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Overrepresentation: An Overview of the Issues Surrounding the Identification of English Language Learners with Learning Disabilities

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This paper addresses the serious and pervasive problem of the mis-identification of English Language Learners (ELLs) as Learning Disabled (LD). Recent increases in immigration make this problem all the more urgent. The paper outlines problems with current methods of differentiating between learning disabilities and language acquisition processes. These problems come in part from apparent similarities between learning struggles and language struggles and in part from insufficient or biased methods of identifying learning disabilities in ELLs. Misunderstanding, bias, and poor structuring and implementation affect both assessment-based evaluations and the Response to Intervention evaluation process. The paper goes on to suggest more effective methods that include consideration of the home and learning environments in addition to evaluation of the individual learner.

Introduction

According to the Migration Policy Institute (2015), the population of the United States has changed dramatically in the past three decades, as nearly 30 million immigrants, both authorized and unauthorized, have settled here seeking a better future for themselves and their children. Children of immigrants represent a growing share of the nation's total child population, rising from 13.5% in 1990 to 25% today. The dispersal of immigrants varies from region to region. For instance, half of all children in California are from immigrant families while more than a third of children in Nevada and almost a quarter in Washington state and Rhode Island have at least one parent who is an immigrant. Indeed, throughout the U.S., K-12 schools are enrolling almost unprecedented numbers of learners whose native language is other than English and whose culture is often substantially different from that of the school community. Furthermore, English Language Learners (ELLs) are becoming the fastest growing segment of the K-12 student population. In fact, according to the National Association of Special Education Teachers, (NASET, 2015), in the last two decades the population of students who are Limited English Proficient (LEP) has grown by 169%, while the general school population has grown by only 12%. In 2013, there were approximately 5 million K-12 students classified as ELLs, representing nearly 11% percent of public school enrollment (Migration Policy Institute, 2015).

While about 75% of ELLs are born in the U.S., many others have only recently arrived from another country and may have had limited prior schooling. Hence, K-12 schools are faced with the challenge of educating students who have different levels of primary language and literacy proficiency and varying socioeconomic circumstances. Moreover, "as immigrants have moved beyond traditional gateway states such as California, Texas and New York, and as No

Child Left Behind Act provisions have made schools responsible for the progress of ELLs, school districts across the United States are having to develop educational services for this fast-growing group almost overnight (Migration Policy Institute, 2015).

“In all facets of education, a primary objective has been to match instruction services to the needs of all students” (Zetlin, Beltran, Salcido, Gonzalez, & Reyes, 2010, p. 59), which requires both a clear process as well as clear procedures. In other words, schools must align the identification and assessment with the subsequent placement of ELLs with (or without) a potential learning disability. This alignment is especially important to this particular group of students, as they now make up a sizable portion of public school population and have among the highest dropout rates in the nation (Sullivan, 2011). In Texas, for example, only 39% of ELLs received high school diplomas compared to 78% of all students (Migration Policy Institute, 2015).

According to a report by Batalova, et al., (2007), over half of LEP adolescents are U.S.-born second and third generation children of immigrant descent. These data suggest that U.S. schools are not adequately addressing the language needs of these students. If U.S. schools were adequately addressing the language needs of 1st-3rd generation immigrant children, then U.S.-born 2nd and 3rd generation immigrant children would not be LEP because the adequate schooling would have compensated for growing up in a home where English was not spoken. Consistently, wide achievement gaps between LEP and non-LEP students on statewide tests indicate significant instructional challenges across all states.

Although we refer to these learners as a group, our challenge as educators is that they are not a uniform group and no simple solution can address all the struggles that both students and schools encounter. In the following section, we reveal problems with the current identification methods, many of which fail to distinguish between students struggling with learning a language and students with genuine cognitive disabilities. After outlining the problems, we will suggest more effective methods for effectively identifying the differences between language difficulty and learning disability.

Problems with Current Identification Methods

Standard 4.a. “Issues of Assessment for English Language Learners” in the TESOL/CAEP Standards for P–12 Teacher Education Programs states that teachers need to “demonstrate understanding of various assessment issues as they affect ELLs, such as accountability, bias, special education testing, language proficiency, and accommodations in formal testing situations” (TESOL, 2010, p. 56). More specifically, teachers should

...work with other professionals (e.g., speech pathologists, psychologists, special educators) who assess ELLs in order to distinguish the differences among normal language development, language differences, and learning problems. They understand that learning problems, as well as factors identifying gifted and talented students, should be verified in the student’s native language, if possible. [Teachers] use multiple sources of information (e.g., native language assessment, home contacts, other teachers, other learners from the same cultural group, teaching style, the curriculum) to make appropriate adjustments before concluding the problem resides within the learner and making a referral for special education. (TESOL, 2010, pp. 56-57)

In an ideal situation, schools would follow this standard to the letter, and ELLs would receive precisely the services they need. However, in actual practice, the “identification of English Language Learners with learning disabilities is hampered by a lack of theory and empirical norms that describe the normal course of language and literacy development for English Language Learners and the individual, school, and social factors that relate to that development” (Wagner, Francis, & Morris, 2005, p. 13).

Due to the need for better identification models, there will continue to be an over representation of ELLs, who are both linguistically and culturally diverse, in special education. ELLs are currently being under served in the public school system through either a lack of services and supports or through the mis-classification of students with language acquisition problems as students with learning disabilities. Specifically, students with learning disabilities and those with second language acquisition issues are hard to differentiate due to similarities in learner characteristics, such as poor comprehension, difficulty following directions, errors in syntax and grammar, as well as difficulty completing tasks (Chu & Flores, 2011).

Language acquisition problems, on the other hand, have to do with comprehensible input. The language learner needs clarity of input, substantial quantity of input (especially if English language input is not received at home), and contextually-driven input. Without this rich background, language acquisition becomes nothing more than rote memory. When this happens, it only hinders both language acquisition and academic success.

Klinger (2015) outlines how to differentiate the language acquisition process from learning or language disabilities when placing ELLs into special education:

When distinguishing language acquisition from LD, many factors must be considered. It is important for teachers to understand the second language acquisition process, to recognize possible characteristics associated with LD, and to look at the quality of instruction to determine whether students truly have received an adequate opportunity to learn. (p. 1)

Since it is important for educators to be aware of possible characteristics associated with LD and how these may manifest in students acquiring English as an additional language, Klingner (2015, p. 3) further provides a table. Since it is important for educators to be aware of possible characteristics associated with LD and how these may manifest in students acquiring English as an additional language, Klingner (2015, p. 3) further provides a table representing some of the characteristics of language acquisition that can mirror LD:

Some Similarities Between LD and Language Acquisition	
<i>Behaviors Associated w/ LD</i>	<i>Behaviors when Acquiring an L2</i>
Difficulty following directions	Difficulty following directions because the directions were not well understood; it can be harder to remember directions in a second language.
Difficulty with phonological awareness	Difficulty auditorily distinguishing between sounds not in one's first language, or sounds that are presented in a different order.
Slow to learn sound-symbol correspondence	Confusion with sound-symbol correspondence when it is different than in one's first language. Difficulty pronouncing sounds not in the first language.
Difficulty remembering sight words	Difficulty remembering sight words when word meanings are not understood.
Difficulty retelling a story in sequence	Difficulty retelling a story in English without the expressive skills to do so; yet the student might understand more than s/he can convey (i.e., receptive skills in English might be stronger than expressive skills).
Confusion with figurative language	Confusion with figurative language, idioms, pronouns, conjunctions, and words with multiple meanings.
Slow to process challenging language	Slow to process challenging language because it is not well understood.
May have poor auditory memory	May seem to have poor auditory memory if sounds or words are unfamiliar or not well understood.
May have difficulty concentrating	Learning in a second language is mentally exhausting; therefore, ELLs may seem to have difficulty concentrating at times.
May seem easily frustrated	Learning in a second language can be frustrating.

Because the mis-classification of a student as LD creates a lifelong label and a potential stigma, it is imperative that schools resolve the issue of correct identification, assessment, and subsequent placement of ELLs. Some of the factors that contribute to this rampant and unfortunate problem are the following: inconsistencies in approaches to identification, biases in assessment, and variety of instructional practices and learning environments (Institute of Educational Sciences, 2010). This paper focuses specifically on the valid and reliable identification of ELLs who

might have a learning disability, through assessment-related identification. Two of the most widely used methods of identification today are Assessment of Intelligence Quotient and Response to Intervention (Chu & Flores, 2011). By reviewing each, we hope to obtain a clearer understanding of how they contribute to the overrepresentation of ELLs in special education.

Assessment of Intelligence Quotient

The structure of the Intelligence Quotient assessment puts ELLs at a disadvantage. Merriam-Webster defines an Intelligence Quotient, or IQ, as a number used to express the apparent relative intelligence of a person: as (a) the ratio of the mental age (as reported on a standardized test) to the chronological age multiplied by 100, (b) a score determined by one's performance on a standardized intelligence test relative to the average performance of others of the same age. Assessments related to this quotient are evaluated on the basis that the majority of individuals who take them will fall within a normal range. However, there are several forms of bias inherent in the creation and evaluation of these assessments that disadvantage ELLs.

Familiarity with English accounts for at least 50% and up to 90% of test variance found within IQ tests (Zetlin, Beltran, Salcido, Gonzalez, & Reyes, 2010). As a basis for a referral to special education, these assessments do not lend themselves to valid, reliable results, given the biased nature upon they are built. Many other forms of bias have been found within IQ tests, such as item or sample bias, sociocultural bias, and proficiency bias.

Another form of bias is that of teacher expectations—before or after the test is administered—which tend to be lower for ELLs than for other students. Because these lower expectations may become a self-fulfilling prophecy of failure, the ELLs' opportunity to learn is diminished. As such, they experience yet another bias, giving them fewer chances to succeed in their educational experience than their English-only peers. In a number of different ways, the creation, administration, and use of IQ tests is not fair and equitable particularly for ELLs.

Response to Intervention

Johnson, et al., (2009) define Response to Intervention as:

“a multi-tiered instructional and service delivery model designed to improve student learning by providing high-quality instruction, intervening early with students at-risk for academic difficulty, allocating instructional resources according to students' needs, and distinguishing between students whose difficulties stem from experiential and instructional deficits as opposed to a learning disability.” (p. 174)

Typically, Response to Intervention takes place within a general education setting. The classroom teacher administers the first level of intervention, helping approximately 80% of the class achieve the expected norm. Then, after evaluation, the teacher administers another form of intervention, in order to propel another 15% of the class into the realm of achievement. This might come in the form of peer-tutoring, small group work, or some other, more personalized intervention. Finally, approximately 5% of the class is assessed for prereferral to special education, due to a persistent and significant gap in achievement. (This deficit is usually derived through gap analysis, or the difference between the ideal result or standard desired and the individual's actual, real achievement (Rueda & Windmueller, 2006).) Because the students' responses to the first and second intervention were not enough to achieve the required standard, the school and teachers must administer further measures. If a student is eligible for special education services, an IEP (Individual Education Plan) team will determine what the necessary measures are and how they will be administered. These students will be evaluated for specific problems, and a plan will be created so that they remain in the LRE (least restrictive environment) while obtaining the services and support they need to achieve success at normal levels.

Gauging each student's response to intervention can be beneficial because doing so measures both where they are and what they need, presumably. However, it can also open the door to bias created by the teacher's expectations, or lack thereof. Another issue is that of the lack of professional development for teachers regarding language acquisition skills (Zetlin, Beltran, Salcido, Gonzalez, & Reyes, 2010). With such a high population of ELLs in our public schools

today, more attention must be given to the development of these skills, in order to avoid problems such as the ones addressed here.

Research Findings and Suggestions

With up to 90% of students at some point referred for special education eligibility (Zetlin, Beltran, Salcido, Gonzalez, & Reyes, 2010), the over representation of ELLs in the learning disabled category is drawing more attention than ever. "If the validity of educational decisions can be ensured, relative risk of identification for special education eligibility would be less of a concern because the assumption that students were receiving inappropriate services would be bypassed" (Sullivan, 2011, p. 328). The question is how schools can ensure the validity and reliability of the testing of students whose first language is not English.

Current findings indicate that "frameworks to evaluate and monitor procedures can provide the necessary feedback to improve and adjust screening procedures" (Johnson, Jenkins, Petscher, & Catts, 2009, p. 184). These frameworks involve a multilevel approach focusing on the whole educational milieu rather than just on the individual learner, as is the case currently. A focus on individual cognition and motivation is paired with a focus on social interaction and environmental factors such as effective instruction. On top of that layer, institutional and community ideals are aligned to maximize equity, efficacy, and efficiency. For this to work, clear policies must be communicated at all levels, and the focus must be on local needs. Professional development is also necessary, in order to maximize instructional and environmental effectiveness. The following instructional guidelines were made by the National Research Council (2002) regarding the effective teaching of English Language Learners: build and use vocabulary as an instructional anchor; use visuals to reinforce concepts and vocabulary; scaffold learning through peer-tutoring and cooperative learning; strategize the use of a student's first language; and modulate cognitive and language demands, as not to overload the student and raise their affective filter.

Klingner, (2015) provides an example of this by suggesting that educators should use a hypothesis-driven approach when determining whether an ELL has a learning disability.

Educators should begin the referral and evaluation process by exploring the hypothesis that the causes of the student's learning difficulties are primarily external factors. When conducting the assessment, they should do so with the notion that there is nothing wrong with the individual and that systemic, ecological, or environmental factors are the primary reason for learning problems. The next step is to maintain this hypothesis until data suggest otherwise and all plausible external factors have been ruled out. The point is not to look for whom or what to blame for a child's struggles, but rather to understand the multiple complex factors affecting the child's learning and performance.

Klingner especially emphasizes the importance of an ecological framework to determine whether an ELL has a learning disability. It takes into account contextual and intrinsic factors that can affect a student's performance and has four main elements (2015, p. 8):

- a systematic process for examining the specific background variables or ecologies of ELLs (e.g., first and second language proficiency, educational history, socioeconomic status, cultural variables);
- information gathered through a variety of informal and formal assessments;
- examination of the appropriateness of classroom instruction and the classroom context based on knowledge of individual student factors; and
- nondiscriminatory interpretation of all assessment data.

However, as Burr, et al. (2015) summarize in their report, no single method has proven effective in differentiating between ELLs who have difficulty acquiring language skills and those who have learning disabilities. Consequently, misidentified ELLs can end up in classrooms or programs mismatched to their needs, which could hinder their academic achievement. Nonetheless, Burr, et al. contend that a structured process that uses key data to answer the following questions may be the most effective approach to deciphering whether an ELL's academic difficulties are caused by a learning disability or by struggles with acquiring a new language or some other factors (2015, p. i):

- Is the student receiving instruction of sufficient quality to enable him or her to make the accepted levels of academic progress?

- How does the student's progress in hearing, speaking, reading, and writing English as a second language compare with the expected rate of progress for his or her age and initial level of English proficiency?
- To what extent are behaviors that might otherwise indicate a learning disability considered to be normal for the child's cultural background or to be part of the process of U.S. acculturation?
- How might additional factors – including socioeconomic status, previous education experience, fluency in his or her first language, attitude toward school, attitude toward learning English, and personality attributes – impact the student's academic progress?

Conclusion

Inevitably, English Language Learners will struggle to acquire a new language, as any individual would, but that is not to say that they have a learning disability. Rather, it is a sign that they, like those students with an actual learning disability, need an equitable, informed way to learn and be academically successful. Current literature suggests that this can be accomplished through the following: adequate professional development of both general and special education teachers regarding language acquisition; alignment and clarity of policy at all levels of academia, especially identification and assessment of individuals at risk for having a learning disability; the proper use and evaluation of individual response to intervention and accommodations in the learning environment; an approach to assessment for learning disabilities that includes environmental factors of both the school and home; and finally, a reduction in bias through an attitude by individuals at all levels that is both informed and motivated.

