral and social skill interventions have been adopted in our school at 3 levels (i.e. individual, classroom/group and whole-school levels)	3.80	3.73	3.53	3.53
28 School-wide behavioral interventions appear to be essential for students with social, emotional and behavioral difficulties, but NOT for all students	1.13	1.27	2.20	2.87

Similar to Algozzine and Algozzine's (2005) proposed three-level school-wide intervention framework and Siegel's (2008) and Sugai and Horner's (2006) continuum of positive behavior support, participants from the four schools consistently thought that behavioral and social skill intervention practices should be adopted in their schools. In addition, while universal instructions or procedures were used to avert the onset of behavioral or social problems of all students (Corkum, Corbin, & Pike, 2010; Wu, Lo, Feng, & Lo, 2010), teachers indicated that more intense and specialized interventions should be provided for individual students.

Moreover, similar to Corkum et al. (2010), Sugai and Horner's (2006), Upreti et al. (2010) and Wu et al. (2010) views on the extensiveness of universal level of interventions, participants of Schools A and B gave particularly high ratings (higher than 4.5) for Statements 7 and 11, but particularly low ratings (lower than 1.5) for Statements 21 and 28 (see Table 1). This suggested that they had a very strong belief in the need to adopt universal prevention strategies within school contexts. According to data obtained from the interviews, teachers from Schools A and B had widely developed and adopted preventive strategies that were directed towards all students across all school settings, and had involved the school, families, and community members. For instance, in school A, in addition to programs targeted at a particular group/level of students (e.g., Discipline and Motivation Camp for junior secondary students), a wide range of strategic prevention strategies were used for all students, and involved not only school teachers, but also community members from various organizations. Other prevention programs included bullying presentations organized by the Hong Kong Police Force, leadership training camps organized by the Salvation Army, and positive attitude talks organized by the Society of Rehabilitation and Crime Prevention, Hong Kong.

Research question two: The match or mismatch between Hong Kong secondary school teachers' beliefs and Corso's (2007) and Fox et al. (2003) teaching models

The development and maintenance of positive teacher-student relationships, Statements 3, 8, 12, 16, 23, and 26 in the questionnaire focused on teachers' beliefs about the development, maintenance, and significance of positive teacher-student relationships. Table 2 shows the mean responses of each school to the aforementioned statements of the questionnaire.

Table 2. Teachers' Beliefs about the Development, Maintenance and Significance of Positive Teacher-Student Relationships

Statement	School A	School B	School C	School D
3 It is difficult to develop and maintain positive teacher-student interaction/relationships	2.07	1.80	2.27	2.27
8 Students who have social or behavioral problems are those who have negative feelings towards oneself and the school.	4.13	4.33	4.20	4.40
12 Students who always misbehave or have social emotional difficulties are those who always complain	3.67	4.00	3.47	3.53
16 Teachers should try to praise and approve more than they criticize or reprimand/punish.	4.33	4.27	4.47	4.33
23 Criticizing or punishing students' misbehavior is an effective means to minimize students' challenging behavior	1.27	1.47	1.53	1.40
26 Rewards should be used liberally/extensively to ensure that all students benefit	4.00	4.13	4.33	4.07

With respect to Doumen et al. (2008) and Murray and Greenberg's (2006) studies on how negative teacher-student relationships affected the social and behavioral adjustment and functioning of students, participants proposed ways to optimize negative teacher-student relationships. In addition, nearly 85% of the participants suggested that teachers shift their attention from students who did not follow directions/instructions to those who did, and provide appropriate incentives or encouraging responses.

Explicit vs. Implicit use of social and emotional teaching strategies. Statements 2, 4, 6, 10, 13, 17, 20, 22, 27, and 30 in the questionnaire concerned teachers' beliefs about the use of social and emotional teaching strategies. Table 3 shows the mean responses of each school to the aforementioned statements in the questionnaire.

Table 3. Teachers' Beliefs about the Use of Social and Emotional Teaching Strategies

Statement	School A	School B	School C	School D
2 Social skills are best acquired during teachable moments, or within classroom settings where the behaviors normally occur (e.g., during class teacher periods)	4.33	4.07	4.00	4.20
4 Appropriate social skills can be taught/acquired outside classroom (e.g., by means of social networking sites)	3.60	3.73	3.33	3.20
6 Teachers need to provide students with textual- or theory-based information about social skills, such as conflict resolution and dealing with anger appropriately	2.27	2.67	2.07	2.20
10 Social skill programs are particularly useful and therefore should be implemented in Hong Kong schools	3.80	4.87	3.67	4.73
13 Social skills cannot be taught/acquired in school contexts	1.13	1.27	1.13	1.33
17 Appropriate social skills can be acquired through different means (e.g., case studies, role plays, experience sharing and discussion)	4.33	4.27	4.47	4.33
20 Social skills could be incorporated in the digital world.	4.07	4.13	4.00	4.07
22 It is important to enhance students' environment social skills (e.g., making moral decisions, using positive thinking patterns)	4.40	4.47	4.60	4.33
27 It is teachers' responsibility to enrich students' social skills (e.g., conflict resolution, cooperating with others, and dealing with anger and stress appropriately)	3.93	4.07	4.20	4.13
30 Social skills programs should be adopted in secondary schools as early as possible	3.80	4.93	3.47	4.87

Referring to the mean scores of Statements 10 and 30 in Table 3, participants of two schools (Schools B and D) gave high ratings for their beliefs about the early and extensive adoption of social skill programs within school contexts/curricula. In addition, all participants from School D claimed that special educators, educational psychologists and behavior interventionists had given assistance to most class teachers of the junior forms who were running social skill programs in their classes.

On the other hand, with reference to the mean scores of Statement 20 in Table 3, more than 80% of the participants believed that social skills could be incorporated in the digital environment. Their beliefs are in line with the findings of Klein's (2008) and Richardson's (2007) studies on the implications of indirect/implicit social and emotional teaching strategies in terms of the use of the a digital environment, particularly social networking sites. However, contrary to Morgan's (2010) findings on the benefits and

widespread of use of social networking sites to model appropriate social behaviors for students, particularly those with SEBD, most participants (75%) suggested that even though a digital environment may provide a possible platform for social cognition and for acquiring appropriate social behavior, it was difficult for them to evaluate students' outcomes with regard to the effectiveness of these strategies.

Research question three: What are teachers' beliefs about the key factors that hinder or support teachers in facilitating students' social competence with respect to school-wide behavioral interventions?

Statements 5, 9, 14, 19, 25, and 29 in the questionnaire focused on teachers' beliefs about the key factors that hinder or support teachers in facilitating students' social competence with respect to school-wide behavioral interventions. Table 4 shows the mean responses of each school to the aforementioned statements of the questionnaire.

Table 4. Teachers' Beliefs about the Key Factors that Hinder or Support Teachers in Facilitating Students' Social Competence with Respect to School-Wide Behavioral Interventions

Statement	School A	School B	School C	School D
5 Teachers should work with other colleagues as a team to help solve students' social and behavioral problems	4.20	4.33	4.00	4.20
9 Teachers can succeed in supporting students' social competence and help solving their social and behavioral problems/difficulties even without professional training	1.53	1.80	1.13	1.60
14 Teachers cannot succeed in supporting students' social competence if they have negative feelings towards students who present social or behavioral problems	3.80	4.13	4.33	4.00
19 Teachers may fail to assist students with social, emotional, and behavioral difficulties/problems due to inadequate resources provided in school contexts	3.67	3.93	3.80	4.93
25 Close partnership with parents is the key to success in enhancing students' social skills	4.13	4.27	4.47	4.13
29 Close partnership with special educators, school psychologists, counselors and behavior interventionists is the key to success in enhancing students' appropriate social skills	3.53	4.07	3.93	4.87

Sugai and Horner's (2006) and Siegel's (2008) studies indicated the importance of systems-level supports, such as funding, visibility, working structures, operating routines, resource supports, and staff development in school-wide interventions for students with SEBD. In line with these studies, participants in this study generally believed that the willingness of collaborative work among teachers and other professionals, the acquirement of professional training and the adequacy of resource supports were essential criteria when judging the success of school-wide interventions.

Participants of School D gave high ratings for their belief in systems-level supports (see the mean scores of Statements 19 and 29 in Table 4). They further suggested that junior form teachers had found it useful and necessary to receive resources and support from experienced educators, psychologists and behavioral interventionists when running social skills programs. The participants of School D were particularly in favor of the interactive follow-up sharing sessions that were arranged for them to talk things over with experienced educators, psychologists and behavioral interventionists, and colleagues from other schools.

The findings above suggested that with respect to the adoption of school-wide behavioral interventions, three other factors—namely, professional factors, attitudinal factors and contextual factors—may also hinder or facilitate students' social competence development. In order to enhance the effectiveness of the interventions illustrated in Corso's (2007) and Fox et al. (2003) teaching models, teachers' professional development opportunities in the area of social skills training are vital and should therefore be extensively introduced into the education field. In addition to knowledge-based courses, participants suggested that interactive training programs, which aimed to provide in-service teachers opportunities to talk things over with colleagues regarding the difficulties they encountered and the success they achieved with students with SEBD, should be made available.

Regarding contextual factors, participants suggested that in order to design sound social skills programs, school-wide behavioral interventions should be applied within a school context where the working structures, operating routines, resource supports and staff development were well organized. With respect to attitudinal factors, participants indicated that teachers' beliefs about the effectiveness of school-wide intervention, their positive attitudes towards inclusion of students with SEBD, and the provision of inclusive class will also help foster students' social development.

Limitations

There are potential limitations in the present the present study. First, since only four schools were involved in this study, the data may not represent the responses of all teachers in Hong Kong. A small sample such as this can result in bias, and it gives no information about beliefs of teachers who were not involved in this study. Second, because of time constraints, students' feedback about school-wide interventions was not included in the study.

Implications

Using findings from this present study, larger-scale research studies could be further developed to evaluate the effectiveness of school-wide interventions for students with SEBD. Further research studies could also target more secondary schools in Hong Kong.

It would also be worthwhile to consider students' responses to school-wide interventions. Moreover, as the data of the present study suggest that besides teachers, social workers and educational psychologists also play an important role in school-wide interventions; further studies that involve these professionals may provide helpful insights into interventions that promote social competence in students with SEBD.

Conclusions

School-wide interventions were not favorably acknowledged by scholars in the 1990s (e.g., Lane, Rogers, & Parks, 2007; Sugai, Sprague, Horner, & Walker, 2000). However, the present study confirmed the view that school-wide behavior interventions are an effective set of strategies to promote inclusive education and develop students' social competence (Algozzine & Algozzine, 2005; Bradshaw et al., 2008; Lane, Wehby et al., 2007). To prevent the development of problem behavior as well as to reduce the impact or intensity of problem behavior occurrences, participants of this present study indicated that the adoption of behavioral and social skill programs were common practices in their schools and recommended that social skill programs be implemented in schools at an early stage.

At the same time, according to the study, although the teacher participants generally had a strong belief in systems-level support, some of them reported that they found it challenging to implement school-wide interventions, mainly due to the lack of professional training, resources, and support from more experienced educators, psychologists and behavioral interventionists. To increase the effectiveness of school-wide interventions in secondary schools in Hong Kong, it is also high time that different parties in the education field, including teachers, educators, psychologists and behavioral interventionists, focus more on the potential effect of contextual, professional, and attitudinal factors, and work together to support students' social competence.

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**THE EFFECT OF A DISABILITY CAMP PROGRAM ON ATTITUDES TOWARDS THE
INCLUSION OF CHILDREN WITH DISABILITIES IN A SUMMER SPORT AND LEISURE
ACTIVITY CAMP**

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The aim of the present study was to examine the impact of a specific Disability Camp Program (DCP) in the attitudes of children without disabilities toward the inclusion of children with disabilities in a summer sport and leisure activity camp. Three hundred eighty-seven campers without disabilities participated in the study and were divided into control (n = 190) and experimental groups (n = 197). The control group followed the camp's regular program, while the experimental group attended a DCP in addition to the camp's regular program. All participants completed the Attitudes Towards Integrated Sports Inventory (ATISI), (Block & Malloy, 1998) twice; just before and immediately after their participation in the DAP. ATISI consists of two subscales: general and sports-specific. The results of the 2 X 2 repeated measures analysis of variance revealed statistical significant differences on the experimental group, both in general and in sport-specific attitude subscales. These findings imply that participation in this particular DCP can had a positive influence on children's attitudes towards the inclusion of children with disabilities in summer sport and leisure activity camp.

Over the past decade, the inclusion of children with disabilities in regular schools has become a global trend (DePauw & Doll-Tepper, 2000). A basic premise of the inclusion philosophy is placing children with disabilities into regular schools will break down negative stereotypes towards children with disabilities. The concept of inclusion has been the subject of significant discussion and debate among professionals in the adapted physical activity domain (Block & Obrusnikova, 2007; Goodwin & Watkinson, 2000; DePauw, et al., 2000).

Studies have revealed that the majority of children with disabilities seem to function well in physical education classes, while other studies have pointed out that there are some difficulties to obtain acceptance, social contact and inclusion (Bramston, Bruggerman, & Pretty, 2002; Chamberlain, Kasari, & Rotheram-Fuller, 2007; Goodwin & Watkinson, 2000; Kuhne & Wiener, 2000; Pijl, Frostad, & Flem, 2008). Some argued that these difficulties are caused by personal and environmental factors. Attitudes of classmates or friends towards peers with disabilities can be regarded as an environmental factor that might facilitate or inhibit the inclusion of children with disabilities (Vignes, et al., 2009).