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Outcomes of a Cross-Cultural Seminar on Increasing the Perceived Self-Efficacy of Teachers in Tahiti

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When educating international special education teachers, teacher self-efficacy should be evaluated to better understand the effectiveness of training and the delivery of services to students with disabilities. Professionals in the field of disability services, from the United States, conducted a five-day seminar with special education teachers in Tahiti. Participants were self selected teachers from the islands of Tahiti. The purpose of this study was to evaluate the self-efficacy previous to and after the five-day seminar. Teachers self-efficacy was determined through self-reported surveys. Results proved that cross-cultural seminars are beneficial for increasing the self-efficacy, as well as the knowledge base of international teachers in Tahiti. In addition, findings add to a limited research base for education of international teachers as well as the data collected in French Polynesia.

Being a teacher is a universal concept where there is a sharing of information or knowledge between two parties. The way information is distributed can look similar or significantly different when compared across different countries and cultures. When working with individuals with disabilities, the work of a teacher can vary based on cultural perspectives, education of teachers and the infrastructure created by the education system in each respective community or country. Although differences among teachers are expected across different countries and cultures, identifying characteristics of success is imperative. The purpose of this paper is to provide insight into the self-efficacy of teachers in Tahiti who participated in a cross-cultural seminar.

Looking at the varied experiences of teachers in different cultures, standardization of information shared and skills varies. According to Scroggs & Mastropieri (1996), The Council for Exceptional Children (1996) developed and validated a common core of minimum essential knowledge and skills for entry into professional practice in special education, which included: 1. Philosophical, historical and legal foundations of special education; 2. Characteristics of learners; 3. Assessment, diagnosis and evaluation; 4. Instructional content and practice; 5. Planning and managing the teaching and learning environment; 6. Managing student behavior and social interaction skills; 7. Communication and collaborative

partnerships; and 8. Professionalism and ethical practice. The literature also indicates that classroom teachers are required to use instructional strategies such as multilevel instruction, differentiated instruction, activity based learning and individualized and adaptive instruction to facilitate special needs students' learning. If we look at this as a foundation for the instruction of teachers of individuals with disabilities in classroom settings, it is essential that teachers, who have not had a traditional education experience, including higher education, be provided with training and development opportunities to increase their ability to utilize multiple instructional strategies. In addition to classical institutional education, teacher self-efficacy, personal experiences, personality traits, and cultural perspectives play a vital role in the delivery of education to individuals with disabilities (Coates & Thoresen, 1976).

Teacher Self-Efficacy

A teacher's efficacy is shaped by his/her self-efficacy, or perceived success as a teacher. A teachers' efficacy is his/her "confidence in their ability to promote students' learning" (Hoy, 2000). Teachers with high levels of self-efficacy tend to exhibit greater levels of planning and organization, they are more persistent and resilient when stressful situations arise, and they are less critical of students when mistakes are made (Jerald, 2007). Overall, teachers who have high levels of self-efficacy are more likely to have students who learn and thrive in their classroom (Shaughnessy, 2004). A teacher develops his/her self-efficacy during his/her student teaching experiences when mastery of strategies is most prevalent (Hoy, 2000).

In order to achieve high levels of self-efficacy, a teacher must be provided with training opportunities to learn and develop new skills. Teaching teachers how to teach is comprised of two components. First, the behavior of teaching must be clearly defined, so that teachers understand the expectations and how to make improvements when necessary. Second, training and development are key components to ensure that teachers understand how to teach various skills to their students (Freeman, 1989). Finally, a behavior skills training approach is beneficial in the modeling, rehearsal and feedback, in order to ensure that target skills are achieved (Gianoumis, Seiverling, & Sturmey, 2012).

Current State of French Polynesia and Special Education

The French Polynesian culture on the island of Tahiti is deeply rooted in the history of the island, therefore the family and sense of community is very dynamic. The theoretical framework used in this research is based on the Social Model of Disability, which sees societies' attitudes as the main problem for people with impairments, promotes participatory and emancipatory research (Priestly, 1998). On the contrary, societies that welcome individuals with disabilities without expectation that they will conform to be more like the general population, are in fact engaging in less discriminatory behaviors; however, this may be perceived as a lack of knowledge or inclusion of individuals with disabilities within a society or culture. This lack of awareness among the population could be caused by four reasons, including (1) the cultural beliefs among individuals that having a disability comes with stigma and discrimination; (2) the lack of funds available to individuals to seek treatment for non-medical purposes, such as those that improve function; (3) lack of education and knowledge for the individual with disabilities, as well as a lack of awareness of disabilities for greater society; and (4) the promotion of individuals with disabilities to seek government assistance over independence and quality of life (Kusumastuti, Pradanasari & Ratnawati, 2013). The Social Model of Disability is an appropriate framework to gain a better understanding of the perspectives of individuals with disabilities in Tahiti. Based on the current perceptions of individuals with disabilities in Tahiti and societal structure of education, the rich culture of French Polynesia lends to a very loving and nurturing community. This perspective can both support and "handicap" an individual with a disabilities' ability to effectively be included in society or within the culture.

Within French Polynesian culture, the family system is at the foundation of the cultural structure in society. The family forms the primary structure for the functioning and ongoing stability of all human societies (Brown & Brown, 2003). In Tahiti there exists multiple perspectives that the individual with a disability is still viewed as a burden or a curse to the family based on societal and cultural perspectives. However, in other families and communities on the island, a person is valued for their abilities and is considered valued in their home. The family perspective of individuals with

disability influences the cultural perspective of disabilities. Within some families, individuals are not given access to the community and are not considered contributing members of society. The limited exposure of individuals with disabilities that the society experiences further stigmatizes individuals with disabilities. It was not until 2007 when the French Government enacted the “Law of 2007” that began the plight or civil rights movement, congruent to the Americans with Disabilities Act in the United States, for individuals with disabilities in Tahiti. Although the law went into effect in 2007 there are still many barriers that exist both at the attitudinal, architectural and program level in the country. It is with the tireless work and diligence of the Federatino of Handi-sport and Adapti-sport that sports and recreation has gained the momentum to serve individuals with disabilities in Tahiti.

According to Metrople (2007), there are approximately 259,596 people residing in Tahiti. Reflecting that population, the Ministrer del al Solidarite Polynesie Francaise (2009) found that 11,266 individuals have a disability, either intellectual or physical. The collection of data reflecting the number of individuals with disabilities did not take place until 2007. Therefore this estimate of the population could be significantly lower because the population of individuals with disabilities is not accurately represented due to cultural perspectives. Personal communication and observation while on the island established that individuals with disabilities are segregated in the educational system according to their disability (i.e. a school for individuals with Down Syndrome, a school for individuals with Cerebral Palsy, etc.). Based on these special schools, individuals receive care and varied education based on the cultural perceptions of the capability of the individual and his/her ability to communicate. The delivery of education to individuals with disabilities varies greatly by school based on disability and verbal communication. Within each school, staffing systems vary based on the needs of the individuals and the perspective of the culture for the students with disabilities ability to learn.

Taking into consideration teacher education and training in Tahiti, it is possible that teachers in Tahiti have not had formal instruction on the concept of self-efficacy; however, even without a precise definition of the concept, the teachers of Tahiti are incredibly proud of their work and currently utilize concepts of self-efficacy without a working knowledge. Reflecting the current education system of teachers who work with individuals with disabilities in Tahiti, there is a deficit in the body of knowledge and perspective, outside of intuition, in this area of research. Thus a new and extended body of knowledge and skills could influence teachers in Tahiti to measure consistency and a minimum level of competency across the island.

REACHability, Adaptive Sports and Recreation, Tahiti Education Project

After completing a thorough review on the literature, research about disability internationally in the global south is recognizably lacking (Singal, 2010; World Health Organization [WHO], 2011). From a historical perspective, the research has included quantitative approaches focusing on identification of impairments or evaluation of services usually with a health focus (WHO, 2011). Recently, there has been increased interest in qualitative studies of structural aspects such as relationships between disability and poverty and/or gender (Ghai, 2002; Grech, 2011). Therefore this research focused on a qualitative approach to explore the shared experience of special education teachers who attended a five-day training at the Institut de la Jeunesse et des Sport de la Polynesie Francaise in Tahiti.

A non-profit organization, the REACHability Foundation, with a mission of bringing education and empowerment to individuals about disabilities and interventions, made personal contact with government officials in Tahiti during a previous trip to the island. The REACHability Foundation was commissioned by government officials to work with professionals from the Handisport and Sports Adaptes, Polynesie, who run sports and recreation activities for individuals with disabilities throughout French Polynesia.

In collaboration with professionals from Handisport and Sports Adaptes Polynesie deficits in disability awareness, behavior interventions, adaptations of sports and recreation, and sensory needs of individuals were identified as areas of need for teachers supporting individuals with disabilities. The framework for the formal training was decided on the basis of the perceived needs of the teachers as reported by the Handisport and Sports Adaptes, Polynesie. Cultural biases and perspectives were considered during weekly meetings, as well as current best practices within each field of expertise.

The education team from the REACHability Foundation, traveled to Tahiti with the goal of providing educators of individuals with disabilities with increased knowledge about disability, service delivery and adaptive activities and

resources. The education included gross motor developmental norms, disability awareness and adaptability skills, functional behavior analysis and antecedent interventions, and sensory dysfunction identification.

Team members included: Dr. Jamie Hoffman, Kristen Cummings, MS, BCBA, Heather Hallam, MA, Eric Amundson, and Joclynn Benjamin. Team members were self-selected or selected by co-founders of the REACHability Foundation, Eric Amundson and Joclynn Benjamin. Three out of the five-team members had previously traveled to Tahiti in April 2014 to provide education to a small, independent school for children with disabilities.

Curriculum for the week was prepared by team members in English and translated into French for the presentation. All presentations consisted of a PowerPoint slide show and each participant of the conference was given a workbook with copies of the slides and additional materials. Curriculum included information on disability awareness, introduction to adaptations of sports and recreation, introduction to Applied Behavior Analysis (ABA), functions of behavior, sensory systems and dysfunction, child development and gross motor development. The education/training was presented simultaneously in English, by the expert presenter, and translated in French, by Eric Amundson, a native speaker of both French and English.

This study explored the shared experience of special education teachers who attended a five day education/training at the Institut de la Jeunesse et des Sport de la Polynesie Francaise in Tahiti. The purpose of this study was to examine the effectiveness of a five-day seminar on increasing the self-efficacy of special education teachers in Tahiti.

Methods

Design and participants

This was a qualitative study of perceived efficacy of teachers who work with individuals in French Polynesian on the island of Tahiti. Forty-six individuals who are teachers of individuals with disabilities in Tahiti participated in a five-day training. Teachers were chosen or self-selected to participate in the training and program based on the school and population with whom they work. The Handisport & Sports Adaptes Polynesie Organization provided teachers details of the education. The education of the participants of the five-day education/training varied from a high-school diploma to higher education comparative to a Master's degree, including kinesiotherapists, teachers, physical education teachers, psychologists, and sports professionals. When asked their profession, all participants self-identified as teachers.

The sample was conveniently obtained by providing participants with three different colored note cards. REACHability Foundation collected data on the perceived efficacy prior to and post education/training. Exploratory research design conducting a cohort analysis utilizing secondary data collected by The REACHability Foundation during a five-day education/training at the Institut de la Jeunesse et des Sport de la Polynesie Francaise in Tahiti. The REACHability Foundation did not collect demographic characteristics of participants.

Procedure

The REACHability Foundation collected data on the first day of the education/training and on the final day of the education/training. Participants were given two different cards on the first day of the education/training. The blue card was identified as a place for the participants to write things that were "not working" for them in their current working environment. They were asked to write down aspects of their job that were most difficult or challenging when working with individuals with disabilities in their working environment. Participants were then given a pink card to write down things that were working in their working environment. Participants were asked to identify things that they believe they did well or procedures that they were proud of in their work with individuals with disabilities. The directions for both cards were open-ended and did not specify examples of procedures or a set number of concepts to write down. The following research questions guided the study:

- What is the perceived current status, identifiable strategies and programs that currently work in the educational setting for teachers who work with students with disabilities in Tahiti?
- What is the perceived current status and identifiable challenges that currently exist in the educational

setting for teachers who work with students with disabilities in Tahiti?

- What is the perceived outcome and knowledge gained from participating in a five day training program at the Institut de la Jeunesse et des Sport de la Polynesie Francaise in Tahiti?

Day one of the conference provided the learners with information on gross motor developmental norms. Participants were provided with a copy of the Test of Gross Motor Development-2 (Ulrich, 2000) a gross motor assessment tool, which included 12 basic gross motor skills, including throwing and catching a ball, dribbling a ball, hitting a ball, jumping, hopping, skipping, leaping, galloping, running, sliding and horizontal jumping. Each participant was taught how to assess a child using the assessment tool and each participant was given the opportunity to be assessed by their peers using the tool.

Day two consisted of disability awareness training and an adaptive sports and recreation overview. Simple adaptations to rules and equipment were introduced. In addition, participants were exposed to different types of adaptive sports and recreational activities. Participants were given the opportunity to engage in disability simulation activities, including completing a task with visual impairment simulation goggles. This training also included an activity analysis by breaking down tasks within a recreation activity and focusing on things that participants can do, rather than what they are not able to do based on their disability.

On day three of the conference, participants were introduced to sensory concepts covering the human vestibular, proprioceptive, and tactile systems. Participants were taught to assess their client's sensory needs using the Sensory Checklist (Biel & Peske, 2005). Three different checklists were provided to participants based on the communication style of the client, Child/Teen Sensory Tools Survey, Parent Sensory Tools Survey, and Teacher's Sensory Preferences. Based on the results of the sensory surveys, participants of the conference were taught to best meet the needs of their clients.

Day four provided participants with a basic understanding of the four functions of behavior, based on Applied Behavior Analysis. Participants watched videos and practiced identifying the functions of different behaviors when using information on the preceding variables (antecedents) and immediate consequences. Participants were supported in conducting ABC observations by watching simulations of children with disabilities. Participants were taught to use the functions of behavior to design alternative replacement behavior plans. Participants were also given insight to antecedent interventions in order to reduce the opportunity for problem behaviors to occur.

On day five, participants were taken through the assessment from start to finish. Participants were asked to consider all variables of the assessment and the assessment results when designing a program for their clients. The week ended with a culmination project where participants were grouped with their peers and presented a set of goals based on a fictitious participant and given assessment results.

At the end of the five-day seminar, the REACHability Foundation asked participants to write down on a yellow card the aspects of the education/training that were most useful and that they will likely utilize in their work with individuals with disabilities. Participants were not given specific instructions on what to write, nor were they asked to write a specific number of concepts that they found valuable from the education/training. Participants were presented with a certificate of completion. With the distribution of the certificates the participants showed their pride and were very excited to celebrate the knowledge gained and accomplishments of one another.

Data collection and analysis

Data were collected before the start of training by the REACHability Foundation. Participants were instructed to write down what they were perceived to be working in their current jobs on a pink note card. In addition using a blue colored index card, participants were asked to write things that were not working before they began the training/education program. Data were collected at the conclusion of the five-day training and education. Participants were given a yellow index card and asked to identify what they learned from the training/education. The number of concepts identified as

working, not working or valuable from the seminar varied across participants and were not specified by the REACHability Foundation.