Attitudes of children without disabilities and their preparation to accept, coexist and cooperate with peers with disabilities in the same physical education classes in regular schools is one of the most important factor for successful inclusion (Obrusnikova, Block, & Dillon, 2010; Tripp, Rizzo, & Webbert, 2007; Siperstein, Parker, Norins, & Widaman, 2007). During the last decade studies indicated that some children have held positive attitudes towards inclusion of peers with disabilities in physical education classes (Arampatzi, Mouratidou, Evaggelinou, Koidou, & Barkoukis, 2011; Beck, Fritz, Keller, & Dennis, 2000; Nikolarazi & De Reybekiel, 2001), while other studies reported negative attitudes (Kalyva & Agaliotis, 2009). Nikolarazi et al., (2005), suggested negative attitudes of children without disabilities are a result of feelings of fear and lack of information. Vignes et al., (2009) went further stating negative attitudes may be just as obstructive as physical barriers in limiting children with

disabilities from participating fully in schools and communities. Negative attitudes may result in low acceptance by peers, few friendships, loneliness and even being rejected and/or bullied. This can have dramatic effects on the lives of children with disabilities, resulting in difficulties in joining group activities, declining academic performance, dropping-out of school and/or problem behavior (Jackson & Bracken, 1998; Aluede, Adeleke, Omoike, & Afen-Akpaide, 2008; Lund, et al., 2009).

Attitude theorists have suggested that people have an interest to become aware about issues related to disability in order to form attitudes. With respect to including children with disabilities in regular education and especially in regular physical education classes, such knowledge may be focused on understanding the needs of children with disabilities and to reduce misunderstandings and feelings of pity. An essential question is whether providing knowledge about disability to children without disabilities will lead to more positive attitudes (Aluede, et al., 2008). Disability Awareness Programs (DAP) are key factors to create awareness and understanding about individuals with disabilities (Holtz, 2007; Ison, et al., 2010). It was found that a well structured multifarious DAP can influence children's attitudes positively (Kalyvas & Reid, 2003; Kippers & Bouramas, 2003; Loovis & Loovis, 1997; Papaioannou, Evaggelinou, Barkoukis, & Block, 2013).

The Education Committee of the International Paralympic Committee recognized the value of the DAP and developed an educational program called *Paralympic School Day* (PSD) (IPC, 2006). Information and project activities in this program offer opportunities for children to learn about the Paralympic Games and become aware of the unique abilities of the athletes with disabilities. Research on PSD programs indicated a positive effect on general attitudes toward the inclusion of peers with disabilities in physical education class (Jesina, et al., 2006, Liu, Kudlacek, & Jesina, 2010, Lukas, et al., 2006, Panagiotou, et al., 2008, Van Biesen, Busciglio, & Vanlandewijck, 2006, Xafopoulos, Kudlacek, & Evaggelinou, 2009). However, attitudes toward adaptation of sports rules tended to decrease (Jesina, et al., 2006, Liu, et al., 2010, Panagiotou, et al., 2008, Wilhite, Mushett, Goldenberd, & Trader, 1997, Xafopoulos, et al., 2009). It appears many children without disabilities did not want to adapt sport rules and have a peer with disability as a teammate.

Hesitations to adapting sports and having a peer as a teammate may be the result of concerns that the inclusion of a child with a disability may slowdown and change the game making it less fun for everyone. Perhaps a less competitive, recreational environment involving physical activities might offer a more appropriate setting to influence attitudes towards children with disabilities. Recreation is defined as an activity developed by society that is designed for the primary reasons of fun enjoyment and satisfaction. The notion of recreation relates directly to the activity and it's independent of the participant's feelings and experiences. People who participate in recreation activities may experience enjoyment and satisfaction or may encounter failure, rejection and feeling of helplessness. This is particularly important for children with disabilities, especially children with intellectual disabilities and autism, who often face barriers when attempting to participate in community recreation and sports programs (Block, Taliaferro & Moran, 2013). An interesting dialogue has occurred during the last fifteen years regarding alternative settings where inclusion might succeed, such as interscholastic secondary school athletic programs (Kozub & Porretta, 1996), aquatic programs (Conatser, Block, & Lepore, 2000), outdoor recreation programs (Herbert, 2000), and organized summer camps programs (Fenning, et al., 2000).

Summer camps are recreational setting, in which children have the opportunity to participate in activities and games with peers on a daily basis, which foster inclusion and develop close relationships. Summer sport and leisure activity camps are usually designed to provide leisure and sport specific activities. These camps provide a wide range of sport (i.e., basketball) and leisure (i.e., art) opportunities for children and teens who love to try new and different activities or want to combine two or more interests. In these settings children get the chance to sample and enjoy a range of exciting sports and recreational pursuits in a high-energy environment or begin to develop sports skills and have the chance to learn or develop their game as an athlete (Thurber, Scanlin, Scheuler, & Hederson, 2007). However, there is no past evidence investigating the effect of DAP in summer camps. Thus, the purpose of the present study was to examine the impact of a three-week DCP on attitudes of children without disabilities toward the inclusion of a hypothetical peer with physical disability in a summer sport and leisure activity camp. Based on prior research in physical education, we hypothesized that the DCP would result in more positive attitudes towards disability.

Methods

Participants

Three hundred eighty seven campers without disabilities ($M = 11.25$ years old, $SD = .97$), from a summer sport and leisure activity camp in Northern Greece specialized in basketball participated in the study. The campers were divided into two groups, an experimental group ($n = 197$, $M = 11.08$ years old, $SD = .98$) that attended a DCP, and a control group ($n = 190$, $M = 11.43$ years old, $SD = .93$) attending the regular program of the camp which consisted of sports and leisure activities.

Instrument

Participants completed a modified version of the *Attitudes Towards Integrated Sports Inventory* (ATISI) (Block & Malloy, 1998). ATISI is a modified version of the *Children's Attitudes Towards Integrated Physical Education-Revised* (CAIPE-R) (Block, 1995), a validated survey instrument designed to measure children's attitudes toward inclusion of peers with disabilities in regular physical education. The version of the ATISI used for this study was modified from Block and Malloy (1998) in that statements contained within the inventory dealt with adaptations and attitudes toward inclusive participation on a basketball team. The questionnaire measures two dimensions of attitudes; a general dimension assessing attitudes towards inclusion in the team (8 items, example item - *It would be ok having a camper like John on my team*), and a sport-specific dimension measuring attitudes of participants with respect to specific rule and game modifications to basketball (5 items, example item - *It would be ok to allow John to shoot at a lower basket?*). Responses were given on a 4-point Likert scale from 1 (*no*) to 4 (*yes*). Higher scores indicate more positive attitudes towards inclusion (Table 1).

Table 1: Total Scores for General and Sport-Specific Attitudes

General Attitudes (8 items)	Sport-Specific Attitudes (5 items)
24 (yes)	20 (yes)
18 (probably yes)	15 (probably yes)
12 (probably no)	10 (probably no)
6 (no)	5 (no)

Disability Camp Program

The DCP designed for this study was based on the principles of the Paralympic movement and more specifically on the educational program called PSD. Consistent with PSD program, the aim of the PCP was to increase awareness and provide information about children with physical disabilities in the camp's enjoyable and playful environment. The DCP involved a range of practical and theoretical activities in which children enrolled by themselves such as disability simulation sport activities, information about Paralympic Games using lectures and video presentations and drawing activities with topics related to the Paralympic sports, athletes and equipment (<http://www.paralympic.org/the-ipc/paralympic-school-day>).

The DAP in the current study included ten activities (theoretical-practical): (1) Human Rights; (2) Information about Paralympic Games; (3) Boccia; (4) Classification; (5) Wheelchair Rugby; (6) Athletics; (7) Accessibility games; (8) Swimming; (9) Wheelchair Basketball; and (10) Drawing. The experimental group was divided in 10 sub-groups of approximately 20 children/per group. Each subgroup of children participated every day for 20 consecutive days in all the above mentioned activities. Each activity lasted for 35 minutes and children rotated to the next activity until the completion of all ten activities. Participants had the opportunity through the DCP to become aware of the personal uniqueness of individuals with a disability and to become familiar with a physical disability through the Paralympic Games (i.e., rules, adaptations and regulations of the events, famous athletes, equipment and actual participation). In addition, other activities, such as conversation regarding reading, discussion and watching a film that included a person with a physical disability, were organized during the midday.

Procedure

Upon the arrival of the campers, a written permission was granted from the parents and the camp directors. During the first day of the camp all children answered the questionnaire in which there was a hypothetical scenario in which a peer with a physical disability would be participating in their basketball league. Exact wording for the scenario follows: *John is a child who really enjoys playing basketball. However, due to the nature of his disability, he is unable to use his legs to walk and must, therefore, move around by using a wheelchair. He has the full use of his upper body. He is able to dribble, pass, and shoot the basketball, and also fully understands the rules of the sport. He has played in a wheelchair*

basketball league in the past; however, he is interested in playing in the sport camp league because he wants to have fun and meet other children without disabilities.

After being presented with this situation, participants were asked to comment on a series of statements designed to assess their attitudes toward participation of an individual with a physical disability in their basketball summer league. In the next 20 days the activities of the DAP were implemented to the experimental group. Children in the control group attended the regular program of the camp. During the last day the post-intervention measurement was held. In both measurements the questionnaires were administered during midday recess at children's cabins by the research personnel. The whole procedure was supervised by researchers, and both oral and written instructions were provided to children. All participants were reassured about the confidentiality of their responses and their right to withdraw.

Data Analysis

A 2 X 2 repeated measure analysis of variance was used to examine the effects of the disability awareness program on children's general and sports-specific attitudes (group X pre-post measure). In particular the first independent variable was "group" with two levels (experimental and control group). The second independent group was a within factor variable "measure" with two levels (pre and post measurement). Two such ANOVA's were conducted, one using the general attitudes as the depended variable and the other using sports-specific attitudes. The statistical package that was used was SPSS 19.0 (for Windows). The significant level was set at .05.

Results

Participants reported positive general and sports-specific attitudes towards the inclusion of peer with physical disability in summer sport and leisure activity camp. The correlations between the attitudes' dimensions were moderate to high in both measurements ($r > .79$). Analysis of variance revealed two significant main effects regarding *pre-post measure* ($F(1, 385) = 63.62, p < .001$, partial $\eta^2 = .142$) and *group* ($F(1, 385) = 99.08, p < .001$, partial $\eta^2 = .205$). Moreover an interaction between the two independent factors was also noticed ($F(1, 385) = 65.74, p < .001$, partial $\eta^2 = .146$). Whereas responses of the control group did not change between the pre and post measure ($M_{pre} = 14.41 \pm 3.09$, $M_{post} = 14.30 \pm 2.79$), the experimental group was significantly improved after the awareness program ($M_{pre} = 15.30 \pm 2.82$, $M_{post} = 17.88 \pm 1.79$) (Figure 1).

The same pattern of results was noticed for the sport-specific attitudes. In particular, the two main effects were statistical significant, *pre-post measure* $F(1, 385) = 84.26, p < .001$, partial $\eta^2 = .180$ and *group* $F(1, 385) = 56.73, p < .001$, partial $\eta^2 = .128$, as well as their interaction, $F(1, 385) = 65.53, p < .001$, partial $\eta^2 = .145$. Figure 2 depicts the observed interaction. Whereas responses of the control group did not change between the pre and post measure ($M_{pre} = 15.46 \pm 3.41$, $M_{post} = 15.64 \pm 3.16$), the experimental group was significantly improved after the implementation of the awareness program ($M_{pre} = 15.80 \pm 2.60$, $M_{post} = 18.73 \pm 1.73$) (Figure 2).

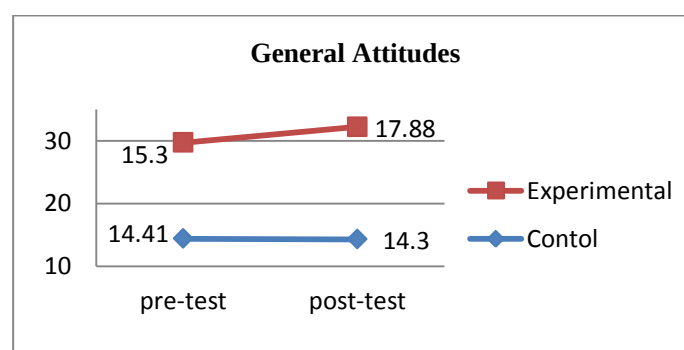


Figure 1: Scores of pre and post-test for General Attitudes

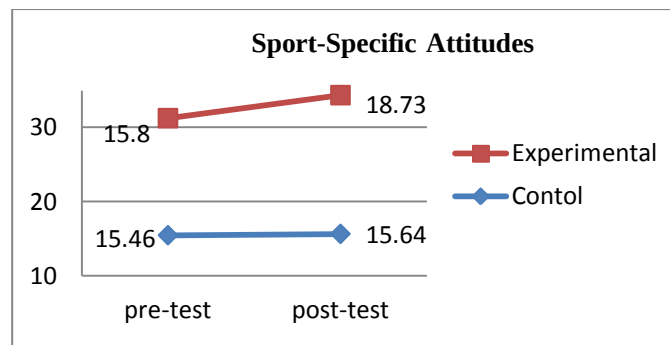


Figure 2: Scores of pre and post-test for Sport-Specific Attitudes

Discussion

The hypothesis of the present study was that the DCP would have a positive effect on the attitudes of children without disabilities. Results of the analysis supported our hypothesis on the positive effect of the DCP on general and sports-specific attitudes towards the inclusion of peer with physical disability in a summer sport and leisure activity camp.

Participants of the experimental group who attended the DCP surveyed in this study had relatively positive general attitudes toward the inclusion of a camper with physical disability in the summer sport and leisure activity camp. The mean score of 17.88 for the eight statements measuring this global general attitude indicated children participating in the DCP were generally receptive to having a camper with physical disability participate in their team. With respect to the general attitudes, findings of the present study are in accordance with past evidence suggesting that DAPs like *PSD* including information, assimilation games, and interactive group discussions about disability can shape the attitudes of children without disabilities (Liu, et al., 2010; Panagiotou, et al., 2008; Papaioannou, et al., 2013; Rillotta & Nettelbeck, 2007; Van Biesen, et al., 2006; Xafopoulos, et al., 2009). Also, results of this study are similar to results of other findings who implemented other DAPs in outdoor recreation activities (e.g., Block & Malloy, 1998, Townsend & Hassal, 2007). It appears that this type of activity can have a positive effect on children's attitudes. For example, Magouritsa's et al., (2005) and Hutzler's and Levi, (2007) revealed children were more favorable to accept peers with disabilities in their recreation outdoor activities after the implementation of intervention programs. Hutzler et al., (2007) suggested participation in active simulation disability activities increases children's attitudes toward inclusion of peers with disabilities positively.

Inclusion in an outdoor recreation setting such as summer sport and leisure activity camp where children get the chance to participate in activities and games with peers on a daily basis and develop close relationships should be effective in developing positive attitudes. A summer camp setting may allow children to take healthy risks in a safe and nurturing environment. Summer camps are a typical life experience for children and young people and in this setting children can learn new skills, build friendships, and experience personal growth. Unlike the school setting which emphasizes academics, the camp setting provides a unique experience emphasizing less-competitive sports, social interaction, and having fun.

As far as the sport-specific attitudes, as mentioned in the second part of the questionnaire, results showed the mean response score for these statements for the experimental group was 18.73. This score indicated attitudes of respondents toward sport-specific modifications (i.e., scoring system, height of basket, rule adaptations, equating competition by having another individual compete in a wheelchair) were positive, and nearly as favorable as the general attitudes toward inclusion statements. In addition, results of other studies indicated negative attitudes on sports-specific attitudes (Van Biesen, et al., 2006) or a decrease of attitudes after the inclusion of students with disability in general physical education classes (Korologou, et al., in press, Wilhite, et al., 1997). These other studies found some children, particularly older children, felt the adapted game was not very challenging because it was too easy, not competitive and differed from what they were used to (Kalyvas, et al., 2003). In addition, previous research seems to show are accepting of peers with disabilities physical education classes but not necessarily as teammates in a competitive sport setting (Wilhite, et al., 1997). One logical conclusion is that this is a natural behavior of children who want to share the game with powerful teammates in order to become winners. These other studies suggest inclusion in physical education in regular schools where the focus

is more learning and educational lead to more favorable attitudes compared to sports settings where the focus is more on competition and winning.

This contrasted to results of the present study which found that the DCP can promote a positive effect on sports-specific attitudes of campers based on the camps setting. Positive changes in sport-specific attitude in this study might be due to the fact that the DCP in this study was a multifarious program consisting of both theoretical and practical activities such as physical disability simulation, physical activities through non-competitive games, information through videos about individuals with disabilities who took place in a recreational setting. It is hypothesized that the present results are due to the fact that in summer sport and leisure activity camp most emphasis is on having fun on a daily basis for three weeks and be a part of a team rather than competition and winning (Papaioannou, et al., 2013). The way that the DCP was organized seemed to play a major role on influence of children's sport-specific attitudes (Liu, et al., 2010). To further promote positive attitudes, the researcher team in the present study initiated an interactive discussion among the campers at the end of the day. Also videos, reading, familiarity with sports for children with physical disabilities, and experiences in participating in basketball using wheelchair may have affected improvement in attitudes during the study. Perhaps the most important activity that lead to positive attitudes was though simulated disability sport activities like wheelchair basketball, wheelchair rugby and boccia. These simulated activities helped participants understand that it is not easy to participate in sports using a wheelchair, and these experiences most likely lead to positive attitudes towards making modifications to rules. In fact, after trying these sports children without disabilities felt it was difficult to play such a game, and this most likely led to favorable attitude towards changing the rules of their basketball game.

It should be noted that some of the simulated activities presented were chosen from previous Paralympic sports programs used in other studies. However, some of these activities such as shooting a basketball from a wheelchair proved to be too difficult for children aged 11 years old. It is recommended that age of participants and choice of activities be considered when planning of a disability awareness program.

Finally, although part of the PCP was focused on sports, it appeared to foster more generally positive attitudes since attention was given not only to the quantity but also to the quality of time which children spend together (Kippers, et al., 2003). Summer sport and leisure activity camps generally include the development of the whole child; not just how they are as an athlete but also how they are as a person, a bunkmate, a teammate, and a friend. It seems that these camps do much more than just improve a camper's soccer, tennis, or basketball skills; they help each child become a more skillful athlete, a more gracious competitor, a more committed team player, and a more confident and accepted person.

Given the discrepancy in this area between research from the physical education setting and the summer sport and leisure activity camps context, further research in this area is warranted. However, results of this preliminary investigation indicated more extensive future research is warranted to examine a number of variables (e.g., impact of level of competitiveness, different types of disability, intramural versus interscholastic activities, contact with children with disabilities and longitudinal follow-up study) associated with children in terms of their attitudes concerning inclusive outdoor recreation programs.

In conclusion, a DCP in outdoor recreation setting does not just happen; it needs to be planned. DCP have become a major force in promoting inclusion in recreational settings, particularly in a summer sport and leisure activity camp. The model used in the present study that combined elements of PSD not only provided the necessary support, but it also orientated the staff and helped to spread awareness about the inclusion. In addition, the content and the duration of a DCP appear to play a key role in creating an inclusive environment. There is a growing shift from segregated summer camp programs to a more integrated (Block, Horton, & Davis, 1997). Results of this study have shown that the PCP was able to provide quality programming to meet each children's individual needs but also providing young participants with or without disabilities an additional incentive to work together. Following the specific philosophy of community-based programs such as PCP can facilitate and promote positive attitudes. Although behaviors that reflects negative attitude can limit opportunities for individuals with disabilities. These negative attitudes and subsequent behaviors can be changed. The recreation professional can implement programs which are designed in moving participant's attitudes about people with disabilities from those that are negative to attitudes that reflect acceptance and understanding of diversity. Programs such as the PCP, which structure interactions, encourage extensive personal contact, promote joint participation, facilitate equal status, foster cooperating interdependence, focus on similarities, and develop effective communication, may be considered in developing positive attitude toward individuals

with disabilities. The model used in the present study that combined elements of PSD not only provided the necessary support, but it also orientated the staff and helped to spread awareness about the inclusion. The implementation of national as well as awareness educational program could contribute to develop positive attitudes toward inclusion of peers with disabilities in summer sport and leisure activity camps. This program are recommended to be implemented in recreational as well as educational settings because could be an effective pedagogical method in order to develop positive attitudes towards individuals with disabilities.

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TRANSITIONING CHILDREN WITH AUTISM TO AUSTRALIAN SCHOOLS: SOCIAL VALIDATION OF IMPORTANT TEACHER PRACTICES

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The transition of young children with autism from early intervention to school needs to be carefully managed in order to maintain intervention gains, protect against the risk of child-and-family anxiety, and enable a successful start to formal education. While many North American studies have mapped high-intensity practices for transitioning children with disabilities to school, only a few have recently examined autism-specific practices. The present study drew on this literature to identify and socially validate transition-to-school practices for Australian children with autism and their families. Queensland intervention and advisory teachers (N = 91) used an on-line survey to rate 36 transition practices. Results indicate that all practices were perceived to be highly important in the Australian context. Future transition-to-school research can draw upon this socially validated practice listing.

The increasing number of children on the autism spectrum requiring intensive supports provides an unexpected 21st century challenge to teachers and education systems (Coakley, 2010). The sharp spike in autism prevalence in the USA (Lord & Bishop, 2010) and Australia (MacDermott, Williams, Ridley, Glasson, & Wray, 2007), coupled with the complex communicative and socio-emotional needs of these children, can destabilise the routine process of transitioning young children to school. Considerable attention has been paid to how teachers use low-intensity practices to manage entry to school for most children and their families (Dockett & Perry, 2001; Pianta & Kraft-Sayre, 2003; Rous & Hallam, 2012), but competencies and practices needed by *sending* teachers to effectively manage this transition for children with autism have received little attention.

A strong North American commitment to mapping high-intensity practices for *sending* teachers to use with individual children with disabilities has been evident across the past three decades. For example, DeStefano, Howe, Horne, and Smith (1991) generated a listing with 16 transition practices; Odom, McLean, Johnson, and LaMontagne (1995) a listing with 22 transition practices; and Rous and Hallam (2006) a listing with 21 transition practices. In the main, these practice listings have focused on (a) interagency coordination and collaboration and (b) child and family preparation and adjustment.

The initial autism-specific study by Forest, Horner, Lewis-Palmer, and Todd (2004) drew on this comprehensive bank of practices to construct an autism-specific listing of 25 transition practices. They clustered these practices into an activity-based timeline of transition phases (12 months prior to kindergarten placement; 6-12 months prior to kindergarten placement; 6 months prior to placement; 3 months and 12 months follow-up after placement). They used this listing to interview families and teachers who were supporting three children with autism in transition between preschool and kindergarten and obtained retrospective ratings of perceived levels of importance and implementation of each practice on a 1-6 response format. High mean ratings of importance for most practices examined in this small-scale North American study provided the content validation for the listing. Denkyirah and Agbeke (2010) then used importance as the measure in a 10-item survey of issues identified by Forest et al. to gather information from sending teachers of preschoolers with autism in Ghana and the USA.

A gap has been acknowledged in teacher readiness to support and coordinate successful transitions into school for children with developmental disabilities generally (Hanson, 2005; Daley, Munk, & Carlson,

2011) and for children with autism specifically (Forest et al., 2004; Quintero & McIntyre, 2011). Many sending and receiving teachers presently have limited knowledge about effective, high-intensity transitions. *Teachers reported they did not use transition practices specific to children with special needs; rather, they used low-intensity practices such as those for the class as a whole* (Rous & Hallam, 2012, p. 233).

Rous and Hallam (2012) have articulated the need to focus on teacher practices that are responsive to context when transitioning individual children to school rather than to overfocus on strategies to teach children specific skills to deal with their transition. Similarly, drawing on previous autism-specific research (Forest et al., 2004; see, also, subsequent cross-cultural work by Denkyirah & Agbeke, 2010), Quintero and McIntyre (2011) argued that children with autism *may require more comprehensive transition supports than other children* (p. 418). They emphasised contextual issues in preparing for transition (e.g., practices related to engaging the transition team, including parents and receiving teachers) rather than strategies for preparing the child per se.

The present study was a response to the emerging need of Queensland teachers working in early intervention services to better support young children with autism to go to school. The state government has increased provision of autism-specific intervention services for these children and their families as prevalence has increased. This situation has placed additional pressures on teachers, parents, and children. Quintero and McIntyre (2011) reported that teachers were much more concerned about transitioning young children with autism to school compared to children with other developmental disabilities. Moreover, there is substantial evidence that parents of a child with autism are more stressed than parents of children of typically developing children and those with other disabilities (Keen, Couzens, Muspratt, & Rodger, 2010; Pisula, 2007). There is also considerable evidence that, from an early age, children with autism display more symptoms of anxiety and stress than other children especially in relation to coping with change (e.g., MacNeil, Lopes, & Minnes, 2009; van Steensel, Bögels, & Perrin, 2011; White, Oswald, Ollendick, & Scahill, 2009).

In order to establish an Australian listing of teacher practice in transitioning young children with autism to school, the study capitalised on the work of Forest et al. (2004) and, more broadly, on the collection of recommended practice studies for young children with disabilities. The aim of this study was to identify, through social validation, important practices from the perspective of teachers sending these young children from intervention programs to Preparatory (Prep) classes in government schools throughout the state of Queensland, Australia. Prep is equivalent to kindergarten elsewhere.

Method

Two interrelated methodological approaches—the definition of and judgment about transition practices—were used to construct the listing in this study. First, a listing included practices ranging across *service delivery patterns, organisational structures, programming principles, and instructional strategies documented as effective and relevant within a specific educational context* (Beamish, 2008, p. 44). Second, this listing was seen to require strong endorsement by practitioners (i.e., their social validation of the practice listing in the local context for service provision with its unique sociopolitical and geographical features). As a rule, practice inquiries in special education (e.g., Eichinger & Downing, 1992; Williams, Fox, Thousand, & Fox, 1990) and early intervention (e.g., Odom et al., 1995; McLean, Snyder, Smith, & Sandall, 2002) have used support from the field to validate practices.

Transition practice generation

The study followed the established procedure used to generate practice listings for special education and early intervention (Odom et al., 1995; Williams et al., 1990). This procedure has typically involved three steps (i.e., identify-sort-edit). In order to identify specific recommended practices (Bussye, Wesley, Snyder, & Winton, 2006), the literature is reviewed. In order to sort and reduce the set of practices from different sources, each practice (and its elements) is then compared for overlap and duplication. Finally, the practice is edited for contextual meaning. That is, while care is taken to retain the intent and integrity of the practice content, the language of the practice is adjusted to match that used within the service system. In this case, the service was the early intervention service of the Queensland Department of Education.