The REACHability Foundation collected data directly from the participants whose native language was French. A reliable translator translated the cards from French to English. The translator had no affiliation or bias associated with the data collection or research study. The French translator is a native French and English speaker. After the translation, the secondary data were given to the researchers for analysis and thematic review.

Results

Effective strategies and programs – pink cards

What is the perceived current status and identifiable strategies and programs that currently work in the educational setting for teachers who work with students with disabilities in Tahiti?

Reflecting the themes of the teachers' perceived effective strategies and programs in their educational setting, one can identify that the themes are recreationally-based in nature and do not have a foundation in traditional academics. The data were analyzed for all 33 responses and themes were identified as representative of the data. Themes included: the use of the pool and swimming – 9%; equestrian center/hippotherapies – 6%; cultural aspect including the respect of authority and boundaries – 9%; socialization – 18%; percussion studio, music and singing – 9%; project for activities – 9%; community trips – 18%; adaptive sports – 18%; improved activities – 4%.

Interesting and noteworthy of the collected perceptions of what teachers identified as working are those that are culturally based and not reflective of a traditional education curriculum in a typical educational setting. The teachers provided little information on the status of the educational or vocational programs of participants, and focused more heavily on recreational programming. This finding speaks to the expectations that are placed on individuals with disabilities in Tahiti.

Challenging strategies and programs – blue cards

What is the perceived current status and identifiable challenges that currently exist in the educational setting for teachers who work with students with disabilities in Tahiti?

The data were analyzed for all 35 responses and themes were identified as representation of the data. Themes included: physical weight and transferring of people – 9%; difficulties with communication and socialization – 11%; lacking the knowledge of how to work with different people based on their disability – 26%; contact with the public is limited – 3%; how to work with parents and get them to do what you ask them to do after school – 6%; lack of accessibility, and difficulty including individuals with different disabilities into activities and sports – 45%.

Educators most commonly expressed their frustration for the lack of inclusion and accessibility for individuals with disabilities within the larger society of Tahiti. Similar to that the responses of what teachers identified as working, teachers did not identify educational or vocational skills as an area of need. Responses surrounded themes of program logistics and inclusion.

Knowledge gained – yellow cards

What is the perceived outcome and knowledge gained from participating in a five day training program at the Institut de la Jeunesse et des Sport de la Polynesie Francaise in Tahiti?

The data were analyzed for all 45 responses and themes were identified as representation of the data. Themes included: learned different ways to adapt to different problem behaviors – 20%; learned better preparation for work – 9%; how to work with people with gross motor and fine motor problems – 7%; how to work professionally – 9%; how to work with parents – 7%; how to adapt recreation activities for many people – 28%; the exchanges between the Americans and our association – 11%; awakening – 9%.

At the conclusion of the five-day education/training, teachers identified adaptations of recreation activities and adaptations of teachers to different problem behaviors, as the greatest areas of learning. Comparing the perceived challenges identified by participants prior to their week of education to the identified outcomes after training, participants identified adaptations of recreation activities and sports as the most challenging prior to the training and as the area of greatest gain after the week of training. Other areas of comparison show that participants gained greater knowledge of program logistics including interactions and collaborations with parents, increasing professionalism in the work place, and increased preparation for work. Teachers also identified “awakening” as an area of knowledge gained, which has not been explicitly defined; however, taking into consideration the culture of Tahiti, the awakening of the teachers is likely associated with their increased knowledge of individuals with disabilities and their potential in recreation.

Discussion

Taking into consideration the content of the education/training program provided during the five days the data collected clearly identifies the outcomes and increased perceived self-efficacy of the teachers who participated based on the reported data. Before the training one participant stated, *“J’aimerais avoir des méthodes pour pouvoir mieux travailler avec les parents concernant l’handicap de leur enfant.”* Translated to: *“I would like to have tools to better work with parents concerning their child’s handicap.”* Another participants stated, *“exemple, tu fais un travail avec l’enfant et que tu demandes aux parents de continuer, ils ne vont pas faire ou ils disent qu’ils sont fatigués.”* Translated to: *“this is not working, for example, you work with the child and ask the parents to continue, but they will not do it or they say they’re too tired, this is a problem.”*

The findings presented show the unique cultural perceptions and perceived efficacy of special education teachers in Tahiti. The participants of the study universally accepted the findings and there are some idiosyncratic cultural issues, which should be taken into account when studying a different culture. For the Tahitian population specifically, their focus on an individual’s awareness is central to the Tahitian culture.

The differences in language between the expert speakers and the participants throughout the week should be considered a limitation of the work completed in Tahiti. As observed by the researchers, throughout their work in Tahiti, literal interpretation of material could influence future explanations of content. As an example, when a teacher in Tahiti is given a ball, the use of a ball is to bounce or kick and explanations were needed to identify alternative adaptations or activities that could be perceived as sport or play, specific to individuals with disabilities. Without a literal translation, a barrier is created limiting the creativity of equipment for the use of sport and recreation, as well as the teacher’s expansion of knowledge. Although experts in each field were present to provide the educational topics, they were all English speakers who utilized a translator to convey the information and questions between participants and experts. It is likely that there was some level of interpretation made by the translator when communicating with the audience. It is possible that the interpreter, based on his own personal knowledge and perspective, altered questions of the audience. In addition to the language barrier when working with and teaching individuals in a different country, an additional limitation is the ability of the individuals being served to answer the question of what is not working. It may be difficult for teachers to provide comprehensive and sufficient information on what is not working because one cannot identify something that is not within their realm of existence. For this reason, the answers of teachers to the question of “what is not working” may not be comprehensive and sufficiently answered.

Limitations

A core limitation of any training program is the funding and cost associated with the presentation. For this project, no funding was acquired and therefore the associated expenses were split between the REACHability Foundation and the Institut de la Jeunesse et des Sport de la Polynesie Francaise. This model is not sustainable for the REACHability Foundation to continue providing education and trainings. In order to continue providing international trainings, the REACHability Foundation must identify and secure future funding opportunities.

As with any qualitative study the question of external validity must be examined and goes beyond the scope of this paper. The results presented here are based on the responses of a small group of special education teachers who

participated in a five-day education REACHability, Sports and Recreation, Tahiti Project. That said this research is representative of that small group and not of the entire population of Tahiti. This study is the beginning of further research related to international perspectives of perceived self-efficacy of special education teachers. The study results can provide a starting point based on the diverse perceptions and the cultural perspectives of disability in Tahiti. Future research may be beneficial to teachers in the traditional education system within Tahiti, not primarily for special education teachers. Additionally, to increase the use of inclusive learning environments where children with disabilities can be integrated into the school system, instead of excluded from a traditional educational opportunity.

The specification of teachers and the population that they serve should be further examined in future research to determine their scope of practice and knowledge base before and after a comprehensive training seminar. Furthermore, research should capture a basic understanding of international diagnostic processes and the impact on education of both the teacher and the individual with a disability.

In an effort to create autonomy while training international schools and organization servicing individuals with disabilities, the REACHability Foundation would benefit from the creation of a menu of various education topics. This menu of topics could be presented during an initial consultation when determining the needs of the organization. The current week of education topics were selected based on the REACHability Foundation's strengths and knowledge, as well as perception of the needs in Tahiti, based on a previous two-day training that was provided for one school on the island six months prior. The training presented was based on a variety of factors that were related to the needs of the special education system as a whole, but especially for increasing teacher self-efficacy. The REACHability Foundation should also consider furthering the training options provided to teachers of individuals with disabilities and combine formal training seminars with practical application of knowledge gained in the training to enhance the learning process. Without the direct observation and feedback for the teachers, the full scope and understanding will not be fully attained.

Conclusion

As the population of individuals with disabilities on the islands of Tahiti continues increase, the need for well-trained teachers who are confident in their skills is prominent. The challenges that these teachers face can be supported through educational opportunities to increase their self-efficacy in working with individuals with disabilities.

The primary purpose of this research was to examine the effectiveness of a five-day seminar on increasing the self-efficacy of special education teachers in Tahiti. Based on the current research, the results proved that a

cross-cultural seminar was effective in increasing the self-efficacy, as well as the knowledge base, of teachers in Tahiti. The findings of this study make important contributions to current work in international teacher training, as well as self-efficacy of teachers. The positive outcomes anticipated may serve to improve the awareness of the needs of individuals with disabilities in Tahiti and opportunities for funding to educate teachers in Tahiti.

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Young Adult Books: Helping to Prepare Teachers for Augmentative Alternative Communication

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Many educators have reported limited education in their training or preparation programs on assistive technology and communication devices. The present study reported on action research conducted in this area using book study groups. Participants included graduate students enrolled in a face-to-face course required within their special education teacher preparation program. Qualitative data were collected via participants' reading reflections and indicated that use of young adult literature facilitated constructing new knowledge regarding disabilities, assistive technology, and augmentative alternative communication devices and builds on their reflective practices. Furthermore, these future special educators may extend use of the book study with K-12 students.

Introduction

The importance of assistive technology (AT) is recognized globally as evidenced within the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993) which supported the provision of AT. Since the adoption, about half of the United Nation countries have passed legislation to address providing AT to individuals with disabilities (South-North Center for Dialogue and Development, 2006). In the U.S., AT requirements are included in legislation such as the Individuals with Disability Education Improvement Act, Americans with Disability Act, Assistive Technology Act, and the Rehabilitation Act. These acts define AT as “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of children with disabilities” (20 U.S.C. §1401). One category of AT is augmentative alternative communication (AAC). AAC includes “forms of communication (other than oral speech) that are used to express thoughts, needs, wants, and ideas” (ASHA, 1997-2015), including aided assistive technology such as picture symbols, communication boards, and speech generating devices. Estimates of the number of students with disabilities receiving services in U.S. schools who could benefit from AT vary by type of disability category and range from 10% to 100% (Golden, 1999). Moreover, students identified as using AT had an average of seven devices listed on their Individual Education Plans (IEPs) and for many of these students one of the devices was AAC (44.7%) (Stegall, 2007). In other words, approximately 3% of all students with a disability utilize AAC (Blackorby, Wagner, Marder, & Guzman, 2004; Worah, 2011). Although the consideration of AT for all students with disabilities is mandated in the U. S. and research indicated that many students utilized AT and AAC, training on these devices is limited across preparation programs.

In investigating general education teacher preparation programs, researchers found a significant lack of preparation and experience in technology instruction designed for students with a disability, including use of assistive technology (Cavanaugh, 2002; Jost & Mosley, 2011). Likewise, research indicated limited formal instructional training in special education teacher preparation programs on AT. For example, results of a national survey of special education teacher preparation programs indicated that some programs required course work in AT (34.6%) and of those most required only one course (86%). Undergraduate and graduate programs concentrating in severe to moderate disabilities were more likely to require AT courses than programs focusing on mild to moderate disabilities, general special education, or secondary special education. Overall, undergraduate degree programs were more likely to require an AT course than

graduate programs (Judge & Simms, 2009). Additionally, researchers found that although programs provided some instruction in AT, many students had limited or no access to actual AT devices (49%-58%) and few programs required students to demonstrate AT competencies (Bausch & Ault, 2012). Moreover, although university graduate special education program coordinators reported it was important for preservice teachers to be competent in AT (rating them critical to extremely critical), they rated student attainment of these competencies as fair (Michaels & McDermott, 2003). Furthermore, many speech-language pathologists (SLPs) reported inadequate preparation in either their undergraduate or graduate program on AT and AAC (74%-78%) (ATIA, 2012). Once educators were working in K-12 schools, AT training and knowledge was still found to be incomplete. For example, general education teachers reported limited knowledge of AT and identified it as an area of need for additional in-service training (Buell, Hallam, & Gamel-McCormick, 1999). Additional survey results revealed that special educators reported limited or no knowledge of assistive technology applications (Puckett, 2004), and many rarely or never had hands-on experience with AT devices (Lesar, 1998). More specifically, just half of special education teachers currently working with students with severe or multiple disabilities (51.3%) reported that their teacher training program and/or experience gave them the necessary skills to improve the communication skills of students using AAC (Soto, 1997). Additionally, many SLPs reported that they did not feel they were knowledgeable in delivering AAC services to students (ATIA, 2012). The limited educator preparation training in assistive technology is problematic for those students with disabilities using AT, and more specifically those using AAC to give themselves a voice.

While in their preparation programs, educators could learn about and become accepting of AT and AAC through reading and discussing fiction and non-fiction books, including children's literature or young adult books, which deal with the life experiences of individuals using AAC. Literature can be used to facilitate preservice teacher examination of their beliefs, values, and understandings about diversity and disability (Dana & Lynch-Brown, 1993; Tattelbaum, 1984). In addition, it has been shown to develop preservice teachers' knowledge of diversity and disabilities. Exposure to the use of literature about disabilities has been shown to be an effective means for developing empathy and acceptance (Kurtts & Gavigan, 2008). What is more, the use of literature and identifying with one or more characters or events in that literature can be used to teach the complex issues a student with disability, their teachers, and/or family face (Iaquinta & Hipsky, 2006). Although no studies were found that specifically addressed the use of children's literature or young adult literature including characters using AAC with preservice teachers, it is possible that similar results regarding the development of preservice teacher's knowledge, empathy, and understanding of the specific challenges teachers, families, and children who use AAC would be seen as well. In turn, teachers can then incorporate these children's or young adult books into their own classrooms to teach and prepare their K-12 typical students about disability and diversity (Dana & Lynch-Brown, 1993) and facilitate their school age students with communication disorders' growth (Tattelbaum, 1984).

In selecting children's and young adult literature including characters with disabilities, Landrum (2001) offers the following suggestions or criteria: the novel should contain a realistic plot involving the character with a disability, the focus of the character must be on their abilities not just their disability, the portrayal of the characteristics of the disability ought to be accurate, and person-first terminology should be used. Blaska (2004) used similar criteria with a few additional suggestions for evaluating literature involving characters with disabilities: the storyline should promote empathy and depict acceptance and the illustrations have to be realistic. Keeping these factors in mind, literature which includes a character utilizing AAC could be selected and used in a teacher preparation course to expand preservice teachers' knowledge, empathy, and understanding of AT and AAC.

Methods

To this end, action research was conducted by an instructor at a small northeast university. The action researchers' role was to select the young adult book, develop reflection assignments and rubrics, facilitate discussions, and analyze data. Participants included 10 graduate students seeking certification in general special education. Participants were enrolled in a required 8 week on-ground course, Communication and Special Education. As part of the course requirements, participants engaged in textbook reading, classroom lecture, and small group activities with AAC devices. In addition, the course required a book study group assignment using the young adult fiction book "Out of My Mind" by Sharon Draper (2010). This book was chosen by the instructor because the main character utilized AAC and was depicted as capable, resourceful, and an active participant in the story plot. She interacted with others and showed character growth. By describing actions or events in school, home, and community settings, the storyline had the potential to open up discussion on current practices involving students with disabilities in multiple environments. In preparation of class sessions covering AAC topics, participants were to individually read the book and complete three journal entries: a double entry journal (which includes both information directly from the text and the reader's reaction), a reflection journal, and a response to participant selected discussion questions posed by the book's author. Then in class, participants discussed in small groups

their reaction to the readings. Qualitative data from reflections and discussions were analyzed and topic themes emerged. These themes centered on depictions or understandings of the disability, need for communication, the communication device, the ability to relate to family dynamics, teachers and education, the desire for friends, and the possible impact on their teaching practice.

Results

The book study led to understanding of cerebral palsy (CP) through the main character Melody, a 13 year old girl with CP. She was non-verbal, used a wheelchair, and required assistance with mobility and personal care. One student reported that the book provided numerous examples of the physical impact of CP such as what happened if she wasn't strapped in properly, when she got so excited about winning that she was unable to control the kicking and squealing, and saving her dinner so she didn't have to let other kids see her being fed by her mother.