This structured identify-sort-edit procedure was used to generate a set of practices for transitioning young children with autism to school that is recommended, comprehensive, and contextually meaningful. Recommended practice has been described as systematically constructed, based on scientific and

experiential knowledge, and designed to facilitate sound decisions under specific circumstances (Bussye et al., 2006). Within this definition, all practices considered for this listing fitted within the Simpson (2005) classification of scientifically based and promising practices for children with autism. For example, in this study, one of the weaker practices in terms of evidence base was *social story*. This practice, however, was accepted for teacher scrutiny because it has been identified as promising autism-specific practice (Simpson, 2005), it has attracted strong support in the field (Reynhout & Carter, 2009), and it is a well-documented intervention for children with autism (see, for example, review by Test, Richter, Knight, & Spooner, 2012).

The first step led to the identification of 86 specific research-based practices. Practices were sourced initially from the autism-specific list of 25 practices provided by Forest et al. (2004). The extra 61 practices were identified from published practice listings from the more general disability literature (e.g., DEC, 1993, with 22 practices; DeStephano et al., 1991, with 16; Mitchell, 1991, with 1; Rous, 2008, with 21) and from specific articles (e.g., Fox et al., 2002; Stoner et al., 2007).

In the second step, practices were sorted into a working set of 36 practices. Eleven new practices relevant to autism were extracted from the extra disability practices over and above those in the Forest et al. (2004) practices. This set of practices was sequenced into five transition clusters, from initial planning to follow-up, as developed by Lerner, Lowenthal, and Egan (1998). All practices were checked for their feasibility (i.e., sensible and do-able by teachers) when supporting the transition of children out of and into educational programs.

The third step, editing, involved progressive rewording and elaboration of practices. Editing protocols used in previous studies provided a systematic procedure for assuring practice quality (Beamish, 2008; Beamish & Bryer, 2012). A three-part process was followed. First, the primary source for the wording of each practice was systematically re-checked, and its wording was adjusted to absorb refinements embedded in similar practices. For example, the teacher-friendly language used by Mitchell (1991) was used to elaborate on the brief wording of *Specific kindergarten placement is selected* used by Forest et al. (2004). This change more clearly expressed the teacher's practice in assisting parents to make a decision about placement (see Appendix, Decision support). Second, the list was reviewed independently by two early intervention teachers with both substantial field experience and specific postgraduate training in early intervention, and further minor contextual adjustments to wording suggested by these reviewers were made. Finally, researchers polished the wording across the list of 36 recommended practices (see Appendix).

Setting and sample

For almost 30 years, the Queensland Department of Education has made a substantial investment in providing a statewide early intervention service for young children with developmental disabilities, including those with autism. Teachers at these early childhood developmental programs (ECDPs) have always played a central role in supporting the transition-to-school experience for children and their families. In rural and remote communities with no local ECDP, advisory visiting teachers have performed this role. Both groups of teachers have acquired practical experience in transitioning young children with high support needs to school. Hence, the entire population of sending intervention and advisory teachers in this large governmental service was targeted as potential participants in the present study. A statewide invitation and recruitment process was undertaken across all education regions in order to obtain email addresses of potentially interested and experienced teachers at ECDPs and in advisory visiting teacher positions. This process yielded 123 potential participants for a statewide survey.

On-line survey development and administration

An on-line survey was constructed to collect teacher views about the relative importance of the identified 36 transition practices. Survey content comprised 10 demographics items (background information, teaching experience, and self-appraisal), the 36 practice items, and a final question to elicit any additional comments about transitioning children to school. The practice items were distributed across the five transition areas: Initial Planning ($n = 7$); Preparing Child and Family ($n = 11$); Preparing the Prep Class ($n = 8$); Introduction to Prep Class ($n = 7$); and Follow-up Support and Evaluation ($n = 3$). Each practice statement was presented with a six-category response format from *not important* to *highly important*. This response format was similar to that used by Forest et al. (2004).

The on-line content was prepared in LimeSurvey, a reliable open-source application hosted by Griffith University. The survey then received university ethics approval, was pilot tested by experienced early interventionists, and was activated in the middle of the school year (see Klieve et al., 2010). An initial email containing an information-and-consent package about the study established contact with the target population. A subsequent email invitation provided a direct link to the survey that allowed each individual to respond anonymously to the survey. A register of invitations then monitored all responses to the invitation and issued two follow-up email reminders to non-respondents at fortnightly intervals to boost the overall return rate (Cook, Heath, & Thompson, 2000).

Participants

Altogether, 91 teachers (74% response rate) submitted a completed survey. All but one were female ($n = 90$), and this gender distribution was consistent with that of teachers working in this service. Table 1 shows that most respondents (76%) worked in ECDPs fulfilling teaching and administrative roles respectively. Other respondents were advisory visiting teachers and other teachers performing a variety of support roles. Most respondents were in their midcareer years, in the 39-49 age bracket, but younger and older teachers also took part. Metropolitan, regional, and rural locations were well-represented in responses. The majority of respondents (56%) had a Bachelor of Education degree, and almost half the teachers (46%) held a qualification in special education.

Table 1. Key Characteristics of Responding Teachers

Characteristics	ECDP ^a Teacher ($n = 39$)	ECDP HOSES ^b ($n = 30$)	AVT ^c ($n = 14$)	Others ^d ($n = 8$)	Total ($N = 91$)
<i>Age (years)</i>					
<30	5 (71.4%)	0 (0%)	1 (14.3%)	1 (14.3%)	7
30-49	24 (42.1%)	21 (36.8%)	6 (10.5%)	6 (10.5%)	57
50+	10 (37.0%)	9 (33.3%)	7 (25.9%)	1 (3.7%)	27
<i>Location</i>					
Metropolitan	29 (61.7%)	10 (21.3%)	3 (6.4%)	5 (10.6%)	47
Regional	6 (25.0%)	10 (41.7%)	8 (33.3%)	0 (0%)	24
Rural	4 (21.1%)	9 (47.4%)	3 (15.8%)	3 (15.8%)	19
<i>Highest Teaching Qualification</i>					
Teaching Dip	1 (7.7%)	7 (53.8%)	4 (30.8%)	1 (7.7%)	13
BEd	14 (53.9%)	4 (15.4%)	3 (11.5%)	5 (19.2%)	26
BEd (Special Ed)	15 (60.0%)	8 (32.0%)	2 (8.0%)	0 (0.0%)	25
MEd	1 (16.7%)	1 (16.7%)	3 (50.0%)	1 (16.7%)	6
MEd (Special Ed)	6 (35.3%)	9 (52.9%)	2 (11.7%)	0 (0.7%)	17
Other	2 (50.0%)	1 (25.0%)	0 (0.0%)	1 (25.0%)	4

^aECDP denotes Early Childhood Development Program; ^bHOSES denotes Head of Special Education Services; ^cAVT denotes Advisory Visiting Teacher.

Responding teachers reported extensive experience not only in early childhood education and intervention but also in working with and transitioning children with autism (see Table 2). Experience in early childhood education was clustered and evenly dispersed across the 2-5 year (26%), 6-10 year (25%), and 11-20 year (27%) periods. By comparison, teachers with the most experience in early intervention were clustered across two periods: 2-5 year (35%) and 6-10 year (34%). In addition, three quarters of the teachers (76%) indicated that they had been working with children with autism for at least 6 years, and the majority (94%) had been involved in transitioning these children to school for at least 2 years. On average, teachers reported involvement in transitioning at least 17 children with autism to Prep across the 2005-2010 period.

Table 2. Work Experience of Responding Teachers

Experience	Early Childhood Ed ($n = 81$)	Early Intervention ($n = 83$)	With Autism ($n = 89$)	Transitioning ($N = 91$)
< 1 year	3.7%	4.8%	1.1%	5.6%
2-5 years	25.9%	34.9%	23.6%	43.3%
6-10 years	24.7%	33.7%	32.6%	32.2%
11-20 years	27.2%	16.9%	21.3%	13.3%
> 20 years	18.5%	9.6%	21.3%	5.6%

In this study, teacher experience was paired with knowledge of and confidence in the transition process. High to very high levels of knowledge and confidence were self-reported by 69% and 72% of respondents, respectively. The effectiveness of actual transitions during the 2007-2009 period received somewhat lower evaluations, with the majority of teachers assigning either a moderate (35%) or high (40%) rating to transitions in which they had involvement.

Analyses

The quantitative components of the survey comprising demographics and practice ratings were analysed using SPSS Version 18.0. The assessment of level of practice importance was measured on a 6-point scale from *not important* = 1 to *highly important* = 6. In order to examine the level of importance of each of the 36 practices, the research team then used two long-established benchmarking conventions: the 50% criterion level (Odom et al., 1995) and the more stringent 80% criterion level (Williams et al., 1990).

The text from the final comments, the qualitative component of the survey, was compiled and analyzed using the linguistic analytic tool, PASW Text Analytics for Surveys (TAS) 3. This SPSS-compatible software provided a systematic means for the research team to build, refine, and cross-member check a set of key issues or themes in respondents' views of and experience with the transition process. Automatically generated themes were reviewed by inspection of actual comments, renaming and expansion of themes if not appropriate to text, and final rechecking of text linkages to all themes. A bar graph showing the frequency of thematic issues was then produced and subsequently tabularized to display theme frequency (see Table 4). Finally, a graphic map (see Figure 3) was created to show theme importance (viz., circle size relating to frequency) and relationship between themes (i.e., the greater the thickness of the line between themes indicating the stronger the connection between themes).

Results

Ratings of practice importance

Figure 1 provides a summary of ratings for the 36 practices across five clusters: Initial Planning; Preparing Child and Family; Preparing for Prep Class; Introduction to Prep Class; and Follow up After Transition to Prep. All respondents assigned very high levels of importance (average mean scores all above 5; maximum possible score = 6), thereby exceeding the stringent 80% international benchmark convention for a recommended practice (Williams et al., 1990). Strong consensus about these highly sensible practices was evident among these sending teachers.

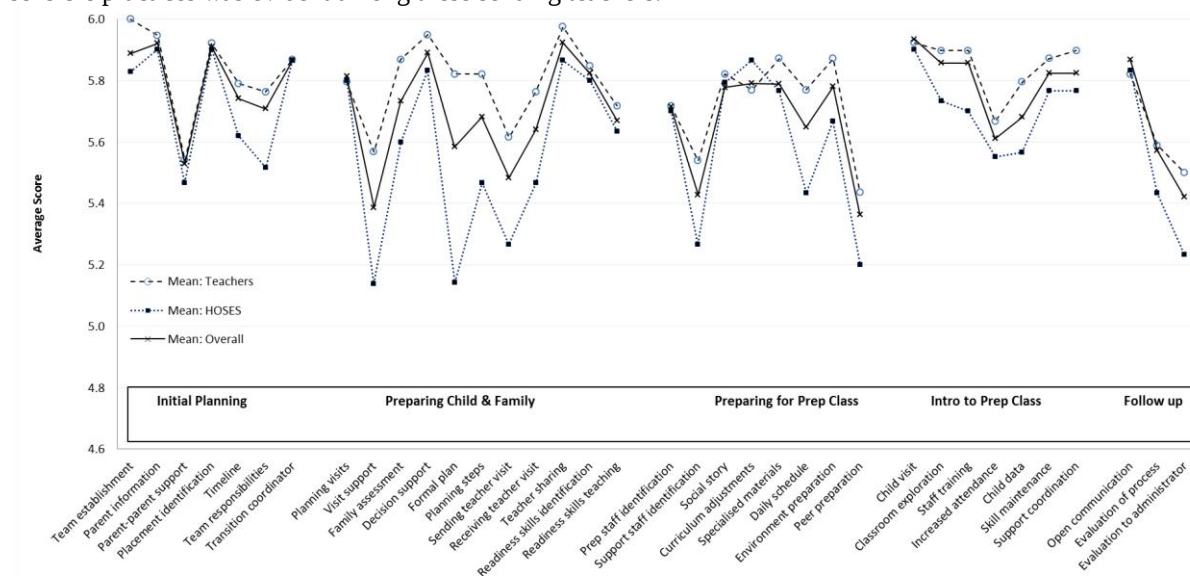


Figure 1. Mean ratings of importance for the 36 transition practices ($N = 91$).

Table 3 shows examples of some differentiation across practices. Participants gave slightly lower ratings to a few items scattered across the five areas. For the five most and least supported practices, average mean ratings ranged from 5.93 to 5.36 on the 6-point scale. These minor fluctuations in high ratings, which occurred within each cluster of transition practice, suggested that some practices were perceived as critical and others, while valuable, were potentially more subject to discretion in the field.

Table 3. Most and Least Supported Transition Practices by Mean Rating and Standard Deviation

Cluster	Transition Practice	Abbreviation	Mean	SD
Intro to Prep Class	Child is well supported on initial visit to Prep classroom	Child visit	.93	.127
Initial Planning	Parents are provided with information about the transition process and available program options	Parent information	.92	.171
Preparing Child and Family	Teachers (sending & receiving) share information about the child and link needs to curriculum, resourcing, and facilities	Teacher sharing	.92	.107
Initial Planning	Prep placement options (regular school, special school, specialised program) are identified	Placement identification	.91	.125
Preparing Child and Family	Parents are supported in making their decision for selecting a specific Prep placement	Decision support	.89	.148
Preparing Child and Family	Sending teacher visits receiving Prep classroom	Sending teacher visit	.48	.170
Preparing the Prep Class	Support staff needed for Prep placement are identified	Support staff identification	.43	.145
Follow-up	Evaluation of transition is passed on to administrator, who is responsible for transition planning	Evaluation to administrator	.42	.161
Preparing Child and Family	Parents and sending teacher visit multiple placement options at least one time	Visit support	.39	.176
Preparing the Prep Class	Prep children are prepared for the child's transition into the class	Peer preparation	.36	.113

Differences in role, location, and experience may have contributed to minor fluctuations observed among ratings. For example, in the Preparing Child in Family cluster, *teacher sharing* was one of the most highly rated practices (Mean = 5.92), while the practice of assessing multiple placements in *visit support* was one of the lowest (Mean = 5.39). While both practices require time and effort, the relative ratings may reflect the difference between a practice that is considered critical to effective transition and essential to the sending teacher's role versus one that is resource intensive and less practicable in the transition context.

The ratings of ECDP teachers and ECDP HOSES (i.e., administrators) were also graphed in order to consider whether their respective roles in sending a child with autism to school contributed to these minor fluctuations. Closer inspection of Figure 1 shows that the sending teachers consistently assigned higher ratings than HOSES. Moreover, in the Preparing Child in Family cluster, they gave higher ratings to 5 of the 11 practices. Respective roles appeared to contribute to these discrepancies, with teachers as aspirational *do-ers* wanting to deliver the best outcomes for the child and the family and administrators taking a more pragmatic view of do-ability because they are sensitive to procedural and resourcing issues.

Comments on transition practice

A large number of responding teachers (45%) took up the option to provide additional comment. These comments were expansive with some remarks exceeding 200 words. Some comments addressed a single issue or theme, but many covered several concerns about transition. Table 4 summarises the 12 key themes, with *the transition process* ($n = 36$), *links with parents* ($n = 15$), and *constraints* ($n = 12$) being the most frequently raised issues and concerns. Initial inspection revealed the espousal of professional values in all key issues.

Three examples related to these issues are cited to illustrate the kind of values held by teachers in this field (see below). In these examples, teachers affirmed transition as a distinct process in intervention practice for children with autism, acknowledged the critical role of continuous communication among stakeholders, and recognised the need to circumvent constraints on achievement of the best possible outcomes.

Transition is extremely important for children with Autism, as it is for all children with disabilities. We don't treat it as part of the IEP process; transition is treated as a separate process.

The most important factor in transitioning students with Autism into Prep is a continuous stream of communication between all staff (Prep, special education, specialists, other agencies) and parents.

Current practices are often based on 'the best you can do with what you have' and some very creative responses to meet children, families, teacher and school needs are required.

Table 4. Key Themes Raised in Final Comments by Frequency

Themes	Frequency
ransition	36
arent links	15
onstraints	12
eaming	10
tress	6
individualised approach	6
individual Education Plans (IEPs)	5
ommunication	5
lacement	5
administrative support	3
eacher training	3
mportance of Early Childhood Development Programs (ECDPs)	3

Figure 2 shows the varied response patterns among these issues revealed in TAS text analysis. Very strong links between issues, shown by the strength or thickness of lines, were evident between transition process and links with parents and between transition process and constraints. Quite strong linkages occurred between transition process, links with parents, teaming, and communication. These patterns of connections suggested that partnerships and communication between staff team and family are essential elements throughout the transition process.

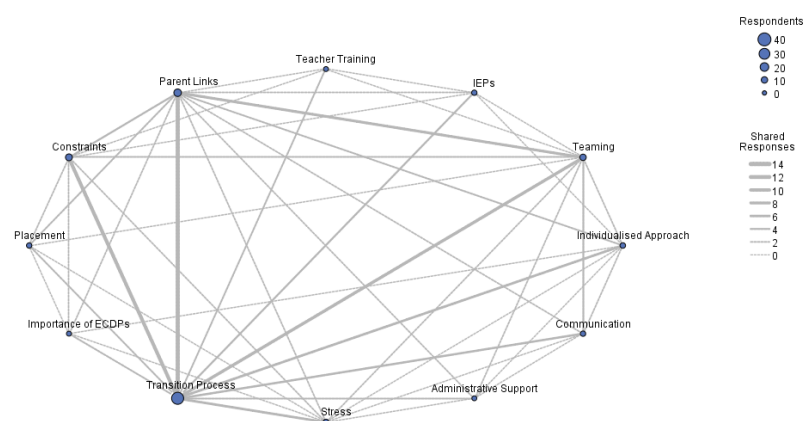


Figure 2 Connections among issues in final comment ($n = 51$).

This study brought together a range of sensible and feasible practices into a new listing of important practices. Sending teachers and administrators affirmed the importance of all of these practices to the transition process. However, their slightly less positive response to some practices suggested that salience and context are issues.

Discussion

This Australian study obtained sending teacher views about the importance of 36 transition-to-school practices previously identified as recommended practice in the North American context and compiled as a practice listing for the Queensland context. A substantial sample of experienced intervention and advisory teachers ($N = 91$; 74% response rate) dispersed over the wide geographic area of Queensland consistently allocated high ratings of importance to each and every one of these practices using an on-line survey. They did not choose to reduce the number of practices or to add to them. This strong endorsement confirmed the ecological relevance of the practices to this Queensland service. The sending teachers demonstrated their awareness that transition is a comprehensive process that extends beyond their specific roles and responsibilities (Rous & Hallam, 2012), and, in their extra comments, they made clear their awareness of contextual linkages affecting this process.

In the present study, strength of field endorsement exceeded expectation, with all transition practices surpassing the stringent 80% criterion level. These results are akin to those obtained by McLean et al. (2002) in the validation of the revised Division of Early Childhood practice listing. In that North American study, every practice was socially validated by a large field sample ($N = 388$; overall 51% response rate), and *for every practice, 90% or more of the respondents indicated either agree or strongly agree* (McLean et al., 2002, p. 123).

Comparison of the present study with the earlier Forest et al. study shows strong similarities in the core finding about importance. The present study involved a larger sample of 91 specialist teachers who were engaged in sending roles only. The Forest et al. sample was much smaller ($N = 10$) and comprised a mix of parents and early years teachers engaged in sending and receiving roles. Except for one of their 25 practices, the Forest et al. sample rated all practices above a mean level of 4.8/6.0. For our sample, all 36 practices were rated above the mean level of 5.35. For example, comparison of a specific practice about sending and receiving teachers sharing information (see Appendix, *Teacher sharing*) showed very little difference in teacher ratings, with a 5.92 mean rating in the Queensland sample and a 5.85 mean rating in the Forest et al. sample of early years teachers. Furthermore, the Forest et al. study provides some guidance for subsequent research activities in three aspects: (a) perceived importance ratings of teachers with different levels of qualifications and experience; (b) the perceived importance ratings of parents with their consumer perspective and experience; and (c) the pairing of importance ratings with those of implementation or use of transition practices within and between services.

The strong field validation of this transition practice listing is an important outcome. The present study delivers a local list of high-intensity practices, which teachers can put into immediate use in transitioning children into school. This research on specialist teachers' professional practice extends earlier work on strategies that enable children to make a successful transition and other work on teacher and parent perceptions about transition. For example, Australian research on early childhood transitions for children with developmental disabilities has identified essential skills that young children need to function effectively in regular school (e.g., Chadwick & Kemp, 2000, 2002; Kemp & Carter, 2000, 2005). Parents' views about transition issues have also been canvassed (e.g., Bentley-Williams & Butterfield, 1996; Campbell, 1997; Johnstone, McAlpine, & Wheeler, 1993), together with teachers' views about child-focused transition issues (e.g., Green & Kemp, 1998; Newman-Brewer, 1996).

Therefore, this comprehensive practice listing provides a legitimate Australian tool to investigate transition-to-school practice for children with autism and their families. The manageable size of this 36-item listing also provides a convenient tool for benchmarking transition practice in the field. Previous Queensland research on recommended practice (Beamish, 2008; Beamish & Bryer, 2012) indicates that specialist teachers value and use such lists when they are restricted to 30-40 items. A tool of this kind is essential to the setting up of professional action learning cycles in which individual teachers and teaching teams are willing to use a list of specified practices to accept, guide, monitor, and evaluate their practice over time (Umbreit, Ferro, Liaupsin, & Lane, 2007).

In addition, listing content can be infused into tertiary training programs and professional development activities. The building of teacher capacity in the area of transition-to-school practice can positively influence the implementation of these recommended practices (Wolery & Bailey, 2002). Moreover, because joint training of cross-agency staff is seen to increase the likelihood of team cooperation and collaboration across the transition process (Rous & Hallam, 2006), professional development activities can feature joint training opportunities for sending and receiving teachers and other stakeholders.

Limitations and future research

The present study was restricted to one early intervention service and its sending teachers. Immediate follow-up prospects involve a series of on-line surveys to strengthen the validation of this listing and refine practice content to suit child and family needs and service contexts. First, more extensive field testing in a range of services should be conducted in autism-specific intervention organisations, early education and care services, and schooling sectors across Australian states and territories. Second, surveys should be conducted to establish the acceptance of these practices by other key stakeholders who work in partnership with sending teachers in the transition-to-school process. These partners include receiving teachers, families, therapists, guidance personnel, and school administrators.

The iterative process of action research on this socially valid listing has the capacity to build a trustworthy knowledge base among stakeholders and a practical framework for meaningful ongoing communication among parents, teachers, and administrators. This iterative process is consistent with the current view that *successful transitions for children with autism need intensive parent-professional relationships and support for the future staff in program planning and monitoring in order to ensure that treatment gains are not lost* (Fava & Strauss, 2011, p. 517). Moreover, multiple perspectives may clarify whether stakeholders place less importance on practices in those transition phases in which they are less directly engaged.

Additionally, this initial inquiry sought views only on the level of practice importance. Level of practice implementation has yet to be investigated. An initial step is to follow-up with the intervention and advisory teachers who participated in the present study. These teachers assigned only moderate-to-high evaluation ratings to their transition experiences and also described the presence of constraints in their transition activities. Hence, this second survey will establish the *do-ability* of each validated practice, together with the identification of barriers and supports for practice implementation within this Queensland service.

Finally, within this large government service, it would be informative to conduct some case studies using the Forest et al. triadic format (sending and receiving teachers and parents) to examine practice importance and use simultaneously. The focus of practice around a single child would allow solution-focused actions to be generated for specific family conditions. Data from sufficient cases should facilitate building an enhanced transition support system into specific service policies and procedures.

Conclusion

This study represents the first Australian autism-specific inquiry into transition to school. As and when targeted federal and state funding to stimulate autism research has run its course in Australia, research of this kind should provide a starting point to examine the effectiveness of implementation and sustainability of these practices (Umbreit et al., 2007) for transitioning young children with autism to school. This practice tool seems likely to be highly portable across local communities and service systems. Moreover, with additional field testing and modification, the tool should assist individuals and teams to guide, assess, and monitor actual transitions against these practices.

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Appendix. Practice Listing for Transitioning Children with Autism to School

Abbreviation	Practice
Initial planning	
Team establishment	Transition team (parents and sending program staff) is established
Parent information	Parents are provided with information about the transition process and available program options
Parent-parent support	Parents have access to a key person (e.g., veteran parent) to support them through the transition process
Placement identification	Prep placement options (regular school, special school, specialised program) are identified
Timeline	Initial transition timeline is created
Team responsibilities	Contents of initial transition timeline include roles and responsibilities of team members
Transition coordinator	A team member is identified as the transition coordinator
Preparing child and family	
Planning visits	The transition coordinator arranges classroom visits to placement options
Visit support	Parents and sending teacher visit multiple placement options at least one time
Family assessment	Families' needs related to transition are assessed and addressed
Decision support	Parents are supported in making their decision for selecting a specific Prep placement
Formal plan	Transition plan is formalised
Planning steps	Transition plan includes specific steps to complete the transition
Sending teacher visit	Sending teacher visits receiving Prep classroom
Receiving teacher visit	Receiving Prep teacher visits sending program to observe child
Teacher sharing	Teachers (sending and receiving) share information about the child and link needs to curriculum, resourcing, and facilities
Readiness skills identification	Readiness skills needed by child to be successful in Prep placement are identified.
Readiness skills teaching	Identified readiness skills are taught to the child, and progress is monitored
Preparing the Prep class	
Prep staff identification	Staff to work with child in Prep are identified
Support staff identification	Support staff (e.g., speech & language pathologist, occupational therapist, physiotherapist, autism advisor) needed for Prep placement are identified
Social story	A social story about the transition to Prep is created for the child
Curriculum adjustments	Adjustments to the Prep curriculum are identified
Specialised materials	Materials specific to the child's needs at Prep are created/ modified
Daily schedule	Individual daily schedule for the child at Prep is created
Environment preparation	Prep learning environment is made ready/ appropriate
Peer preparation	Prep children are prepared for the child's transition into the class
Introduction to Prep class	
Child visit	Child is well supported on initial visit to Prep classroom
Classroom exploration	Child is allowed to explore the Prep classroom at times of low stress and with few expectations
Staff training	Staff to work with child in Prep program are provided with the necessary training
Increased attendance	Child's attendance at Prep program is gradually increased
Child data	Child's file and data are sent to the receiving school administrator

Skill maintenance	Arrangements for maintenance of child's existing skills and behavioural supports are put in place
Support coordination	Support staff to work with child in Prep classroom are coordinated and monitored
Follow-up support and evaluation	
Open communication	Communication lines are kept open between receiving and sending teachers through telephone calls, e-mails, and personal contact
Evaluation of process	Parent and teachers (receiving and sending) evaluate the transition process
Evaluation to administrator	Evaluation of transition is passed on to administrator, who is responsible for transition planning

WHAT DOES TEACHERS' PERCEPTION HAVE TO DO WITH INCLUSIVE EDUCATION: A BAHAMIAN CONTEXT

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Bahamian classrooms are comprised of students with varying disabilities (emotional, physical, mental, and learning), and these students are failing to meet the requirements of their various grade levels due to inadequate interventions critical to addressing their individual needs. For these needs to be met in mainstream classrooms, Inclusive Education is inevitable. Consequently, a qualitative phenomenological study was conducted to survey perceptions of primary school teachers towards this practice. The sample included teachers from various schools within New Providence, The Bahamas. Data was collected through semi-structured interviews. Responses were qualitatively analyzed for themes and main concepts through open-coding. The study emphasizes the need to recognize teachers' perceptions towards inclusive education as a fundamental aspect of the practice's success in primary schools. Findings indicated that ninety percent of the teachers interviewed expressed negative perceptions of inclusive education. It was also revealed that the most prevalent influencing factors of the teachers' negative perceptions were lack of training in special education and inclusive education, and lack of resources. Twenty percent of the teachers expressed positive perceptions of inclusive education, stating however, that the success of such a practice depends greatly upon a myriad of elements.