Further understanding of the disability was demonstrated through many students' double entry journals which included referencing Melody's explanation of realizing she had a disability. "I guess I figured out I was different a little at a time. Since I never had any trouble thinking or remembering, it actually sort of surprised me that I couldn't do stuff. And it made me angry" (Draper, 2010, p.9). As with many children with CP, the character in this book had average cognitive abilities. Additionally, one participant expressed compassion when reading about the reactions of the character's classmates to her disability, for example, "how she [Melody] felt about her classmates who assumed that her mind was as dysfunctional as her body was heartbreaking to read." Not only were the characteristics realistically portrayed, but they were not the only defining traits to Melody. Journal entries reflected this, such that students remarked on the character's strength and determination. For example, when describing why Melody entered the quiz team, one student stated "she wanted to show people that a disability does not define you and it does not mean that you cannot learn or succeed." Another student wrote "I think some people see a person with a disability and only see the disability. They don't realize that there is a real human being sitting right in front of them."

One of the main themes in the story and discussions was the importance of communication and how it impacts all areas of life. For example, the main character was asked whether she would rather be able to walk or talk and she responded "talk, talk, talk". Several participants reported that the author stated it best for Melody in that "Everybody uses words to express themselves. Except me. And I bet most people don't realize the power of words. But I do" (Draper, 2010, p. 7). The author also used an analogy of a fish in a fishbowl to a child's lack of communication and this analogy resonated with the students. For example, one student wrote that

I really liked the comparison of Ollie [fish] and Melody. Both are trapped and unable to express themselves. Melody is trapped in her body and unable to speak and Ollie is stuck in the bowl. I think this scene also showed how communication is such a struggle for Melody and her family. There seems to be a lot of misunderstandings due to the lack of communication or communication devices.

People are often unsure how to communicate with individuals who are non-verbal. The author illustrates this through an inner dialogue of the main character "Sometimes people never even ask my name, like it's not important or something. It is. My name is Melody" (Draper, 2010, p. 4). This quote resonated with one of the participants who shared that she had witnessed "many times where people will almost ignore individuals with a disability. I don't think it is to be rude or ignorant but I think it is because people might feel uncomfortable or assume that they will not understand". Not only does communication impact the family life, but it also impacts the educational experience. As one participant wrote "she is unable to raise her hand or get the teacher's attention. Knowing the answers or wanting to participate in class but not having the means to communicate is very difficult and frustrating for her". Another participant commented that "she is probably the smartest 5th grader in her class, but her teachers aren't asking questions in ways that Melody is able to demonstrate what she knows." Thus the participants were able to connect communication challenges with instructional approaches. The storyline also provided an opportunity to empathize with and relate to the character's experiences and their own daily life. For example, one participant wrote

This chapter really got me thinking about how often we do take the ability to talk and communicate for granted. Our society thrives on sending texts, or emails without thinking about how lucky we are to have the ability to communicate with words to our peers. It also made me think about how important it is to

actively work on getting students the ability to communicate and giving them that voice they are missing.

Through the persistence of many individuals, the main character acquired AAC, specifically a speech generating device. One student summarized the importance of the device as follows,

the Medi-talker is a life altering piece of equipment for Melody. Having all of these thoughts and feelings stuck inside her with no real way to tell people what is going on with her has to be almost too much to bear. Then to be able to tell your parents for the first time in your 13 years of life that you love them would have to be such a release. She is now able to show the world that she is smart and that she has thoughts and feelings just like everybody else. It is a small release from the prison of silence that she has endured for her entire life.

The importance of AAC was further noted with reflections such as “the device not only gives her speech, it gives her the power to make choices”, the “use of communication devices is not static but changes as the needs change”, and “I don’t believe the device changed her potential, I just believe that it allowed teachers to see what she truly knew.” Likewise, participants were also able to gain knowledge on the importance of proper programming of devices. For example, one student wrote that

Melody wanted McDonald’s but she could not communicate that to her father. She could communicate that she was hungry and wanted to eat, but could not communicate exactly what she wanted. When giving someone a device to communicate, it is important that things are included on the communication board that are of interest and importance to the individual.

Further, students were able to identify challenges for providing instruction to students using AAC. “It can’t help overcome all barriers. Discussions are still difficult due to the time it may take to type things out or select words.”

Several family dynamics were explored through the book study including parents’ feelings when their child was treated differently, the struggles of the family to choose a communication method and obtain a device for their child, and the various aspects of daily life that are a challenge for parents with a child with significant health or physical needs. One quote from Melody’s character prompted much discussion on how parents might blame themselves for the disability. “I wanted to tell Mom that I was sorry she was so sad and so scared. That it wasn’t her fault. That I was just the way I was and she had nothing to do with it” (Draper, 2010, p. 73).

Several story events took place at school which illuminated various aspects of educating students with disabilities. One of the special education teachers failed to review the characters’ previous school records, assess their abilities, or collect data during instruction and thus spent the entire year working on a few letters of the alphabet. One participant wrote

This entire chapter got to me. I just couldn’t believe that this teacher didn’t even take the time to find out what level her students were on or their interests. It also drove me insane how nothing about how she ran her classroom was age appropriate even in the slightest. If I was Melody, I would have a meltdown too in that situation. I, again, was so happy that her mother stood up for her daughter instead of blindly following the ‘expert’s’ advice like so many do.

Fortunately, there were examples of a good special education teacher and paraprofessional as well. As one student reflected, “the book also shed light on insightful teachers who understood that the students needed to be pushed and that they could and should have access to the general education curriculum”. The main character, Melody, also participated in inclusion classes and several teachers were introduced to illustrate the contrasting ways teachers respond to having a student with significant needs in the general education classroom. One reflection indicated that

the way that a few of the teachers talked to Melody is a major reason, in my opinion, why most of the students treated her the way they did in the book. If the teacher is telling the rest of the class to be welcoming to their visitors or that Melody getting the only perfect score must be a fluke, of course the rest of the students would follow suit with that mindset.

Another student shared that “teachers set the tone for the classroom. She will not accept name calling or making fun of other students and her actions back that up.” As with most children, the main character had a strong desire for friends. Several of the students specifically discussed the social benefits of inclusion and that how a teacher treats the child using

AAC will also have an impact on their peer relationships. For example, one student wrote that “Melody begins to realize what students outside of H-5 [the self-contained classroom] have the opportunity to do and begins to yearn for those chances and to be able to hang out with people outside of school.” The college students were surprised that students with disabilities would be in class with the same students with disabilities for several consecutive years as this is quite different from their own K-12 experiences.

The inclusion program changes Melody’s school experiences in many ways. Unlike other children, Melody has been in the same classroom every year with exactly the same classmates. They tend to do the same things over and over, year after year, from learning the alphabet to assembling the holiday snowman decorations. For Melody going to different classes with a variety of kids is novel, interesting, and a little nerve-wracking.

One participant summarized the character’s educational experiences as follows, “Overall the inclusion program helps Melody to break free, not only is she trapped within herself because she can’t communicate, she was in essence trapped in room H-5 also and it was keeping her from reaching her full potential.”

Lastly, the book study activities provided the participants with an opportunity to reflect on their own attitudes and consider what they could do when they are teaching students with communication difficulties. As one participant pondered,

reading the text ‘I have never spoken one single word. I am almost eleven years old (pg.2)’, kind of stopped me in my tracks. I can honestly say that I don’t think I have ever thought this way about students who are non-verbal. I have never considered how much they may actually have to say, but we aren’t giving them the proper means of communicating those thoughts. I wonder how many teachers provide their students who are non-verbal with as many forms of potential communication as possible?

Finally, participants connected what they had learned from the research and topics discussed in class, to story events, and to their future teaching. This was indicated in the following reflections, “Research shows that students need to be included with peers that do not have a disability to benefit from every student socially. It definitely made me look at my future practices and ways to include each and every student in the classroom.” “We need to ask ourselves the following questions: How can we truly include students who are non-verbal in our classrooms; have we listened hard enough to what they are trying to tell us?”

Discussion

Results of this small action research study indicated that book study activities involving young adult fictional literature could be used in a teacher preparation course to expand preservice teachers’ knowledge of AAC and understanding of AT. Although the findings of this study were limited to use of one young adult book at one university, the results were similar to those of other researchers regarding development of teachers’ knowledge and empathy through children’s literature including disabilities in general (Dana & Lynch-Brown, 1993; Iaquinta & Hipsky, 2006; Kurtts & Gavigan, 2008; Tatelbaum, 1984). Hopefully, in turn, these future teachers will use children’s and young adults’ literature in their K-12 classrooms to assist typical children in acquiring knowledge about students with disabilities (Inquinta & Hipsky, 2006; Dana & Lynch-Brown), specifically those utilizing AAC. Several participants indicated their intention to do just that. In addition, they could use this same reading with students using AAC to order to improve their self-efficacy, perceptions of self-worth or self-image, and interpersonal relationships (Tatelbaum, 1984).

Other teacher preparation programs from around the globe could incorporate children’s literature or young adult books including characters using AAC who also represent the people, culture, and language of their country. The present action research utilized the book ‘Out of My Mind’, though other books may be chosen. Landrum’s (2001) and Blaska’s (2004) criteria for book selection should be followed. This is not as easy as it sounds! Altieri (2008) reviewed children’s fictional books including characters with disabilities and found that only a few of the characters received assistance from technology (2008). Furthermore, Prater (2003) found that just 20% of the books reviewed realistically depicted students with a disability. This author reviewed over 30 books for the study and found only 5 that would be appropriate (see Table 1). The book chosen was easy to read, could be completed within a short time frame, and topics supported course textbook

reading assignments. Participants indicated that they liked the reflection and discussion activities and have recommended the book to other teachers.

In summary, as part of required coursework within a graduate special education class, students were required to participate in several activities as part of a book study of a young adult's book involving a student with a disability who used AAC. Through the discussions and reflections, participants indicated increased knowledge of students with disabilities using AAC and development of empathy for these students, their teachers, and families. As a result, the young adult book study will be a required component in future offerings of the course. Further, this activity may be one of many strategies used to improve the AAC preparation of general educators, special educators, and/or speech-language pathologists around the globe.

Appendix:

Selected Children's Literature and Young Adult Fiction Books with Characters who Utilize AAC

Author Title (Year)	Summary
Sharon M. Draper Out of my Mind (2010)	This book is written from the viewpoint of Melody, a 5 th grade girl with CP. Melody is very smart, but unable to show it as she is non-verbal until she is introduced to a voice output device. Through some heart-warming events, the reader sees Melody's struggle with physical difficulties and typical teen challenges. In the end, Melody realizes that she is no different than any other middle school student; she faces challenges, wants to fit in, and just wants a friend.
Elizabeth Helfman On Being Sarah (1992)	Sarah is 12 years old, has CP, and is nonverbal. She uses Bliss Symbols on a board on her wheelchair to communicate. After attending a special school for elementary school, she is to begin middle school in a public school. The events in this book center on her relationships with her family and classmates.
Cynthia Lord Rules (2006)	This book is told from Catherine's viewpoint, a 12 year old girl whose brother David has autism. Catherine meets Jason, a young boy who uses a wheelchair for mobility and picture symbols for communication. In order to help Jason voice his thoughts, she creates new, colorful picture symbols – awesome, whatever, stinks a big one. Through some typical adolescent experiences, Catherine realizes that being different is 'normal'.
Linda Mitchell Maddox Resonating the Sound (2011)	As the author stated, "This is a story about obstacles and ways the middle school age characters in the book choose to deal with them in their lives"(p. 6). Two years following a traumatic brain injury, Jana is unable to speak and chooses to try AAC. Eli, a fellow student who has Gifted Aspergers, helps to personalize the device.
Patricia Mervine How Katie got a Voice (and a cool new nickname) (2012)	This story was told from the perspective of one of the students in a 4 th grade class in an unusual school (all the students and teachers had nick-names). Katie, who uses picture symbols and eye gaze to communicate, begins school there. Her peers have a difficult time communicating with her until she gets a communication device.
Liane Shaw The Color of Silence (2013)	There are two main characters in this story: Alexandra or Alex (who chooses not to talk following the death of her friend) and Joanie (who has a degenerative muscular disease and cannot speak). As part of Alex's community service she was to visit Joanie in the hospital. There an SLP tries Eye Gaze communication with Joanie. The author provides a good description of the device and some of the struggles in getting it programmed. With the device, Alex realizes that Joanie is funny and knows how to read and spell.

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Implementing Portfolios Using Tk20: An Educational Assessment System

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The purpose of this paper is to share results of collaborative effort introducing special education portfolios into an inclusive teacher education program using the Tk20 assessment system. Tk20 is an assessment system for both providing evidence of educational skills and achieving that evidence in such a way as to demonstrate growth of teacher candidates. This is not only important for the teacher candidates as they push themselves professionally, but it is also a crucial aspect of accreditation requirements for teacher education programs. Therefore, the focus of the paper is on the usefulness of standards based, working and exit electronic special education portfolios in teacher education. The three instructors report teacher candidates' learning outcomes and professional development by analyzing data in a special education portfolio via Tk20 from special education courses in three phases of a teacher preparation program prior to student teaching practicum. We describe the lessons learned and focus on victories and challenges in our planning and implementation process. We also suggest recommendations for others to implement the interdisciplinary efforts for effective collaboration into a college wide, electronic educational assessment system in order to track the performances of teacher candidates over time.

Introduction

In many, if not most cases, teacher candidates from any given country are different in a variety of cultural ways from one another and from their instructors (Brown, 2010). These teacher candidates are active learners with unique backgrounds and skills. They have multi-layered lives with increasing demands and responsibilities and they move at a hectic pace. They juggle competing interests, the least of which might be their college course demands. Often, they are more technologically savvy than their instructors in the use of multimedia and communication tools. It is the role of the college instructor, however, to capture the quality of the student performance often in relationship to program or college standards. The difficulty for most teacher education programs is how to accurately evaluate the ever changing performance of each teacher candidate across time (Fallon, Wright, Lalonde, & Browning, 2012).

Ecology of technology use is rapidly changing across the globe. With increasingly diverse college classrooms in every country, technology integration is both a challenge and an opportunity (Zhang, J., Fallon, M., & Russo, T., 2015). New technology has colleges and universities rethinking the tools to manage the ever changing needs of program assessments. Of critical importance is the alignment of curriculum, instruction, and assessment. Regardless of the discipline or the country in which the program originates, the content must be taught so that all teacher candidates have the

opportunity to understand the information and are given the chance to demonstrate their knowledge and skills. Using these instructional strategies, the instructor role seems to shift, from that of a director or controller of the intake of learning to that of a facilitator or provider of learning opportunities. This shift in role for the instructors can better mesh with the salient characteristics of diverse learners and improve the quality of the learning process for all (Fallon & Brown, 2010).

What is the usefulness of special education portfolios and Tk20?

Tk20 is a comprehensive learning outcomes software tool purchased to support the assessment of student learning on college campuses using an archive that acts as an electronic portfolio of the teacher candidate's cumulative performances. Tk20's functionality includes support for defining goals and outcomes related to college and program mission, mapping of the outcomes to curriculum, support of course-based assessments with rubrics aligned to professional and state standards, surveys, field and clinical experience assessments completed by supervisors and faculty, reporting, and tracking of data driven decisions. This is an assessment system for both providing evidence of educational skills and archiving that evidence in such a way as to demonstrate growth of teacher candidates (Fallon, Lalonde, Wright, & Browning, 2012). The system enables assessment at the student, program, and unit levels, with data collected at the student level and aggregated for review at the program and unit levels for successful national accreditation by the National Council for the Accreditation of Teacher Educators (NCATE), which is now transferred to the Council for the Accreditation of Educator Preparation (CAEP).

Portfolios in teacher education, such as the special education portfolio used in this project, have several unique features that are of importance to any teacher education program in the world. They are flexible, allowing the contents to reflect the uniqueness of the teacher candidate and the individual path of the program. They allow a teacher candidate to document his/her progression from introductory level to mastery of professional skills or to extend the development of the teaching performance from an initial level in coursework to integration in the internship experience. In an electronic assessment system, the contents are permanently archived, yet easily accessible to the teacher candidate and any other person with whom the teacher candidate wishes to share. Tk20 allows for unlimited number of Presentations Portfolios, pulling artifacts from a variety of sources in multiple versions and reflecting multiple viewpoints for both teacher candidates and instructors.

This means instructors incorporate into their teaching course assessments that assist teacher candidates to preview, organize, understand, remember, and retrieve critical concepts. These assessments can be correlated into a presentation portfolio using Tk20 on any given topic or concept. By incorporating presentation portfolios into their teaching, instructors literally teach student how to understand, apply, and demonstrate their skills in any content area. Thus, teacher candidates can apply the same techniques to their studying and the retrieval of the information in test situations. For any teacher candidate, the ability to do self-evaluation on their teaching practices is critical (Fallon, Ackley, & Brown, 2003). A major influence upon a teacher's sense of self as a professional is their ability to reflect upon their dispositions, knowledge, and professional skills using reflection and self-analysis. Thus, teacher education instructors can require the addition of reflection and self-evaluations to the portfolio. This means to incorporate that self-evaluation into the portfolio, making specific plans for future changes that promote the learning of all teacher candidates.

Standards from several professional organizations are embedded into each assignment on Tk20. The flexibility of Tk20 allowed the integration of the content major, along with our dual certification teacher education program. The challenge was developing a special education portfolio that meets content standards in English Language Arts, Foreign Languages, Mathematics, Social Studies, and the Sciences, along with standards for special education. The special education portfolio had to focus on meeting standards in special education. As a result, faculty, assessment staff, and teacher candidates needed to collaborate in ways they never had before. Working across disciplines is an integral part of a major and minor, a scholarly self, what each person brings to education, and their passions in a multifaceted way. This collaboration led to greater understanding of each other's perspective and of the contribution to student success assessment can have.

What is the role of assessment in special education programs?

The educational process has become a matter of compliance and fulfillment of requirements. This compliance view of education does not require much from the teacher candidates beyond recalling and recognizing key facts and skills, being able to paraphrase and summarize material provided by the instructor, and following directions well enough to provide the instructor "what they want." Instructors in inclusive classrooms recognize the unique individual within each

student and work to motivate teacher candidates to participate by relating their individual experiences and perspectives with those reflected within the classroom community and curriculum. Developing uniform units of study can assist teacher candidates in recognizing what they already know and can do, anticipating the types of experiences they will have within a course or activity, and planning for their intentional involvement in the learning process (Parkison, 2010).

Accreditation systems have necessitated a re-thinking of the type and manner of assessments developed for individual courses and within programs. Learning to balance the teaching and learning process is the critical job of the college instructor. College instructors (Fallon, 2010) need to use instructional and assessment strategies that increase retention and retrieval of critical information in ways that were not used in the past. Developing an interdisciplinary assignment is necessary for potential special educators and should be based on planning, teaching, and assessing individual needs of learners using Response To Intervention (RTI) as model and data analysis.

For the special education portfolios, it is important that the teacher candidates were in charge of representing their mastery of meeting the Council for Exceptional Children (CEC) standards using artifacts they create. These artifacts served as examples of their professional growth throughout the program – from entrance into the program when they are being introduced to and practicing knowledge and skills necessary for teaching teacher candidates with disabilities to the final phase of student teaching.

To truly demonstrate “mastery” the teacher candidates must be able to read and understand the CEC standards, create instruction (for example) that reflects an understanding of the CEC standards, and then present and speak to what they have developed and how it meets the standards. If this process was too directed by college supervisors in student teaching, the end result will represent a combination of the supervisors’ and teacher candidates’ mastery, not the teacher candidates’ alone. This is not only important for the teacher candidates as they push themselves professionally, but it is also a crucial aspect of accreditation requirements for a program.

Why have portfolios in Teacher Education programs?

Inclusion programs have general education and teacher education integrated with each other, generally referred to as dual certification programs. Dual certification programs are similar to a double major. Within a dual certification program, the use of portfolios has long been a strategy used worldwide to document a teacher candidate’s progress (Fallon, & Watts, 2001). There are two approved programs with majors in some area of general education and also in special education. Teacher education certification may also be available using an alternative path. Portfolios may be one method of documenting that a teacher candidate has demonstrated the skills necessary to reach certification through the alternative path. One example of this type of portfolio might be an inclusive unit and lesson plan portfolio, demonstrating the ability to plan and teach inclusively.

Teachers naturally feel a responsibility to teacher candidates to guide them and help them understand what our expectations are. Every instructor develops key assessments for his or her course based on course objectives and laid out in the syllabus. Tk20 can be used to share key assessment electronically with the teacher candidates in the class, for teacher candidates to share their work back to the instructor as evidence of meeting course requirements, and for the instructor to provide the teacher candidates with grades on their performance. Tk20 uses this process of sharing files between instructor and student electronically. Results are then archived with each student who then has an electronic academic record of his or her performance in the course. Why might teacher candidates want an assessment record of their performance developed? Every student has access to a complete record of their performance within a class and across a program. This may also be used in job hunting or as evidence of special education professional growth and development. One of the benefits of using Tk20 is the fact that teacher candidates will have access to work uploaded to Tk20 even after they have graduated. Empowering them now will ensure they have the skills they need to successfully use Tk20 to the fullest extent in their professional careers.

Most states have both conventional and alternative paths to certification that often use a portfolio as evidence of program completion. Most colleges and universities have approved programs requiring portfolios as partial fulfillment of requirements. This means they can recommend teacher candidate to states for certification upon conferring of the degree based on the evidence in the exit portfolio. The exit or Credential Portfolio demonstrates that the teacher candidate’s professional abilities and he/she meets standards for teaching in inclusive environments and in the core content areas. The portfolio may also be used as a Master Teacher Portfolio for National Board Certification or as a Showcase Portfolio for job hunting.

Methods

Accredited institutions must have programs that are consistent with national and international standards. In any given syllabus, course objectives are coded with whatever professional standards that are met within the course requirements. In the initial stage of this project, an extensive campus-wide needs assessment of student learning outcomes assessment needs was conducted at a medium size college in western New York in 2009-2010. Results of this needs assessment indicated a campus-wide need to have technology to support assessment of student learning from the planning stages, to data collection, data analysis, data review, data decision making, and tracking of program improvements based upon the data driven decisions. In 2011, Tk20, a comprehensive learning outcomes software tool, was purchased to support the assessment of student learning outcomes campus-wide (www.tk20.com). In the same way, the assessments on Tk20 are coded to the same standards as evidence of performance meeting those standards. In summary, instructors must predetermine the key assessments in a course that meet these standards, measure teacher candidates' performance on the assessments to those standards, and provide feedback to teacher candidates through an assessment system such as Tk20. Instructor training sessions were provided and a "soft rollout" for teacher candidates was planned in the following semester. The purpose of the trainings and soft rollout was to allow stakeholders time to learn the system and develop course based assessments.

Once the Tk20 system was ingrained into the teacher education program, the study was developed to better evaluate the effectiveness of key assessments and the Tk20 system. The purpose of this study was to explore the use of Tk20 as a platform of a special education portfolio in teacher education programs to prepare teacher candidates for meeting professional standards of the Council for Exceptional Children (CEC). This study was investigation on developing a special education portfolio using Tk20 in inclusive childhood and adolescence teacher education programs in a middle-sized public college located in the northeastern part of the United States. The research question to be explored was: Can a teacher preparation program demonstrate teacher candidates' professional performance and development by using a special education portfolio via Tk20?

Participants

Three instructors from inclusive childhood and adolescence teacher education programs in a middle-sized public college in the northeastern part of the United States participated in this study. All of the three instructors required their teacher candidates to submit core course work into electronic portfolios, and assess their teacher candidates' learning outcomes using the platform of Tk20.

Procedures

Based on the CEC 2001 preparation standards for special educators, a panel of three experts in special education developed core assessments across the special education courses and student teaching practicum during the four phases in the inclusive teacher education programs. All of the experts had doctoral degrees in special education, and had been teaching in the inclusive teacher education programs at the research site for three years or more. Each of the core assessments was initially developed by one instructor who taught the course. It was revised by the panel of experts for accuracy and appropriateness for the alignment with the CEC 2001 standards. Each of the core course assessments was then implemented in an all three special education courses designed to prepare teacher candidates for inclusive classrooms, including teaching students with disabilities. Table 1 indicates the alignment between the core course assessments and the CEC 2001 standards.

Insert Table 1 about here.

Appendix A gives an example of the instructional guideline and scoring rubrics for one of the core course assessments, Standardized Assessment Report (SAR), in EDI 419 Assessments for Special Education. SAR requires teacher candidates to administer and score a norm referenced test, selected on the basis of the needs of a learner. It is followed by the Individualized Education Program (IEP) case study. The assessments of SAR and IEP refer primarily to CEC 2001 Standards 2 & 8. Table 2 provides an example of how the components of the core course assessment of SAR and IEP are aligned to the CEC 2001 standards. By aligning the teacher candidates' performance indicators to the professional organization's standards, the instructors are able to provide teacher candidates specific expectations and feedback on their performance. Furthermore, the department is able to make data-driven decisions regarding the course and the program improvement.

Insert Table 2 about here.

Data Analysis

Descriptive analysis were used to investigate teacher candidates' performance on the core course assessments using Tk20. Both frequency and percentage of the teacher candidates' performance at the categories of exemplary, proficient, developing, and unacceptable by courses were reported. In addition, the frequency and percentage of the teacher candidates' incompleteness of each core course assessment were analyzed and reported.

Results

From Fall 2011 through Spring 2014, in the course of EDI 413, Introduction of Special Education, a total number of 71 teacher candidates' performance met or exceeded the "Developing" criteria of the Family Systems Theory (FST) paper (81.6%). However, 11 teacher candidates failed to submit their FST paper into the Tk20 e-portfolio (12.6%). A total number of 61 teacher candidates' performance met or exceeded the "Developing" criteria of the Functional Behavioral Assessment and Behavioral Intervention Plan (FBA/BIP) (70.1%). However, 11 teacher candidates failed to submit their FBA/BIP into the Tk20 portfolio (12.6%). In the course of EDI 414, Methods and Materials in Inclusive Classrooms, a total number of 265 teacher candidates' performance met or exceeded the "Developing" criteria of the Unit Planning Assessment (96.0%). However, seven teacher candidates failed to submit their Unit Plans into the Tk20 portfolio (2.5%). A total number of 269 teacher candidates' performance met or exceeded the "Developing" criteria of the Lesson Planning Assessment (97.5%). However, six teacher candidates failed to submit their Lesson Plans into the Tk20 portfolio (2.2%). In the course of EDI 419, Assessments for Special Education, a total number of 225 teacher candidates' performance met or exceeded the "Developing" criteria of the Standardized Assessment Report (SAR) (81.5%). Only one teacher candidate failed to submit the SAR into the Tk20 portfolio (0.4%). A total number of 235 teacher candidates' performance met or exceeded the "Developing" criteria of the Individualized Education Plan (IEP) (85.1%). However, 20 teacher candidates failed to submit their IEP into the Tk20 portfolio (7.2%). More detailed data analyses were reported in Table 3. Since more than one assessment is mapped to each CEC 2001 standards, the number and percentage of teacher candidates whose performance met or exceeded the "Developing" criteria of the core course assessments indicated that, in general, each standard was met successfully.

Insert Table 3 about here.

Discussion and Conclusions

The purpose of this study was to explore the use of Tk20 as a platform of a special education portfolio in teacher education programs to prepare teacher candidates for meeting professional standards of the Council for Exceptional Children (CEC). This study was investigation on developing a special education portfolio using Tk20 in inclusive childhood and adolescence teacher education programs in a middle-sized public college located in the northeastern part of the United States. The current study was an investigation exploring the following research question: Can a teacher preparation program demonstrate teacher candidates' professional performance and development by using a special education portfolio via Tk20? The results of this study indicate that the use of electronic assessment systems such as Tk20 can be a valuable tool in the growth and development of teacher candidates worldwide.

Limitations

There are a number of limitations associated with this study. The first limitation pertains to the use of data collected from the courses taught by the three participating instructors. Each of the three special education courses was offered by multiple instructors, so the data reported in this study did not cover all teacher candidates' performance. Another limitation was the different sample size across the three courses. Over the three school years, since the participating instructors taught more sessions of special education courses at higher levels, that is, EDI 414 Methods and Materials in Inclusive Classrooms and EDI 419 Assessments for Special Education, more data were reported and analyzed from these two courses, compared to the data from EDI 413 Introduction of Special Education. Because of these limitations, findings of this study should be interpreted with caution.

In spite of these limitations, as reported in the "Results" section, since more than one assessment is mapped to each CEC 2001 standards, the number and percentage of teacher candidates whose performance met or exceeded the "Developing" criteria of the core course assessments indicated that, in general, each standard was met successfully. The results of this study indicated that a teacher preparation program can demonstrate teacher candidates' professional

performance and development by using a special education portfolio via Tk20. Beyond the scope of this study, there are lessons learned about special education portfolio implementation that we discuss as follows.

What are the lessons learned about special education portfolio implementation?

Overall, this was a valuable experience and one that was worth it at this institution. However, the stakeholders in this project learned some valuable lessons that changed the outcomes of the project. The first lesson was that analytical and reflective thinking is important to our institution. This lesson is consistent with the research literature on self-evaluation (Fallon, Ackley, & Brown, 2003). However, there was a short time line for training and implementation of this project. In hindsight, additional time for faculty conversations, training, and troubleshooting would have been helpful. Purposeful and intentional conversations with supervisors, faculty, staff, and teacher candidates about portfolio usage would have been valuable. Such discussions might have averted some problems in archiving critical performances in realistic settings. Early on in the implementation process, some instructors viewed the submission and grading of artifacts in Tk20 as optional. Therefore, a policy was written for the Professional Education Unit (PEU) that was explicit in detailing required course assessments. Perhaps earlier conversations with instructors and supervisors could have avoided this issue.

Another lesson learned in this study was to be explicit in directions to teacher candidates about the core assessments and accompanying rubrics. The researchers in this study suggested that one issue should be addressed early in process is to stress that the work in Tk20 needs to be the teacher candidates' own work. Since the special education's portfolio is meant to showcase and highlight the teacher candidates' abilities to use CEC standards to guide their creation and implementation of instruction to all learners, only artifacts that are of their own original design should be uploaded into the portfolios. If a student has created an original artifact using other previously created resources as inspiration, credit should be given to the original author(s) (using APA 6th ed.) so credit is being given where it is due. In the case of a core assessment that is the product of group work, each teacher candidate must identify his/her own contributions. References and footnotes can be used to identify where any shared work is evident.

Colleges and universities worldwide have policies on honesty and honor. Such policies are commonly explained in handbooks, orientations, and in course syllabus. The researchers in this study advise that those policies should be reviewed in light of electronic systems such as Tk20 for authenticity and application to online sources. Academic honesty and plagiarism policies should be part not only of instructors' and supervisors' syllabus but also incorporated into the core assessments themselves. College instructors may choose to also give teacher candidates explicit examples of acceptable ways of sharing ideas and information and ways in which honesty may be compromised. In this study, the researchers found that teacher candidates did not always have a clear understanding of when honesty was compromised.