If the right to education for all is to become a reality, it is imperative that all learners have access to quality education that meets every student's individual learning needs. Still, today, millions of children continue to experience exclusion within education around the world, according to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 1994). Education should be effective, therefore, education should not be about making schools available to whom it is easily accessible. It should be about being proactive in identifying the obstacles which learners encounter while attempting to access Inclusive Education opportunities. Additionally, effective education should seek to remove those obstacles which result in students' exclusion.

The implementation of the principle of Inclusive Education depends primarily upon a fundamental change of the mainstream school system; Inclusive Education advocates that children with special needs have to be educated along their normal peers in the regular classrooms. According to Foreman (2008), schools should provide for the needs of all the children in their communities, regardless of ability and disability. In order to achieve this undertaking, teachers in inclusive classrooms play a major part through their attitudes. The practice of Inclusive Education requires the involvement of and collaboration between educational professionals.

At present in The Bahamas there are students within general education classrooms who are unsuccessfully meeting grade level requirements because their needs are not met in their respective educational environments (Ministry of Education National Commission on Special Education, 2005). Coupled with low achievement, is the fact that many of the Bahamian public schools are comprised of a large number of foreign nationals, for whom language and cultural barriers exist, preventing academic success for these students. Consequently, this study was conducted to ascertain teachers' perceptions of Inclusive Education, and the influences of their perceptions.

In addition to the students' frustration resulting from low achievement, teachers are also frustrated because they lack the means and knowledge of instructional methods for educating Special Needs students (Ali, Mustapha, & Jelas, 2006). In contrast, some teachers refuse to instruct the students who are characterized as *slow* or *struggling* and would rather focus on the more independent workers often referred to as the *high flyers*. The role of teachers in Inclusive Education is a crucial one; it is imperative that their perceptions towards this practice are assessed so that necessary elements are implemented in an effort to address both the students' and teachers' needs. The preceding factors are the rationale behind the decision to conduct this study on teachers' perceptions of Inclusive Education. While many teachers welcome the change, some may feel challenged, even confused, about the expectations of their new role as an Inclusive Educator. This study is crucial in determining reasons for teachers' apprehensions towards including special needs students into their classrooms. Through this study, best practices for the implementation of inclusive Education within a Bahamian context have also been explored.

Inclusive education is a reality in The Bahamas; not in terms of the actual instructional practice, but in terms of the composition of the primary schools' classrooms. These classrooms are comprised of students with mixed abilities as well as special needs (a diverse range of needs often caused by a medical, physical, mental or developmental condition or disability).

DeBoer, Pijil, & Minnaert (2011) suggest that the successful implementation of inclusive policies is greatly dependent upon the educators' acceptance of them. Therefore, teachers' perceptions of inclusive education must be evaluated in an effort to improve the deficiencies within the education system which negatively influence their perceptions and attitudes. Inclusion implies accommodating the learning environment and curriculum to meet the needs of all students and ensuring that all learners belong to a community (Cushner, McClelland, & Safford, 2012).

Unfortunately, many educators have reservations about Inclusive Education and the thought of supporting the wide spread placement of students with special needs in general classrooms. According to Shade and Stewart (2001), one of the main factors influencing the successful implementation of any inclusive policy is the positive attitude of teachers; teachers' acceptance of the policy of inclusion is likely to affect their commitment to implementing it (Bradshaw, 2003; 2004).

Over the years, inclusive education research has yielded varied results. Avramidis, Bayliss, and Burden's (2000) study suggests attitudes towards inclusive education are strongly influenced by the nature of disabilities. In contrast, Blackman, Conrad, and Brown (2012) found that teachers were positive about including only those children whose characteristics were not likely to require extra instructional or management skills on the part of the teacher. (David & Kuyini, 2012) indicate that some change in attitude has occurred over the past 10 years, partly as a result of teachers experiencing working with students with special needs. Although it is important to evaluate teachers' perceptions of Inclusive Education, it is even more critical to determine the factors that influence these perceptions because it is these factors which serve as obstacles to the success of any Inclusive Education program.

The purpose of this present study is to ascertain what perceptions primary teachers have toward Inclusive Education, and the factors that influence their perceptions. As a result of this study, the Government of The Bahamas will be well-informed as to the areas that need to be improved upon within the public primary schools, in an effort to make Inclusive Education an effective practice.

In the Individuals with Disabilities Education Act (IDEA) and the Americans with Disabilities Act (ADA), it is clear that students with disabilities must be educated in regular education settings to the maximum extent appropriate in light of their needs, and prohibit their exclusion unless education there cannot be achieved satisfactorily even with appropriate supplementary aids and services. Therefore, it is imperative to ascertain primary teachers' perceptions about Inclusive Education because they are the persons who will be required to effectively execute this practice. Through ascertaining the reasons behind teachers' perceptions towards Inclusive Education, the Department of Education would be better able to accommodate teachers through the provision of the necessary tools that would make them more accepting of Inclusive Education.

This study is imperative to the development of Inclusive Education in primary schools throughout The Bahamas. As a result of this study, it is hoped that training and instruction at the primary (elementary) level may be enhanced so that teachers will be able to enter classrooms confident in their ability to cater to the special needs of all students in their mainstream classrooms.

Theoretical Framework

This study's theoretical framework is based upon Vygotsky's Social Constructivist Theory, which is supportive of the implementation of more Inclusive Education classroom practices. This theory supports that such implementations should be carried out via emphasis on the sociocultural context (of the classrooms), the role of social activity in learning, and the contributions of learners to their own development.

Research Questions

The research questions that guide this research are as follows:

1. What are the positive and negative perceptions of primary school teachers towards Inclusive Education?
2. What are some possible factors that influence teachers' perception towards inclusive education?
3. What are some recommendations for promoting best practices for inclusive education at the primary school level?

Review of Literature

According to Cushner, McClelland, and Safford (2012), inclusive education refers to *the practice of including another group of students in regular classrooms: students with physical, developmental, or social-emotional disabilities, and those with chronic health problems* (p. 403). The philosophical basis of Inclusive Education rests on the principles that heterogeneity within a group is both unavoidable and desirable, and that differences in ability are not marks of greater or lesser worth. The idea of Inclusive Education is to provide whatever adaptations are needed (as unobtrusively as possible) in an effort to ensure that all students (regardless of their disability) can participate in all classroom experiences, and as much as possible, in the same manner as everyone else.

The fundamental characteristic of inclusive education is the teachers' willingness to accept students with special needs; their attitudes and knowledge about inclusive education are important as these are indicators of such willingness. The review serves to emphasize and explain the factors that influence these teachers' perceptions. It is crucial to ascertain why teachers perceive Inclusive Education the way in which they do so that policy makers can address the deficiencies in an effort to ensure successful inclusion of all students with special needs. The review of literature comprises three sections: Firstly, it provides a cross section of recent studies that have examined teachers' perceptions of Inclusion and the influencing factors. Secondly, it compares the findings of these interrelated studies. Finally, it presents implications of the research presented in relation to teachers' perceptions of Inclusion, which, if ensued, will consequently enhance the success of Inclusive practices within primary classrooms.

Inclusive Education Research

Extensive research has been conducted in an effort to examine teachers' attitudes on Inclusion (Avramidis, Bayliss, & Burden, 2000; Hammond & Ingalls, 2003; Ali, Mustapha & Jelas, 2006; Loreman, Forlin, & Sharma, 2007; Jerlinder, Danermark, & Gill, 2010; De Boer, Pijl, & Minnaert, 2011). Avramidis and Norwich (2002) reviewed a variety of international studies carried out on teachers' perceptions of Inclusive Education, and explored various factors that could possibly have an impact upon teacher acceptance of the Inclusion principle. Their results found evidence of positive attitudes of teachers, but no evidence of acceptance of a total inclusion. Teachers' attitudes were found to be strongly influenced by the nature and severity of the students' disabilities presented (child-related variables) and less influenced by teacher-related variables.

A review of literature compiled by Avramidis and Norwich in 2002, contend that teachers' attitudes could become more positive if more resources and support are provided. This review of literature indicates that a key element in the successful implementation of the Inclusive Education policy is the views of the personnel who have the major responsibility for implementing it - that is, teachers. Teachers' beliefs and attitudes are critical in ensuring the success of inclusive practices since teachers' acceptance of the policy of inclusion is likely to affect their commitment to implementing it (Norwich, 2002). Other researchers (Carrington, S. & Brownlee, J., 2001; David, R., & Kuyini, A.B., 2012) mention that although teachers may agree on a theoretical level with inclusion, they have negative attitudes as far as its implementation is concerned. Teachers' negative attitudes towards disability lead to low expectations from their students which result to decreased learning opportunities and low academic performance (Carrington & Brownlee, 2001). Avramidis and Norwich (2002) also discovered that

teachers who have no direct experience with integration, have very negative attitudes whereas those with more experience with disabled people adopt more positive attitudes towards integration.

De Boer, Pijil, and Minnaert (2011) also show that educational environment-related variables, such as the availability of physical and human support, were consistently found to be associated with attitudes to inclusion. According to Avramidis and Norwich (2002), various studies concur that teachers' attitudes towards Inclusion are strongly influenced by the nature of the disabilities and/or educational problems being presented, the professional background of teachers, limited or non-existent training for teachers to acquire integration competencies, teachers' lack of confidence both in their own instructional skills and in the quality of support personnel available to them.

Hwang and Evans (2011) conducted a study which examined thirty-three Korean general education teachers from three primary schools in Seoul regarding their attitudes towards, and willingness to accommodate, the needs of a student with a disability. The study incorporated both quantitative and qualitative methods of research, and the results revealed that 41.37% of general education teachers had positive attitudes towards inclusion programs, while 55.16% were unwilling to actually participate in the practice of Inclusive Education. Qualitative findings reveal that the teachers' reluctance towards the practice was due to a lack of training in the area of Inclusive Education. Additionally, teachers expressed that they did not have enough time to effectively meet the needs of students with disabilities as well as those without disabilities simultaneously.

As the relationship between general and special education is one of co-equal partnership and mutual support, Muhanna (2010) argues that administrative support and collaboration are powerful predictors of favorable attitudes towards full inclusion. As with previous studies conducted by Subban and Sharma (2001), this study agrees that although many teachers express a willingness to accommodate students with disabilities in their classroom, this willingness varies according to the type and extremity of the students' disability, and the resources provided to support Inclusive Education.

Kilanowski-Press, Foote and Rinaldo (2010) investigated the state of inclusion practices in general education classrooms via a survey of seventy-one inclusion teachers serving as special educators across the state of New York. Small group instruction, co-teaching, one-to-one instruction, and planning support were explored in relationship to class size, number of students with disabilities, and severity of disability. In this study, Kilanowski-Press, Foote, and Rinaldo (2010) suggest that a lack of understanding of what Inclusive Education is, presented an impediment to the process of improving the quality of inclusive special education practices.

Inclusive Education Implementation Strategies

According to Scruggs, Mastropieri, and McDuffie (2007), providing educators with greater awareness of the range of inclusion programs in our schools is a first step toward success in inclusive education. This implies, therefore, the teachers must be knowledgeable about all that inclusion entails, if they are to successfully implement the practice.

Several studies which were conducted on best practices of Inclusive Education (Carrington & Brownlee, 2001; Cushner, McClelland, & Safford, 2012) highlight the importance of teacher collaboration. Carpenter and Dyal (2001) assert that inclusion is most effective when proactive principals establish models of effective co-teaching. However, in an effort for collaboration between general classroom teachers and special education teachers to be effective, teachers' perceptions must be positive in this regard. Kilanowski-Press, Foote, and Rinaldo (2010) suggest that, given teacher reports indicating an overall lack of preparation for work with students with disabilities in their training programs, it is plausible that the quality of inclusion programs established in the schools may suffer as a result of both attitudinal and training factors.

David and Kuyini's (2010) study reveals that teachers with more than three students with disabilities in their classrooms displayed the least effective classroom practices. This suggested that the greater the number of students with disabilities in the classroom, the less the evidence was of teachers' effective classroom practices on social inclusion. Correspondingly, Kavoori (2002) in relating the success of inclusive classrooms in New Delhi stressed that it is dependent on the number of students with disabilities in the regular classroom. The need for extra time and additional responsibilities imposed on teachers by the increase in number of students with disabilities in classroom is expected to affect teaching processes and teachers' attitudes as well.

Subban and Sharma (2001) concur with Bradshaw and Mundia (2006) in their study when they state that *It is probable that teachers who received the appropriate training experienced fewer concerns about including students with disabilities into mainstream settings, as the training provided them with some form of preparedness* (p. 50). The increased need for more specialized training and professional support is viewed as critical to the success of inclusive education. Sharma, Ee, & Desai (2003) in a comparative study between Singapore and Australia, found that training in special education appeared to lessen pre-service teacher's concerns regarding inclusive education.

Subban and Sharma (2001) advise that educational planners and policy makers should incorporate practical and effective instructional techniques that would be useful in the inclusive classroom, into teacher preparation programs and professional development programs. This view is supported by the recommendations of the Meyer Report (2001) which acknowledges the need for additional support, training and expertise for general education teachers (Department of Education Victoria, 2001).

Blackman, Conrad, and Brown's (2010) findings suggest that there were significant differences between Barbadian and Trinidadian teachers' attitudes towards integrating special needs students in general education settings. Blackman, Conrad and Brown (2012) admit that more research is required in an effort to understand the basic factors which influence the attitudes of Caribbean teachers towards the integration of students with special needs in mainstream settings.

In accordance with the framework of Vygotsky's Social Constructivist Theory, Brown, Odom, and Conroy (2001) suggest that positive interactions between students with and without disabilities determine the success of Inclusive Education within any given classroom. This theory supports that learning is a social advancement that involves language, real world situations, and interaction and collaboration among learners (Rodina, 2007).

Cook (2001) implies that in order for teachers to effectively facilitate such positive interactions, they need to have a positive disposition or attitudes towards students with disabilities and strong sense of self-efficacy. Blackman, Conrad, and Brown (2012) suggest the use of successful strategies including: continued and varied professional development exercises, single courses and content-infused approaches, and inclusive units of study.

There is sufficient evidence in the literature that suggests that teacher attitudes are a decisive factor in determining the success of Inclusive Education programs and the philosophy of Inclusion (Jerlinder, Danermark & Gill, 2010; Avramidis & Kalyva, 2007; Niemeyer & Proctor, 2002). Teachers determine whether or not the theories associated with the philosophy of inclusive education translate into the actual practice within educational realms.

The increased need for more specialized training and professional support is viewed as critical to the success of Inclusive Education (Hammond & Ingalls, 2003; Sharma, Ee, & Desai, 2003; Van Reusen et al., 2001). Sharma, Ee and Desai (2003) in a comparative study between Singapore and Australia, found that training in special education appeared to lessen pre-service teacher's concerns regarding Inclusive Education. According to Leatherman (2007), it is reported that teachers need coursework on strategies for working with children who have disabilities. Additionally, practical hands-on experiences in inclusive classrooms are required in an effort for teachers to feel comfortable to teach all children.

In an effort for an Inclusive Education program to be effective, certain resources must also be in place. Without the necessary resources, Inclusive Education would not be very successful (Leatherman, 2007). In this study, findings indicate that the availability of support services was a factor that teachers perceived as important in order to have a successful inclusive classroom. The types of services considered beneficial are consultation with speech and language therapists, physical therapists, occupational therapists, and special educators.

A major factor, as noted in the study by Hwang and Evans (2011), in the success of Inclusive Education is the degree of collaboration between general and special teachers, and their perceptions of their respective roles. This study argues that administrative support and collaboration are powerful predictors of favorable attitudes towards full inclusion.

Kilanowski-Press, Foote, and Rinaldo (2010) explain that when understanding the implementation logistics and success of inclusive practices, including collaborative and consultative teaching models, it is imperative to realize the impact that interpersonal factors may have in terms of the program's overall success.

Cook and Friend (1995) identify the need for mutual understanding between general and special educators in terms of instructional beliefs, time for solid instructional planning, agreement on the establishment of classroom routines, establishment of classroom discipline norms, as well as parity, or the projection of both teachers as equally responsible for instruction, as critical components of strong collaborative teaching programs. However, underlying such efforts is the necessity of both general and special educators to work together in a mutually respectful manner that is devoid of territoriality or power struggle.

The preceding review of literature has emphasized several influencing contributors of teachers' negative perceptions towards inclusive education. Although teachers' perceptions in some studies were less negative than those in other studies, identical negative influences were prominent among all of the studies explored. This review of literature has shown that a lack of resources, inadequate teacher training, lack of knowledge about inclusive education, and the number of students with disabilities within one classroom setting contributed to the teachers' negative perceptions.

Teacher collaboration, student interactions, instructional techniques, and teachers' attitudes were common factors which, according to the findings of the various studies, can affect the successful implementation of inclusive education. If inclusive education is to be a success, all stakeholders must assume responsibility for their role in this practice, and realize that without collaboration, inclusive education will never become a reality.

Method

Study Setting

The Ministry of Education is the governing institution for education in The Bahamas. There are two hundred and six schools in the school system of The Bahamas; one hundred, sixty-one are fully maintained by the government and forty-five are private schools. Of the one hundred and sixty-one public schools, fifty are situated on New Providence and one hundred and eleven are in the Family Islands. Schools are divided into districts. The following are the school districts within the island of New Providence: North Eastern, North Western, South Eastern, and South Western. There are approximately eight hundred primary school teachers within New Providence (Retrieved from Bahamas Education website: <http://www.bahamaseducation.com/teachers.html>).

The primary category caters to preschool and grades one to six (1 - 6), after which pupils transfer to the junior category (grades 7- 9) and later to the secondary category (grades 10-12). These levels are fairly distinct in the Department of Education schools in New Providence with slight variations in Family Island schools, where some All-Age schools remain. The Bahamas, like many Caribbean islands, follows the British educational system therefore, the national examination is the Bahamas General Certificate of Secondary Education (based on the British equivalent). Teachers are given preference for employment if they possess a Bachelor's Degree and Teachers Certificate from an accredited college or university.

Due to large class sizes within the public schools comprising of students from various ethnicities and ability levels, the practice of inclusive education is critical (Commonwealth of The Bahamas National Census of Special Education Population and Related Services Grades 1-12 Report, 2005). According to this report, of the 5,396 students who were noted as having special needs, a combined total of 3,236 were categorized as slow learners or remedial. It is this reason why the Department of Education has decided to pursue the practice of Inclusive Education within the public schools. This qualitative study took place among public primary schools within the island of New Providence in The Bahamas.

Study Design and Data Collection

The research methodology used in this study was a qualitative phenomenological design which was reflective of semi structured interviews with participants using preset questions outlined by the researcher. Data was collected through the use of semi-structured interviews conducted with ten public primary school teachers. The interviews were tape-recorded and immediately transcribed. Analysis was conducted through the process of open coding (Miles & Huberman, 1994; Strauss & Corbin 2007). Working within the research structure provided by the research objectives and the conceptual framework,

transcribed data was qualitatively analyzed through open coding to establish themes and main concepts. Recurring topics in the text were recognized as themes and sub-themes. A table of central themes and sub-themes was constructed. This process allowed a deeper understanding and explanation of issues that were being studied. To ensure greater validity and reliability a peer reviewer read through the data to ensure themes and categories corresponded with the research questions.

Participants

Utilizing convenience sampling, a group of teachers ($n=10$) were selected, who met the following inclusion criteria: These teachers were all primary school teachers employed by the Ministry of Education, with a minimum of 5 years teaching experience, and currently posted at a school within the island of New Providence, and consisted of males and females. Convenience sampling was utilized, because of feasibility and access to the participants (Andrews & Frankel 2010). The schools used English as the language of instruction and catered mostly to students of families from low income groups. Class sizes across schools ranged from 30-35 (mean = 34 students) (Commonwealth of The Bahamas National Census of Special Education Population and Related Services Grades 1-12 Report, 2005). All participants were informed of their rights as it relates to the Institutional Review Board.

Findings

Results from the study revealed that primary school teachers' perceptions of inclusive education are primarily negative. Upon analysis of the data collected, the following themes emerged as the most prominent among teachers' responses in regards to the factors which influenced their perceptions towards the implementation of inclusive education (a) lack of teacher training, (b) insufficient resources, (c) limited administrative support, (d) teachers' attitudes, (e) large class sizes, and (f) poor building infrastructure. Although rarely identified as a contributing factor of the teachers' negative perceptions, the misunderstanding of what inclusive education meant, was a significant factor for two of the respondents (20%).

The participants within the study were very candid with their responses. While most of the teachers (60%) demonstrated negative attitudes towards the implementation of inclusive education within primary schools, some of the teachers (30%) displayed mixed feelings about the practice, and one teacher (10%) firmly support the practice of inclusive education (see table 1 for teachers' perceptions of inclusive education by gender and teaching experience). In general, the teachers viewed the idea of inclusive education as an extremely difficult feat due to the myriad deficiencies within the public education system, which, in their opinion, would impact the success of inclusive education. Teachers reported that at this present time, *it is not feasible for the government of The Bahamas to venture into such an undertaking because there are too many concerns in dire need of immediate resolution.*

The mean age of teachers was 37 years and the mean number of years of professional experience was 12. With the exception of two participants, all teachers were married and had children. Ninety percent of the teachers within the group ($n = 9$) had completed a Bachelor of Arts Degree in Primary Education, which involved 4 years of teaching training. One male teacher had completed a Doctorate of Education Degree, which involved eight years of training (see table 2 for demographic information about teachers).

Positive and Negative Perceptions of Inclusive Education

Teachers' perceptions of inclusive education in the primary schools were primarily negative. Of the ten teachers interviewed, only one teacher (10%) fully supported the idea of inclusive education. This respondent stated, *I think this [inclusive education] is what education is all about. Students should not be stigmatized; they should be taught in an inclusive environment because we are preparing these children for life.* Similarly, another teacher reported, *It is a great idea; we need it [inclusive education] because the number of students who fall into such category has increased over the years.*

The teachers who expressed mixed feelings towards the implementation of inclusive education agreed that the practice is an excellent idea, and it could work as long as the prerequisites are in place. To this effect, one of the male respondents said, *Inclusion could work, but you can't make teachers accept this practice if they are against it.* Another male respondent reported, *It is a lofty idea but a strong foundation must be built before implementing inclusion.*

The teachers did not perceive inclusive education as being beneficial to students with disabilities. One teacher proposed that the practice should not be implemented in primary schools because the special needs students may feel ostracized, and their non-disabled peers disadvantaged. Many of the teachers felt

that the non-disabled students would be negatively impacted by inclusive education due to classroom teachers spending too much time with the special needs students. The teachers were of the opinion that

Table 1. Teachers' Perceptions of Inclusive Education by Gender and Teaching Experience

		Strongly Disagree with the implementation of Inclusive Education	Somewhat Disagree with the implementation of Inclusive Education	Strongly Agree with the implementation of Inclusive Education
Gender				
	Female	3	2	0
	Male	3	1	1
	Total	6	3	1
Years of Teaching Experience				
	5-10	3		
	11-15	1	2	
	16-20	1	1	1
	>20	1		
	Total	6	3	10

Table 2 Demographic Information About Participants

Variable	n	%
Gender		
Female	5	50
Male	5	50
Age		
20-29	1	10
30-39	6	60
40-50	2	20
>50	1	10
Years of Teaching Experience		
5-10	3	30
11-15	3	30
16-20	3	30
>20	1	10
Current Grade Level		
1	1	10
2	0	0
3	4	40
4	0	0
5	1	10
6	1	10
^a Other	3	30
Professional Qualifications		
Associate's Degree	0	0
Bachelor's Degree	9	90
Master's Degree	0	0
Doctoral Degree	1	10
Total	10	100

Other = Physical Education.

students with disabilities, regardless of the severity, would benefit more from being taught in *special schools* with teachers trained in special education. One teacher stated, *There should be a special education unit attached to every public primary school.*

One of the female teachers, who held a negative perception of inclusive education, stated that she would only reconsider the idea of its implementation if she had a disabled child of her own. Subsequently, another teacher agreed that one factor which would positively influence her perception towards inclusive education is empathy. *If you [the teacher] could put yourself in the parent's or special needs child's position, you would ask yourself, 'What kind of education would you want this child to have?'*

The teacher's defined inclusive education in various ways. Few of the teachers (20%) expressed that their understanding of inclusive education was not clear. When asked about his understanding of inclusive education, one teacher reported, *It is not clear. It needs more clarification.* Similarly, another teacher admitted, *I am not certain of its meaning.* Other teachers (30%) stated their presumed meaning of inclusive education, admitting that they were not sure. *I think it has something to do with slow learners,* one teacher said. Fifty percent of the teachers interviewed, however, explained their understanding of inclusive education without an indication of uncertainty. Within this group of teachers, some individuals stated that inclusive education was defined as teaching special needs students with non-disabled students in regular classroom settings, while others explained it as combining lower level learners with average students in the same classroom. Another teacher described inclusive education as, *The involvement and practice of reaching all children, no matter their mental, physical, social, or financial ability.*

Several teachers suggested that inclusive education would be more practical if classroom teachers were provided with aides. One teacher reported, *Inclusive education would mean a lot more work for classroom teachers; they should be assisted by a teacher's aide.* Another teacher stated, *Teachers' aides should be provided because the large class sizes make it a lot more difficult for only one teacher. I would reconsider [inclusive education] if I had an aide.*

Influencing Factors of Teachers' Perceptions.

Teachers identified a variety of factors that influenced their perceptions of inclusive education. Such factors included (a) teacher training, (b) resources, (c) support, (d) infrastructure, and (e) the understanding of inclusive education.

Teacher training. As seen in table 3, which displays influencing factors of teachers' perceptions, 100% of the teachers identified insufficient, or lack of teacher training as a factor which negatively influenced their perceptions of inclusive education. One teacher explained, *I am not interested in inclusive education because I am not trained to deal with students with disabilities. I cannot cater to their needs.* Another teacher reported, *They [teachers] have to be properly equipped to teach mainstream students.* Teachers were of the perception that in an effort to be an effective and efficient inclusive educator, they had to be trained in special education. One male respondent stated, *I am not trained to teach special needs students; I have a difficult time teaching normal students.* Teachers felt that their lack of training in special education or inclusive education would result in their inability to adequately meet the needs of the students in their class, those with or without a disability.