Unlike some course managements systems, users of Tk20 do not see the same information at the same time. This is an area that the researchers in this study suggest should be carefully studied for effects on quality of the core assessments. Instructors do not see a final core assessment until the teacher candidate has submitted it for feedback or grading. Therefore, it would be helpful for both teacher candidates and instructors to download guides and tutorial for one another. Course instructors and supervisors should look at the tutorials and guides for teacher candidates. Teacher candidates should review the information available to instructors so as to better understand the process of Tk20 submissions. Such a process of "training" both the college instructors and teacher candidates in the mechanics of submitting core assessments is an important matter of efficacy of electronic portfolios.

Future studies should also focus on the transition from a teacher education program to the first year of teaching in public schools and beyond. Some studies (Fallon & Brown, 2002) have found that this transition from promising teacher candidate to novice teacher can be difficult for some. Tk20 has the capability to allow teacher candidates to continue archiving their performances, thus continuing to document electronically their growth as professional. The results of this study are promising for teacher education programs on an international level in finding new ways to document the development of critical skills for new teachers on the global stage.

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TABLE 1
Alignment
Between
the Core
Assessmen
ts and
CEC 2001
Standards

Assessmen	CEC 2001 Standards
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t	1	2	3	4	5	6	7	8	9
	Foundations	Development & Characteristics of Learners	Individual Learning Differences	Instructional Strategies	Learning Environments & Social Interactions	Language	Instructional Planning	Assessment	Professional & Ethical Practice
1. Family Systems Theory (FST) Paper in EDI 413 (Phase I)	X		X						
2. Functional Behavioral Assessment (FBA) & Behavioral Intervention Plan (BIP) in EDI 413 (Phase I)		X	X						
3. Inclusive Unit Planning and Lesson Planning Assessment in EDI 414 (Phase II)				X	X		X		
4. Standardized Assessment Report (SAR) and Individualized Education Program (IEP) Case Study in EDI 419 (Phase III)		X						X	
5. Performance-based Student Teaching Evaluation in Special Education Student Teaching Practicum (Phase IV)				X	X	X	X	X	X
6. Professional Education Unit (PEU) Global Assessment of Candidate Performance (GACP) in				X	X		X	X	X

**Special Education
Student Teaching
Practicum (Phase
IV)**

TABLE 2.

Alignment Between EDI 419 Working Portfolio Artifact Core Course Assessment Components and CEC 2001 Standards

Special Education Standardized Assessment Report (SAR) and Individualized Education Plan (IEP)

CEC 2001 Standard	Assessment Component
ICC8K1, ICC8K2, ICC8K3, ICC8K4, IGC8K1, IGC8K2, IGC8K3	SAR: General information on the standardized test: Understand assessment terminology, legal provisions and ethical principles, assessment procedures, and its limitations
ICC2K1, ICC2K2, ICC2K3, ICC2K5, ICC2K6	SAR: Test-taker information: Understand human development, educational implications of exceptionalities, and individuals with and without exceptional learning needs
ICC8S1, ICC8S2, ICC8S3, ICC8S4, ICC8S7, ICC8S9, IGC8S2, IGC8S3	SAR: Test administration information: Conduct non-biased assessment with technology, and report results
ICC8S5, ICC8S6, ICC8S8, IGC8S1, IGC8S4, IGC8S5	SAR: Test result interpretation and recommendation: Interpret assessment information, and monitor progress
ICC2K1, ICC2K2, ICC2K3, ICC2K5, ICC2K6, ICC2K7, IGC2K1, IGC2K2	IEP: Present Levels of Performance and Individual Needs (PLOP): Understand human growth and development, educational implications of exceptionalities, similarities and differences among individuals with and without exceptional learning needs
ICC2K2, ICC2K3, ICC2K7, IGC2K2, IGC2K4	IEP: Annual Goals/Short-term Objectives: Understand educational implications of characteristics of exceptionalities, sensory impairments, physical and health needs, psychological and social-emotional characteristics of individuals with exceptional learning needs
ICC8K1, ICC8K2, ICC8K3, ICC8K4, ICC8S5, IGC8K1, IGC8K2, IGC8K3, ICC8S5, ICC8S6, ICC8S7, ICC8S8	IEP: Evaluation and Recommendations: Understand assessment terminology, legal provisions and ethical principles, assessment procedures, and its limitations; Interpret assessment information, and monitor progress

TABLE 3.

Descriptive

*Analyses by
Assessment*

EDI 413. FST

Paper:

*Performance
(Frequency, %)
& Mean Score*

Term	Exemplary (95-100)	Proficient (87-94)	Developing (77-86)	Unacceptable (-76)	Incomplete	Total
Fall 2011	22 (75.9%)	2 (6.9%)	2 (6.9%)	1 (3.4%)	2 (6.9%)	29
Spring 2012	13 (61.9%)	1 (4.8%)	2 (9.5%)	3 (14.3%)	2 (9.5%)	21
Spring 2013	12 (80%)	1 (6.7%)	1 (6.7%)	0 (0%)	1 (6.7%)	15
Spring 2014	4 (18.2%)	11 (50%)	0 (0%)	1 (4.5%)	6 (27.3%)	22
Total	51 (58.6%)	15 (17.2%)	5 (5.7%)	5 (5.7%)	11 (12.6%)	87
Total Number of Teacher Candidates Meeting Performance Criterion of <i>Developing</i> or Better (N = 87)						71 (81.6%)

*EDI 413.
FBA/BIP:
Performance
(Frequency, %)
& Mean Score*

Term	Exemplary (95-100)	Proficient (87-94)	Developing (77-86)	Unacceptable (-76)	Incomplete	Total
Fall 2011	9 (31.0%)	9 (31.0%)	5 (17.2%)	5 (17.2%)	1 (3.4%)	29
Spring 2012	2 (9.5%)	7 (33.3%)	1 (4.8%)	9 (42.9%)	2 (9.5%)	21
Spring 2013	3 (20%)	7 (46.7%)	3 (20%)	1 (6.7%)	1 (6.7%)	15
Spring 2014	12 (54.5%)	3 (13.6%)	0 (0%)	0 (0%)	7 (31.8)	22
Total	26 (29.9%)	26 (29.9%)	9 (10.3%)	15 (17.2%)	11 (12.6%)	87
Total Number of Teacher Candidates Meeting Performance Criterion of <i>Developing</i> or Better (N = 87)						61 (70.1%)

*EDI 414. Unit
Planning
Assessment:
Performance
(Frequency, %)
& Mean Score*

Term	Exemplary (95-100)	Proficient (87-94)	Developing (77-86)	Unacceptable (-76)	Incomplete	Total
Fall 2011	56 (90.3%)	3 (4.8%)	0 (0%)	0 (0%)	3 (4.8%)	62
Spring 2012	39 (92.9%)	2 (4.8%)	1 (2.4%)	0 (0%)	0 (0%)	42
Fall 2012	47 (88.7%)	3 (5.7%)	2 (3.8%)	1 (1.9%)	0 (0%)	53
Spring 2013	24 (61.5%)	8 (20.5%)	2 (5.1%)	3 (7.7%)	2 (5.1%)	39
Fall 2013	44 (80%)	4 (7.3%)	5 (9.1%)	0 (0%)	2 (3.6%)	55
Spring 2014	17 (68.0%)	4 (16.0%)	4 (16.0%)	0 (0%)	0 (0%)	25
Total	227 (82.2%)	24 (8.7%)	14 (5.1%)	4 (1.4%)	7 (2.5%)	276
Total Number of Teacher Candidates Meeting Performance Criterion of <i>Developing</i> or Better (N = 276)						265 (96.0%)

TABLE 3.
Descriptive
Analysis by
Assessment
(Continued)
EDI 414.
Lesson
Planning
Assessment:
Performance
(Frequency, %)
& Mean Score

Term	Exemplary (95-100)	Proficient (87-94)	Developing (77-86)	Unacceptable (-76)	Incomplete	Total
Fall 2011	53 (85.5%)	5 (8.1%)	1 (1.6%)	0 (0%)	3 (4.8%)	62
Spring 2012	38 (90.5%)	1 (2.4%)	1 (2.4%)	1 (2.4%)	1 (2.4%)	42
Fall 2012	50 (94.3%)	1 (1.9%)	2 (3.8%)	0 (0%)	0 (0%)	53
Spring 2013	26 (66.7%)	9 (23.1%)	3 (7.7%)	0 (0%)	1 (2.6%)	39
Fall 2013	38 (69.1%)	9 (16.4%)	7 (12.7%)	0 (0%)	1 (1.8)	55
Spring 2014	19 (76.0%)	5 (20.0%)	1 (4.0%)	0 (0%)	0 (0%)	25
Total	224 (81.2%)	30 (10.9%)	15 (5.4%)	1 (0.4%)	6 (2.2%)	276
Total Number of Teacher Candidates Meeting Performance Criterion of <i>Developing</i> or Better (N = 276)						269 (97.5%)

EDI 419. SAR:
Performance
(Frequency, %)
& Mean Score

Term	Exemplary (95-100)	Proficient (87-94)	Developing (77-86)	Unacceptable (-76)	Incomplete	Total
Fall 2011	17 (73.9%)	6 (26.1%)	0 (0%)	0 (0%)	0 (0%)	23
Spring 2012	10 (71.4%)	1 (7.1%)	2 (14.3%)	1 (7.1%)	0 (0%)	14
Fall 2012	10 (13.7%)	44 (60.3%)	12 (16.4%)	6 (8.2%)	1 (1.4%)	73
Spring 2013	9 (21.4%)	9 (21.4%)	7 (16.7%)	17 (40.5%)	0 (0%)	42
Fall 2013	42 (52.5%)	6 (7.5%)	17 (21.3%)	15 (18.8%)	0 (0%)	80
Spring 2014	5 (11.4%)	18 (40.9%)	10 (22.7%)	11 (25.0%)	0 (0%)	44
Total	93 (33.7%)	84 (30.4%)	48 (17.4%)	50 (18.1%)	1 (0.4%)	276
Total Number of Teacher Candidates Meeting Performance Criterion of <i>Developing</i> or Better (N = 276)						225 (81.5%)

EDI 419. IEP:
Performance
(Frequency, %)
& Mean Score

Term	Exemplary (95-100)	Proficient (87-94)	Developing (77-86)	Unacceptable (-76)	Incomplete	Total
Fall 2011	14 (60.9%)	9 (39.1%)	0 (0%)	0 (0%)	0 (0%)	23
Spring 2012	4 (28.6%)	10 (71.4%)	0 (0%)	0 (0%)	0 (0%)	14
Fall 2012	28 (38.4%)	28 (38.4%)	10 (13.7%)	3 (4.1%)	4 (5.5%)	73

Spring 2013	10 (23.8%)	11 (26.2%)	5 (11.9%)	5 (11.9%)	11 (26.2%)	42
Fall 2013	29 (36.3%)	38 (47.5%)	5 (6.3%)	7 (8.8%)	1 (1.3%)	80
Spring 2014	20 (45.5%)	11 (25.0%)	3 (6.8%)	6 (13.6%)	4 (9.1%)	44
Total	105 (38.0%)	107 (38.8%)	23 (8.3%)	21 (7.6%)	20 (7.2%)	276
Total Number of Teacher Candidates Meeting Performance Criterion of <i>Developing</i> or Better (N = 276)						235 (85.1%)

Appendix A. EDI 419 Working Portfolio Artifact-Special Education Standardized Assessment Report (SAR) and Individualized Education Plan (IEP)

Part 1: Special Education Standardized Assessment Report (SAR) Instructional Guideline and Scoring Rubrics

Description of Task

Individualized Education Programs (IEPs) are informed by the results of more than one assessment. Often, different people will administer each assessment. Create an assessment plan for one of your students. Select a **norm referenced assessment** based on the **individual needs** of the learner, **administer** it, and **determine allowable accommodations** based on the scoring. Write an assessment report on the test administered, responding to the prompts given by your instructor. Your goal is **to write a formal assessment report**.

You must administer a standardized test to someone (sibling, parent, significant other, classmate, roommate, etc.) with permission of your instructor based on individual circumstances. If you could, you are encouraged to give the test to a child with disabilities, **but ONLY with the permission of his/her school-based teacher educator, his/her parents, and the student if appropriate**. There are not enough tests to go around, so groups of two or three will each choose a test. The test will be passed around within the group until **everyone has had an opportunity to administer it**. Score the test and write an assessment report with recommendations. Based on the information provided by standardized tests and other assessments, your student may be identified with one or more of the 13 categories of disabilities and then an IEP may be developed for your student based on the assessment report.

Your report and IEP should include the following information: test information, including type of test, strengths, weaknesses, reliability, validity, scoring, and standardization sampling. You must also describe: the test environment, student behavior, monitoring of performance, unusual impacts to testing, and any other influences. **List any additional assessments you will need to conduct and why**. Describe your timetable for these assessments. Include in your report what allowable accommodations will be used during testing and in the classroom. You will be graded on organization, completeness of the report, grammar conventions, and recommendations for the student's programming. You must add a reflection on your own performance of this assignment. Be specific in your areas of strength and those in which you need to grow as a professional. Graduate students will also be graded on their use and appropriateness of the American Psychological Association (APA) style.

Rationale

A standardized test is a test administered and scored consistently and strictly based on standard procedures. It is a critical component to provide information during the identification and education process for students with disabilities. Within the Childhood and Adolescence Inclusive programs, each teacher candidate was introduced to different standardized tests, their administration, scoring, and interpretation procedure. It is the intent of this assignment to help teacher candidates develop a better understanding of standardized tests and demonstrate the skills needed to administer and score the test, and interpret the test results through a formal assessment report.

Alignment with CEC Standards (CEC 2001 Standards 2 and 8)

This assessment meets or exceeds standards set by NCATE, CEC, ACEI, and other content area professional organizations, including the following standards: CEC 2001 standards 2. *Development and characteristics of learners*, and 8. *Assessment*.

Prompts**A. Prompts for General Information on the Standardized Test:**

- 0) Test Name:
- 1) Test Purpose(s):
- 2) Who administers the assessment?
- 3) Test Type:
- 4) Criterion-referenced
- 5) Norm-referenced
- 6) Environment of the assessment:
- 7) Test format:
- 8) Scoring procedures:
- 9) Standardization:
- 10) Overall achievement or specific dimension:
- 11) Reliability:
- 12) Validity:

B. Prompts for Test Administration Information:

0. Type of test administration setting:
1. Age of the student:
2. Gender of the student:
3. Grade level of the student:
4. Primary language of the student:
5. How long did test administration take? Number of sessions?
6. Assessment Results:
7. Benefits of test selected:
8. Weaknesses of test selected:
9. Interpretations/Recommendations:
10. Feedback to guide the student's future learning/How the results will be used to help the student:
 What feedback do you provide for the student to address his/her individual strengths and continuing needs based on the results of the standardized test?
 How will you as a teacher support the student to apply the feedback to guide improvement in the specific area?
 How will you as a teacher support the student to move toward using error prevention strategies, self-assessment, self-instruction, and/or self-correction?
0. Using assessment to inform instruction/Future monitoring of the student:
 Describe next steps for instruction to reinforce current strengths of the student;
 Describe next steps for instruction to support further progress in the curriculum;
 Based on what the student knows and can do and your next steps, describe implications for the student's IEP goals and/or curriculum.

C. Personal Reflection: A paragraph reflecting on your skills as a test administrator:

What do you feel you did well?

What have you learned during the process of this assignment which may contribute to your professional growth?

What skills do you still need to develop?

D. Prompts for Report and IEP Writing - In addition to the completeness of your report, the following will also be considered in grading:

1. Report organization:
2. Grammar and spelling:
 - APA (for students enrolled in EDI 519):

Points Possible:

Total Points Achieved:

Rubric and Grading Criteria

All sections of this assignment must be loaded into Tk20 within the time limits given by your instructor. Your

instructor will use the following rubric to evaluate the evidence you provided based on the assignment criteria and the specific CEC standards incorporated into the rubric:

CEC Standard	Exemplary (3)	Proficient (2)	Developing (1)	Unacceptable (0)
General information on the standardized test: Understand assessment terminology, legal provisions and ethical principles, assessment procedures, and its limitations (ICC8K1, ICC8K2, ICC8K3, ICC8K4, IGC8K1, IGC8K2, IGC8K3)	Teacher candidate demonstrates understanding of the appropriate use and limitations of various types of assessments; AND demonstrates understanding of the legal policies and ethical principles of measurement and assessment related to referral, eligibility, program planning, instruction, and placement for individuals with and/or without exceptional learning needs (ELN), including those from culturally and linguistically diverse backgrounds by addressing all topics on appropriate selection of the test, assessment environment, scoring procedure, and explanation of benefits and weaknesses of the assessment.	Teacher candidate demonstrates understanding of the appropriate use and limitations of various types of assessments; OR demonstrates understanding of the legal policies and ethical principles of measurement and assessment related to referral, eligibility, program planning, instruction, and placement for individuals with and/or without exceptional learning needs (ELN), including those from culturally and linguistically diverse backgrounds by addressing most but not all topics on appropriate selection of the test, assessment environment, scoring procedure, or explanation of the benefits and weaknesses of the assessment.	Teacher candidate demonstrates understanding of the appropriate use and limitations of various types of assessments by addressing on some topics on appropriate selection of the test, or assessment environment, or scoring procedure, or explanation of the benefits, or weaknesses of the assessment.	Teacher candidate's understanding of the appropriate use and limitations of various types of assessments is not addressed .
Test-taker information: Understand human development, educational implications of exceptionalities, and individuals with and without exceptional learning needs (ICC2K1, ICC2K2, ICC2K3, ICC2K5, ICC2K6)	Teacher candidate knows and demonstrates respect for students first as unique human beings; understands the similarities and differences in human development and the characteristics between and among individuals with and/or without ELN; AND understands how exceptional	Teacher candidate knows and demonstrates respect for students first as unique human beings; demonstrates understanding of the similarities and differences in human development and the characteristics between and among individuals with and/or without ELN; OR demonstrates some	Teacher candidate demonstrates understandings of the similarities and differences in human development and the characteristics between and among individuals with and/or without ELN by making loose connections between the selected test with learner's development and characteristics , such as age, gender,	Teacher candidate respect for students first as unique human beings is not present; OR understanding of the similarities and differences in human development and the characteristics between and among individuals with and/or without ELN OR understanding of how exceptional conditions can

	conditions can interact with the domains of human development, and knowledge and skills to use this knowledge to respond to the varying abilities and behaviors of individuals with and/or without ELN by making close connections between the selected test with learner's development and characteristics , such as age, gender, grade level, primary language, and ability level.	understanding of the similarities and differences in human development and the characteristics between and among individuals with and/or without ELN by making some connections between the selected test with learner's development and characteristics , such as age, gender, grade level, primary language, and ability level.	grade level, primary language, and ability level.	interact with the domains of human development, and knowledge and skills to use this knowledge to respond to the varying abilities and behaviors of individuals with and/or without ELN is not addressed and makes no connections between the selected test with learner's development and characteristics .
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CEC Standard	Exemplary (3)	Proficient (2)	Developing (1)	Unacceptable (0)
Test administration information: Conduct non-biased assessment with technology, and report results (ICC8S1, ICC8S2, ICC8S3, ICC8S4, ICC8S7, ICC8S9, IGC8S2, IGC8S3)	Teacher candidate demonstrates ability to conduct formal and informal assessments of behavior, learning, achievement, and environments to design learning experiences that support the growth and development of individuals with and/or without ELN; AND demonstrates knowledge and skills to collaborate with families and/or other colleagues to assure non-biased, meaningful assessments ; and demonstrates knowledge and skills to use appropriate technologies to support assessments.	Teacher candidate demonstrates ability to conduct formal and informal assessments of behavior, learning, achievement, and environments to design learning experiences that support the growth and development of individuals with and/or without ELN; OR demonstrates knowledge and skills to collaborate with families and/or other colleagues to assure non-biased, meaningful assessments or demonstrates knowledge and skills to use appropriate technologies to support assessments..	Teacher candidate demonstrates knowledge and skills to conduct formal and informal assessments of behavior, learning, achievement, and environments to design learning experiences that support the growth and development of individuals with and/or without ELN.	Teacher candidate's ability to conduct formal and informal assessments of behavior, learning, achievement, and environments to design learning experiences that support the growth and development of individuals with and/or without ELN is not addressed .
	Teacher candidate	Teacher candidate	Teacher candidate	Teacher

Test result interpretation and recommendation: Interpret assessment information, and monitor progress (ICC8S5, ICC8S6, ICC8S8, IGC8S1, IGC8S4, IGC8S5)	demonstrates knowledge and skills to use the results of assessments to help identify ELNs and to develop and implement individualized instructional programs, as well as to adjust instruction in response to ongoing learning progress; demonstrates understanding of measurement theory and practices for addressing issues of validity, reliability, norms, bias, and interpretation of assessment results; AND demonstrates knowledge and skills to use assessment information to identify supports and adaptations required for individuals with and/or without ELN to access the general curriculum and to participate in school, system, and statewide assessment programs by making data-driven and evidence-based recommendations to guide learner's future learning.	demonstrates knowledge and skills to use the results of assessments to help identify ELN and to develop and implement individualized instructional programs, as well as to adjust instruction in response to ongoing learning progress; AND demonstrates understanding of measurement theory and practices for addressing issues of validity, reliability, norms, bias, and interpretation of assessment results by making data-driven and evidence-based recommendations to guide learner's future learning.	demonstrates knowledge and skills to use the results of assessments to help identify ELN and to develop and implement individualized instructional programs, as well as to adjust instruction in response to ongoing learning progress by making data-driven recommendations to guide learner's future learning.	candidate's ability to use the results of assessments to help identify ELN and to develop and implement individualized instructional programs, as well as to adjust instruction in response to ongoing learning progress is not addressed.
Content	The content is written clearly and concisely, with a very logical progression of ideas, and creates a strong sense of purpose.	The content is written with a fairly logical progression of ideas, and creates a fairly strong sense of purpose.	The content is vague in conveying a point of view, does not stay on topic, and the purpose is vague.	The content lacks a clear point of view, does not stay on topic, and lacks logical sequence.
Writing Mechanics	The paper is written with no errors in grammar, capitalization, punctuation, and spelling.	The paper is clearly written with 1-3 errors in grammar, capitalization, punctuation, and spelling.	The paper is written with 4-6 errors in grammar, capitalization, punctuation, and spelling.	The paper is written with 7 or more errors in grammar, capitalization, punctuation, and spelling, and major revision is

				needed.
APA Style (for EDI 519)	APA style and mechanics for referencing are used correctly with no errors.	APA style and mechanics for referencing are used mostly correct, but with 1-3 errors.	APA style and mechanics for referencing are used with 4-6 errors.	APA style and mechanics for referencing are used incorrectly with 7 or more errors, or missing.

Content Validation of the Scale of Teachers' Attitudes towards Inclusive Classrooms (STATIC)

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The purpose of this study was to examine the content validity of the Scale of Teachers' Attitudes towards Inclusive Classrooms (STATIC). An expert panel of 20 special education teachers and five university faculty members provided individual item ratings on a five-point scale regarding wording and content, along with comments. Item and comment analysis indicated that the wording and content of several items were not aligned with current practice or IDEIA. Suggestions for revision of the instrument are offered.

Introduction

Inclusive education has been at the forefront of special education for nearly 30 years yet continues to be a topic of controversy. A call has taken place over the past few years to move the special education service delivery model towards eliminating segregated classrooms in favor of inclusive classrooms (Horrocks, White, & Roberts, 2008; Lindsay, Proulx, Scott, & Thomson, 2014; Nishimura & Busse, in press; Mastropieri & Scruggs, 2010). With this shift however, teachers may feel unprepared and resistant to take on new roles and responsibilities in addition to their current responsibilities (McLeskey & Waldron, 2002; Nishimura, 2012; Valle & Connor, 2011).

The literature is clear; general and special education teachers are key players in the implementation of inclusive education and their attitudes play a considerable role in educational reform. Furthermore, teacher attitudes are critical to creating inclusive classrooms as oftentimes students model the attitudes and behaviors of adults (Horrocks, et al., 2008; Lindsay, et al., 2014). In order to achieve successful inclusion, teachers must have a firm philosophical understanding of inclusive practices as well as the ability to implement appropriate supports and strategies.

Throughout the literature, general education teachers have been found to have a tendency to demonstrate a negative attitude towards inclusion if they perceive that they are not being supported or do not have the appropriate training to work with students with disabilities (Causton-Theoharis, Theoharis, Bull, Cosier, & Dempf-Aldrich 2010; deBoer, Pijl, & Minnaert, 2011; Hammond & Ingalls, 2003; McHatton & McCray, 2007; Nishimura, 2012). Teacher attitudes have also

been related to variables such as prior experience with inclusive education and class size (deBoer, et al., 2011; Mastropieri & Scruggs, 2010). Teachers tend to hold negative attitudes towards inclusion with higher class sizes and lack of prior knowledge and experience with inclusive practices. Furthermore, deBoer et al. (2011) concluded that teachers with less years of teaching experience hold more positive attitudes towards inclusive education than teachers who have many years of experience.

Given the current atmosphere of high stakes testing and the implementation of the Common Core State Standards, teachers are faced with the increasing challenge to meet the needs of all students in the least restrictive environment (McHatton & McCray, 2007; Nishimura, 2012; Valle & Connor, 2011). The new Common Core Standards require depth of knowledge and teachers are faced with the increasing need to find ways to meet the diverse needs of students. In order for teachers to be successful in differentiating instruction to meet the needs of all students, a significant shift in teacher training and support needs to take place (deBoer, et al., 2011; Horne & Timmons, 2009; Lindsay, et al., 2014). Additionally, teachers need to reflect upon their own attitudes, expectations, and educational practices to identify their areas of strengths and needs to ensure that proper support and training are provided to break down the barriers to inclusive education (Causton-Theorharis, et al., 2010; Cook, 2001; Mock & Kauffman, 2002; Shade & Stewart, 2001).

With the increasing trend of eliminating segregated classrooms, there is a concomitant need to research and refine attitudinal measures to ensure that specific attitudes and beliefs towards inclusive practices are identified. Additionally, it is critical to use the attitudinal measures to identify unknown barriers and, through proper training and support, begin to chisel away at the negative attitudes toward inclusion that are pervasive throughout the field.

The Survey of Teacher Attitudes towards Inclusive Classrooms (STATIC; Cochran, 1999) instrument has been widely used throughout the literature to measure teacher attitudes, however a content validation study was not conducted during the construction of the measure. Furthermore, several items on the measure utilize terms that are now outdated and not in compliance with the re-authorization of the Individuals with Disabilities Education Improvement Act (IDEIA, 2004). The purpose of this study was to examine the content validity of the STATIC instrument.

Method

Participants

Special education teachers (n = 20) and special education university faculty (n = 5) were recruited from Southern California districts and universities. Of the 20 special education teachers, approximately 73.5% identified their race/ethnicity as European American, 12.8% Asian American, 9.4% Hispanic/Latino American, .9% African American, and 3.4% other ethnic groups. The participants' levels of education ranged from: Bachelor's degree (49.9%) and Master's degree (50.1%). Eight of the teachers had over 10 years of teaching experience. The teaching assignments of the participants were: grades K-6 mild/moderate disabilities classrooms (n = 6), grades 6-8 mild/moderate (n = 4), grades K-6 moderate/severe (n = 3), and grades 9-12 mild/moderate (n = 2). Five special education teachers identified as serving in a resource or learning center setting. (It is important to note that in Southern California, a resource setting, learning center, and special day class are typical designations for special education placements.)

Five university faculty members also served on the expert panel. All five faculty members identified as tenured or tenure-track faculty in special education at various universities in Southern California. Four of the faculty members held a Ph.D. in Education with an emphasis in Special Education and one faculty member held an Ed.D. in Education. The expert panel provided expertise and feedback with regards to the wording of each item and its content.

Procedure

Approval was obtained from the University Institutional Review Board before the study commenced. Permission was obtained from the author of the STATIC instrument prior to the distribution of the content validation survey. The survey was administered individually via email and follow-up with individual phone conferences for clarification purposes. A participant's survey was deemed to be satisfactory if at least 90% of the items were completed. All of the surveys met that criterion.

Measure

The Scale of Teacher's Attitudes towards Inclusive Classrooms (STATIC; Cochran, 1999) consists of 20 items that were designed to measure a teacher's attitude towards students with special needs in the general education classroom. The response format is a 5-point Likert-type scale ranging from "Strongly Disagree" to "Strongly Agree," with five reverse coded items. According to the author of the STATIC, the sum score of the 20 items is indicative of teachers' attitudes towards inclusion (Cochran, 1998). Higher scores indicate positive attitudes, whereas lower scores indicate negative attitudes towards inclusion. There are no specific cut off scores.

The original validation study of the STATIC instrument included 516 general and special education teachers. Specific details on the demographics and numbers of general and special education teachers were not provided. The internal consistency estimate for the total scale was high, with an alpha level of .89. Cochran (1998) conducted a confirmatory factor analysis of the STATIC instrument and identified and named four factors for the scale: Factor 1: Advantages and Disadvantages of Inclusive Education; Factor 2: Professional Issues Regarding Inclusive Education; Factor 3: Philosophical Issues Regarding Inclusive Education; and Factor 4: Logistical Concerns of Inclusive Education. Cronbach's alpha reliability coefficients were calculated for each factor. Factor one evidenced a reliability coefficient of .87, Factor two .83, Factor three .57, and Factor four .62. Factor one and two were found to have good internal consistency. The internal consistencies for factor three and four were low (Mertens, 2010). A content validation however, was not conducted during the initial psychometric validation of the instrument.

As a follow up to the original psychometric validation, this study focused on a content validation survey to examine the validity of the individual items on the STATIC instrument. The survey consisted of individual ratings of the original 20 items of the STATIC instrument. The participants were asked to rate each item on two separate criteria: (a) the clarity of the item's wording, and (b) whether the item captured the content of the instrument's purpose. The response format was a 5-point Likert type scale ranging from "Strongly Disagree" to "Strongly Agree." Additionally, participants were asked to comment or provide suggestions for improvement for each of the 20 items. The results of the content validation survey ratings are displayed in Table 1.

Results

The results were analyzed in two ways. First, the mean item ratings and variation were examined to determine whether the panel deemed both the content and wording to be adequate. Items with ratings of four (Agree) or above were considered to be potentially adequate. Next, the item ratings with larger standard deviations and ranges were examined. Those with standard deviations above one and ranges above two were targeted for possible changes to the wording or for exclusion. The rationale behind these criteria was that those items with low means and larger variation in ratings led to disparities among the panel and, as such, may be in need of changes or elimination (see table items with an asterisk). Second, comments from the expert panel were evaluated to ascertain specific perceptions regarding each item.