A respondent said, *If I am not trained to the point of being able to identify various disabilities in students, how can I be expected to adapt my teaching methods to cater to the needs of students with various disabilities?* Teachers believed that if they were sufficiently trained in special education and properly educated as to the intricacies of inclusive education, they would express a more positive perception towards inclusive education, and would more than likely be influenced to participate in the practice.

As a result of these perceptions, the majority of the teachers (90%) suggest that special needs students should be educated at special schools where there are teachers who specialize in special education, and where critical resources and infrastructure are present. According to the teachers, this is only way that special needs students would truly benefit from the inclusive program designed.

Resources. All of the teachers (100%) reported that a lack of resources negatively affected their perceptions of inclusive education. The teachers described resources as being critical to the implementation of any inclusive education program. Many teachers expressed that inclusive education requires many types of resources for both teachers and students. One teacher expressed concern

regarding the provision of assistive technology for special needs students, *Whose responsibility will it be to provide special equipment for these students; the government or the parents?* Another teacher responded, *For a school to be considered inclusive, state of the art facilities must be provided, along with properly designed buildings.*

Table 3. Influencing Factors of Teachers' Perceptions

Factors	n	%
Teacher Training		
Female	5	100
Male	5	100
Resources		
Female	5	100
Male	5	100
Support		
Female	3	60
Male	5	100
Infrastructure		
Female	2	40
Male	2	40
Unclear Understanding of Inclusion		
Female	2	40
Male	0	0

Note. Factors are listed in order of priority.

Several teachers argued that regular classroom teachers currently spend a lot of money on teaching resources each school year without being reimbursed by their school's administration, or the Ministry of Education. Many teachers suggested that their perceptions towards inclusive education would only improve if they were guaranteed by the government or school administration that they would receive the resources needed to enhance inclusive instruction.

This factor has caused several teachers to doubt the success of inclusive education in Bahamian, public primary schools; one teacher justified this position by stating, *If we can't even get enough basal readers for one class, at this present time, how can we expect to get resources for an inclusive education setting, which cost more than basal readers?* Similarly, another teacher responded, *My administrators give teachers a hard time when they ask for dry erase markers. Inclusive education is a joke.* Another teacher stated,

This is why I doubt that inclusion would work, because we're [the regular classroom teachers] not seeing any improvement in the students who attend the resource room every day. So, if a child is being remediated daily by a teacher who is trained in special education, and nothing is

improving, what results could you expect from me, a teacher who is not trained in special education?

Support. Sixty percent of the female teachers ($n = 3$) reported that a lack of support from administrators or Ministry of Education would negatively influence their perceptions towards inclusive education (see table 3, for influencing factors of teachers' perceptions). However, 100% of the male teachers ($n = 5$) indicated that the inconsistent support from administration negatively influenced their perceptions. In total, 80% of all the teachers interviewed reported support as an influencing factor. These teachers also stated that if support was consistent throughout the public primary schools, they would view the practice of inclusive education more positively.

Infrastructure. Two out of five females (40%) indicated the school's physical structure as a negative influencing factor of their inclusive education perception. Forty percent of the male respondents felt the same way ($n = 2$). In total, therefore, four out of a total of ten teachers (40%) felt that the infrastructure of a school has the potential to determine whether or not a teacher would be willing to participate in the practice of inclusive education.

Understanding of inclusive education. Forty percent of the female teachers ($n=2$) reported that they did not completely understand the meaning on inclusive education. One teacher stated, *It [the meaning] is not clear; it needs more clarification.* The other teacher reported, *I'm not certain of its meaning.* This signifies, therefore, 80% of the total number of teachers ($n = 8$) had some knowledge of what inclusive education entailed.

Challenge with Implementing Inclusive Education.

Lack of Support Many teachers mentioned the lack of administrative or government support as a negative influencing factor of their perception of inclusive education. *The administration must be sensitive to the work we would be expected to do in an inclusive setting,* one teacher stated. Another teacher suggested that administrators, as well as teachers may act as obstacles to the successful implementation of inclusive education. She explained, *Teachers and administrators can be obstacles; if teachers and administrators do not buy into it [inclusion], forget it – it won't work.*

Receiving support from the school's administration is not the only source of support which the teachers spoke of; many of the teachers reported that support is also needed from the school's special education teacher and the Ministry of Education as well. Some teachers described the work of the special education or resource teacher as being disjointed when compared to the work that the classroom teachers do with struggling learners. *We [the teachers] need the special education teachers to assist us with strategies for teaching special needs students,* one respondent emphasized.

Teachers indicated that support from the Ministry of Education could be given in a variety ways. *The Ministry should provide the necessary materials and resources needed to operate an inclusive education program, as well as provide free training for teachers,* stated one of the teachers. About 30% of the teachers (three teachers) mentioned that the Ministry of Education should support teachers by increasing salaries. One teacher stated, *I would support inclusion if I got a pay-raise.*

Teachers' Attitudes. Several respondents identified teachers' attitudes as a challenge in implementing inclusive education in the public primary schools. *Developing an intrinsic desire within teachers to willingly participate in such programs is a challenge,* reported one of the male respondents. The majority of the teachers (90%) shared similar, negative attitudes regarding inclusive education. Responses ranged from, *My degree is not in special education,* to, *I don't want to teach special needs students.* Many teachers indicated that teaching struggling readers was more than enough to deal with, without the complexities of inclusive education practices. Some teachers expressed the attitude that it was not in their job description to teacher special needs students.

When asked about the general perceptions of teachers regarding inclusive education, one teacher responded, *They [teachers] think that special needs students should be taught in special education classes because their needs cannot be appropriately met otherwise.* This study revealed that several teachers felt that special needs students should be removed from the regular classroom and taught at *their* pace. Some teachers felt that inclusive education would never be successful in The Bahamas because, *The Bahamas government cannot afford to spend the amount of money that inclusive education programs demand.*

Class Size. Several teachers indicated that class sizes in public primary schools were too overcrowded for inclusive education to be effective. *It is difficult addressing individual needs of thirty-four non-disabled students*, one teacher noted. Several teachers (50%) reported that implementing inclusive education with such large class sizes would result in the special needs students not receiving the level of attention they require. One male respondent reported, *...classrooms are already overcrowded, and we don't know how the parents would react [towards their child being in an inclusive classroom]*.

The need for extra time and additional responsibilities imposed on teachers by the large numbers of students with disabilities in the classroom has been found to affect teaching processes. As indicated by several teachers, this is due to the reality that each student with a disability has different needs and calls for more work, in terms of adapting instruction. Some teachers reported that large class sizes was frustrating, especially without teachers' aides.

Eight out of ten teachers (80%) suggested that inclusive education would be promoted more positively in the primary schools if the class sizes were reduced. One teacher reported, *I might reconsider inclusion if the class sizes were smaller*. In contrast, one teacher stated, *Even if the class sizes weren't reduced, the teachers would react more positively towards inclusion if teachers' aides were provided*.

Infrastructure. Poorly designed infrastructure was another challenge which the teachers identified as a challenge to the success of inclusive education. One teacher noted, *Students are not considered included if they cannot access classrooms and other schools facilities*. In comparison, several teachers mentioned that they viewed inclusive education at their primary school dubiously because the classrooms are too small, and they are not accessible to students who require a wheelchair. One teacher stated, *My school doesn't have any ramps to accommodate students in wheelchairs*. Another teacher reported, *My school has two levels accessible by stairs, and the bathroom stalls are too narrow. Inclusive education can't work here – not like this*.

Many teachers mentioned that reconstructing the buildings would not be sufficient. One female teacher responded, *Students' desks and chairs will have to be replaced as well*. One teacher emphasized that the location of some classes would have to be changed where there is a problem of stairs. *Students have to be able to access their classrooms*, as indicated by one of the female respondents. One of the male respondents stated, *Inclusive education will not be successful without state-of-the-art classrooms*.

Discussion and Implications

Findings of this study implied that there is much preparation required of all stakeholders before The Bahamas can attempt to successfully implement inclusive education practices within its primary schools. This study's findings coincide with those of the review of literature, indicating similar implications as a result of the implementation of inclusive education in the primary school.

In comparison to the literature review, this study has also revealed that one of the primary influencing factors of teachers' negative perceptions is that of the teachers' lack of confidence in their ability to teach special needs students due to a lack of training in the area of special education. This means that the more special education training teachers receive, the more comfortable they would feel teaching in an inclusive environment. In its annual budget, the government of The Bahamas should allot additional funding for international teacher training in the area of special education. Opportunities for training should primarily be offered to teachers who express an interest in special education.

This study revealed that teachers are of the opinion that collaboration should exist between classroom teachers and special education or resource teachers. This finding implies that teacher training should be ongoing both at the school level and off-site. Inclusive education should not be implemented without educating all stakeholders [teachers, parents, students, and community] first. Special education is a very broad area therefore training will take a lot of time. Therefore, it is impossible for training to be done during school hours. This implies, therefore, that teachers will have to participate in after-hours training. Consequently, the Ministry of Education must create incentives for teachers as a way of encouraging them to participate in the training.

Teachers' attitudes play an integral role in the successful implementation of inclusive education program. This implies that if consistent professional development is provided, teachers' attitudes towards inclusive education would tend to be more positive. Since positive teacher attitudes are linked to good teaching

practices, policy makers would also need to provide the school supports and resources that promote positive teacher attitudes, which also enhance inclusive teaching practices.

Findings also imply that changes at the tertiary level of education with regards to teacher education programs in The Bahamas must occur. Teacher education providers, such as local colleges and universities, must ensure that graduates have the necessary attitudes and competencies to design and deliver an inclusive curriculum to a diverse range of learners.

If there is to be a realistic change in the Bahamian educational system, and creation of educational models aligned to those of inclusive education, it is paramount that local colleges and universities work in close partnership with the teaching profession to formulate new knowledge about inclusive learning, especially in the hearts and minds of those entering the profession. Further, if inclusive education is to become a reality in Bahamian public primary schools, it is suggested that the government of The Bahamas will have to readjust its budget for education in an effort to accommodate the costs of teacher training and ensuring the necessary accommodations are implemented.

The teachers' responses would imply that the curriculum currently taught should be reconstructed to accommodate the needs of special needs students. The purpose of a curriculum is to direct instruction. As a result, the content presented within curriculum should be concise and applicable to an inclusive classroom setting. This leads to a domino effect of sorts, in that, curriculum officers at the Ministry of Education will have to collaborate on the production of one integrated curriculum for each grade level inclusive of activities, objectives, and strategies catering to the demands of inclusive education. This then dictates that curriculum and subject officers must also receive professional development training in inclusive education, specifically, in curriculum development for such an instructional model. Once the curriculum has been adapted, teachers will then have to become familiar with the new design, which implies more thorough lesson planning sessions.

Findings within this study, in relation to methods of instruction, imply that classroom teachers must modify their teaching methods in an effort to accommodate the special needs students in their classrooms and facilitate these students' learning in an inclusive environment. One such adaptation would involve the utilization of differentiated instruction. This implies that teachers must become responsible for keeping up-to-date with current trends in inclusive education. Further, in an effort for classroom teachers to learn more about inclusive education strategies, it is crucial that primary schools establish a coaching program as an avenue through which the special education teachers can model instructional practices for the classroom teachers on a daily or weekly basis.

Limitations

There were a few minute limitations to this study. First there was the limited sources from which the data was collected. Data was collected from only 10 participants from only one island of The Bahamas all of which were employed in the public educational system. Data could have also been collected from primary school teachers throughout the family of islands within The Commonwealth of The Bahamas.

Recommendations for Future Research

Although some demographic variables were mentioned in this study, teachers' perceptions of inclusive education were not explored in relation to these variables. Therefore, future studies may focus on investigating teachers' perceptions of inclusive education as they relate to specific variables such as age, gender, and years of teaching experience. Additionally, future study may investigate administrators', and parents' perceptions towards inclusive education, which may be followed up with a comparative study of teachers', parents' and administrators' perceptions of inclusive education. Finally, future research efforts should seek to broaden data collection to a greater number of islands within The Bahamas including teachers employed in the private schools.

Conclusion

This study investigated public primary school teachers' perceptions of inclusive education in The Bahamas, and the influencing factors of their perceptions. This study has shown that 90% of the teachers interviewed displayed negative perceptions towards inclusive education and its implementation. Prominent factors which influenced these negative perceptions included insufficient teacher training, lack of resources and support, poor infrastructure, and large class sizes. Teachers also felt that special needs students would not have their needs met in an inclusive setting, and should be education in

specialized schools. Several teachers indicated, however, that the solution of these negative influencing factors would possibly result in more positive perceptions towards the practice of inclusive education.

Implementing inclusive education in Bahamian, public primary schools will indeed yield several implications: The curriculum would have to be re-designed; the government will have to invest a large amount of money for resources, teacher training, reconstruction of schools' physical plant, and salaries; and the teacher preparation programs at the tertiary level will have to developed for teacher education candidates.

As revealed through this study, inclusive education school reform is not only a school-related matter; it is a matter for all stakeholders involved [teachers, administrators, students, and parents], which includes the communities in which these public primary schools are located. It is a social issue, as it is supported by the philosophical framework of Vygotsky's Social Constructivist Theory. Inclusive education involves cohesion between administrators, parents, and students; it involves the sensitization of all towards the needs of students with special needs. This study has reiterated what other researchers within this review of literature have found, which is the fact that teachers are regarded as the key to change in education, and if not addressed, their feelings of frustration and inadequacy pose as potential barriers to the success of inclusive education.

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