Regarding content, two items were rated below 'Agree.' The lowest rating (3.73) was on item 1: 'I am confident in my ability to teach children with special needs' and the highest rating (4.87) was on item 17: 'I don't mind making special physical arrangements in my room to meet the needs of students with special needs.' Seven items evidenced considerable variability with standard deviations above one and ranges of four and five.

Regarding wording, nine items received mean ratings below 'Agree.' The lowest rating (2.87) was on item 13: 'It is difficult for children with special needs to make strides in academic achievement in the regular education classroom' and the highest rating (4.87) was on item 14: 'Self-esteem of children with special needs is increased when included in the regular education classroom.' Fourteen items evidenced considerable variability with standard deviations above one and ranges of four and five.

The next aspect of the analysis involved comments regarding the items. The most common comment was that the term 'general education' should be used rather than 'regular education' to reflect current terminology. Several comments were directed toward the clarity of the wording of the items. For example, the participants' comments indicated that items 1, 4, and 8 were in need of clarification. The comments indicated that terms such as "confident," "anxious" and "moderately" should be defined within the context of the questions. Specifically, the participants noted that these were abstract terms which impacted their ability to clearly identify with the question and to accurately rate their attitude towards the item. Other comments related to wording were that the term 'special' regarding training and classroom arrangement

(items 16 and 17) contained a negative connotation and could be perceived to have an impact on respondents' answers.

Table 1.

Content Analysis Results for the STATIC

Content		Wording				
Item		Mean	SD	Range (min-max)	Mean	SD
1.	I am confident in my ability to teach children with special needs	3.73	1.39	4.00	4.00	1.41
2.	I have been adequately trained to meet the needs of children with disabilities.	4.33	.90	2.00	4.00	1.73
3.	I become easily frustrated when teaching students with special needs.	4.00	.85	2.00	3.60	1.59
4.	I become anxious when I learn that a student with special needs will be in my classroom.	4.60	.63	2.00	3.60	2.03
5.	Although children differ intellectually, physically, and psychologically, I believe that all children can learn in most environments.	4.13	1.77	5.00	4.00	1.60
6.	I believe that academic progress is possible in children with special needs.	4.67	.49	1.00	4.73	.46
7.	I believe that children with special needs should be placed in special education classes.	4.20	.77	2.00	3.40	2.03
8.	I am comfortable teaching a child that is moderately physically disabled.	4.13	1.41	5.00	4.13	1.36
9.	I have problems teaching a student with cognitive deficits.	4.27	.70	2.00	3.23	1.98
10.	I can adequately handle students with mild to moderate behavioral problems.	4.47	.74	2.00	4.40	1.12
11.	Students with special needs learn social skills that are modeled by regular education students.	4.47	.833	2.00	4.23	.88
12.	Students with special needs have higher academic achievements when included in the regular education classroom.	3.93	1.61	4.000	3.60	1.45
13.	It is difficult for children with special needs to make strides in academic achievement in the regular education classroom.	4.14	1.41	5.00	2.87	1.88
14.	Self-esteem of children with special needs is increased when included in the regular education classroom.	4.80	.56	2.00	4.87	.35
15.	Students with special needs in the regular education classroom hinder the academic progress of the regular education student.	4.73	.70	2.00	3.93	1.70
16.	Special in-service training in teaching special needs students should be required for all regular education teachers.	4.33	.90	2.00	4.73	.59
17.	I don't mind making special physical arrangement in my room to meet the needs of students with special needs.	4.87	.35	1.00	4.73	.46
18.	Adaptive materials and equipment are easily acquired for meeting the needs of students with special needs.	4.14	1.19	4.00	3.13	2.03

19.	My principal is supportive in making needed accommodations for teaching children with special needs.	4.40	1.40	5.00	4.13	1.68
20.	Students with special needs should be included in regular education classrooms.	4.80	.56	2.00	4.73	.70

Discussion and Conclusion

The results of this content validation study indicated that the content of the STATIC instrument is in need of revision to reflect current theory, practice and legislation. Our analysis indicated that several items are in need of rewording and some may warrant elimination. The factor structure of the STATIC also is in need of validation (Nishimura & Busse, in press) to better reflect current practice and theory.

There are obvious strengths and limitations in our study. One strength is the use of an external sample to examine the content of the STATIC instrument. Content validity is essential to determine if the items on an instrument adequately measure the domain of interest. Another strength is that, along with experts in the field, we included practitioners in the content validation, which may serve to enhance social validity.

The limitations include a selected sample derived solely from Southern California. Therefore the results may not generalize beyond the geographic and current practice idiosyncrasies of California. Another limitation is that comments from the participants were solicited in an open-ended fashion. It may have strengthened the study by 'requiring' comment on each item. Participants commented on 19/20 items and the largest number was only four comments on a given item. Therefore, our comment analysis was limited.

The field of special education is in flux. Throughout the country, states and districts grapple with issues of inclusion, which somewhat mirrors response to intervention models as allowed under current IDEIA guidelines. As we progress toward an inclusive model of education there exists a need to advance our knowledge base regarding teacher attitudes to better inform and educate the field. The results of this study speak to the need to provide measures that capture the current state of the field and to advance our understanding of teacher attitudes toward inclusion to enhance the lives of the children we serve. With revision, the STATIC may serve part of that purpose.

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Investigating the Impact of School Administrator's on the Frequency of Physical Restraint in K-12 Schools.

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The purpose of a physical restraint is to control the behavior of a student. It can involve physically holding a person immobile against his or her will to using chemical or mechanical devices to control a person. This study was designed to contribute to the paucity of existing research literature in regards to a school administrator's impact on the physical restraints utilized in public schools. To date, there are no national standards for the use of these procedures in schools. The current investigation examines frequency of physical restraints, behaviors that lead to the use of restraints, the application of physical restraint and the administrator's attitude and efficacy regarding its use. Significant findings and implications for educational leaders were discussed.

Introduction

Physical restraint is defined as an emergency response procedure by one or more staff members that directly restricts "a student's movements by applying force to his or her limbs, head, or body as a means of regaining behavioral control and establishing and maintaining safety for the out of control student and other persons in close proximity" (Fogt, 2005, p. 3). Once thought of as a tool for exclusive use in mental and penal institutions, the use of physical restraints in public schools has become the norm (Ryan & Peterson, 2004). More and more school districts have to contend with students who present severe behavioral difficulties, are often unequipped to do so, and are challenged to prevent or contain these sometimes violent behaviors. Although there is little to no research on the prevalence of physical restraint in public schools, anecdotal information based on court cases and legislation indicates it has become common practice in some school systems and occurs in most, if not all schools (Ryan & Peterson, 2004). The prevalence of restraints is due in part to the Individuals with Disabilities Act establishing the principle of educating all students in the least restrictive environment. This, coupled with high pressure advocacy groups and high profile media attention, has placed school systems and personnel in situations where they feel they must use restraints as a tool to keep schools safe (Ryan & Peterson, 2004).

Proponents of physical restraint say restraint has helped advance the disability education movement by granting access to students who would otherwise need institutionalized or home schooled. Proponents of physical restraint in public schools contend that it is a practice necessary to contain or ensure the safety of all students. Restraint is seen as a means to prevent harm to a person (including self-injurious students), to prevent property damage, or to reduce disruption in a school

environment (Stewart, 2010). Proponents contend that there is no universal alternative that works and that when used properly and when warranted, the effective use of physical restraint keeps schools safe and orderly. These conditions are:

- When preventative approaches have been implemented and failed;
- All staff members know and understand the permissible and impermissible situations for use; and
- When they are used to ensure the safety of all involved.

Although there are no set standards for restraint, there is some consensus on what physical restraints are and how they should be applied. Most professionals agree that physical restraint should be used as a last resort, after de-escalation strategies, training, program changes, behavior studies, and effective staff policies are in place and have failed (Ryan & Peterson, 2004). Staff members should know the permissible and impermissible situations that warrant restraint or seclusion. Proponents agree that restraint may be used when a student's behavior poses a threat to him, her or others, risk of property damage, or behavior causes a significant disruption to the environment. There is also some consensus on when these practices should not be used: (a) for staff convenience; (b) due to lack of staff training or because staff is fearful; (c) used as punishment; and (d) as a response to minor behaviors.

According to the National Disabilities Rights Network (NDRN), in an investigative report, *School is Not Supposed to Hurt*, published in 2009, physical restraint and seclusion are rampant in today's schools. The report lists examples of students in public schools forcibly restrained and dragged to seclusion for a variety of different reasons. All of the incidents portrayed resulted in some sort of emotional or physical trauma to the student and, in some cases, led to the death of the child. These children's cases often prompt a burst of local media or even national media attention, but there is no federal legislation regarding the use of physical restraint or seclusion and state laws vary widely.

Opponents of Physical Restraint

Opponents of restraint believe that the act by the professionals who are entrusted to keep students safe in school does more physical and emotional harm to the very student they are trying to keep safe. They chronicle a "culture of harm" detailing treatment of students from every area of the United States: urban, suburban, rural, wealthy, poor, White, and Black (NDRN, 2009). The use of restraint results in many detrimental effects not only to the student, but also to the staff who employ them: falls, injury, psychological trauma, and even death. A plethora of studies exists from the government and private and non-profit organizations that highlight the risks associated with the use of restraint. For example, the President's New Freedom Commission on Mental Health (2009) states that the use of restraint creates significant risks for children, including serious injury or death, traumatization of people with a history of trauma, loss of dignity, and other psychological harm. As such, the commission recommends that restraint use be reduced and that agencies view high rates of restraint as evidence of treatment failure.

Similarly, the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration (2010) states that the use of restraint on persons with mental health and/ or addictive disorders has resulted in deaths, serious physical injury, and psychological trauma. In 1998, the Harvard Center for Risk Analysis estimates deaths due to such practices at 150 per annum across the nation. Children have been noted at especially high risk for death and serious injury. Agencies such as the GAO (2010) have reported that restraint can be dangerous to individuals in treatment settings because restraining them can involve physical struggling, pressure on the chest, and other interruptions in breathing. According to the Alliance to Prevent Restraint, Aversive Interventions and Seclusion (2012) and American Psychological Association (2009) maintain that restraint and seclusion can result in emotional, psychological, and/ or physical damage as well as death for both patients and staff, and the potential for abuse if used improperly. The National Education Association (2010) has issued guidelines that discuss restraint of "violent" students, stating that physical restraint should be used with a student only when there is an imminent risk either of harm to a person or property damage.

The majority of these groups believe that restraint is used as a method of first resort in many schools. They contend that because there is no federal legislation limiting its use, schools districts are not forced to change these aversive practices. The techniques used are often utilized or implemented by untrained personnel and this often results in the injury or death of students. They also argue that the same restraint procedures that are used in school are being used in hospitals, institutions, and other treatment facilities. There are federal guidelines in place for those settings (Stewart, 2010).

Current Policy

In the spring of 2009, the GAO, in conjunction with the CCEL convened a hearing regarding the abuses from restraint and seclusion. This prompted United States Secretary of Education, Arne Duncan, to call on all states and school districts to examine their policies on the use of restraint and seclusion. In late 2009, federal legislation was introduced to regulate the use of these procedures in schools to prevent abusive situations (Couvillon et al., 2009). However, there are still no federal guidelines regarding restraint and seclusion in public schools.

In July, 2009, Secretary of Education, Arne Duncan, informed chief states' school officers that the United States Department of Education (ED) would begin conducting research on state laws, regulations, and policies regarding the use of restraint in schools. In December of 2009, states were asked to review and confirm the accuracy of those policies and guidelines. To date, there is a wide range of policies, guidelines and statutes that each individual state has adopted.

Historical Use of Physical Restraint

The documented historical use of physical restraint started in the late 1700s in mental institutions in France and England. The medical treatment of persons with disabilities began as a result of Enlightenment ideals (Colaizzi, 2005). In the 18th century, Dr. Philippe Pinel used restraint and seclusion in the institutions to ensure the safety of individuals (both patient and staff) while not infringing on the patient's right of autonomy, respect, and freedom (Fisher, 1994). This practice spread throughout Europe and into the United States by the 1800s in the form of asylum psychiatry.

Prior to the 1970s, in the United States, most people with disabilities who presented challenging or violent behavior were placed in institutions. These institutions were typically large state run facilities. From the 1800s through the middle part of the 20th century, these institutions frequently overwhelmed the staff capacity, resulting in "custodial care" of patients and the routine and indiscriminate use of restraints and seclusions (Tovino, 2007).

By the 1840s asylums had become so overcrowded that behavior control became the central concern. The use of mechanical restraints (strait jackets, cells, manacles, specially designed coercion chairs) became a "moral" way to help individuals regain their self-control (Colaizzi, 2005). At this same time, the argument about the legality and morality of using restraint on patients began. Proponents argued it was a therapeutic, ethical, and a moral way of ensuring patient and staff safety. Opponents argued that restraint was an unwarranted and barbaric way of controlling other humans.

The central argument between the two groups was punishment/discipline versus safety of the patient and staff. Proponents argued that using such techniques ensured the safety of all involved while giving staff the resources needed to therapeutically deal with the patient. Opponents believed that restraints were used primarily as a punishment/discipline instrument and led to widespread abuse of patients by asylum staff (Colaizzi, 2005).

The IDEA is the major federal statute for the education of children with disabilities. IDEA both authorizes federal funding for special education and related services and sets out principles under which special education and related services are to be provided. The requirements are detailed and comprehensive. Major principles maintain that states and school districts make available a free appropriate public education (FAPE) to all children with disabilities, generally between the ages of three to 21. States and school districts identify, locate, and evaluate all children with disabilities, regardless of the severity of their disability, to determine which children are eligible for special education and related services. Additionally, each child receiving services has an individual education program (IEP) spelling out specific special education and related services to be provided to meet his or her needs. The parent must partner in planning and overseeing the child's special education and related services as a member of the IEP team. Lastly, to the maximum extent possible, children with disabilities must be educated with children who are not disabled, and states and school districts provide procedural safeguards to children with disabilities and their parents, including the right to a due process hearing, the right to appeal to federal district court, and the right to receive attorney's fees.

In 1975, the Education for Handicapped Children Act (later known as the Individuals with Disabilities Act or IDEA) required schools to place children with disabilities in the regular or general education classroom to ensure they were educated in the least restrictive environment. Many students with emotional and behavioral problems, regardless of disability label, are now included in the public school environment, many in general education schools and classes. This legal mandate shifted children from institutions to schools. Starting in the late 1970s, school staff and districts began restraining and secluding children in much greater numbers (Ryan, Robbins, Peterson, & Rozalski, 2009).

IDEA states that when the behavior of the child with a disability impedes the child's learning or the learning of others, the IEP team must consider the use of positive behavior interventions and supports (PBIS) to address that behavior. While IDEA emphasizes the use of positive behavior supports, it does not prohibit the use of restraint. Since the 1970s, the ED has noted that state laws may address the use of restraints and the techniques to be implemented.

Beginning in the 1980s and continuing to present, there has been an increasing number of lawsuits involving the use of restraint and seclusion in schools. However, as of 2010, only 23 states have specific sets of laws that regulate the restraint of children in schools. While these laws typically have prohibitions, restrictions, and other procedural safeguards, they explicitly permit the use of restraint on all children.

Advocates of Restraint

There is emerging research that suggests that not only is restraint tolerated, it is encouraged (Stewart, 2010). Masters (2002) suggested that these factors include improved restraint procedures, the growth of national companies expounded restraint training, a lack of success with other interventions, and high staff turnover. These coupled with the thought that restraints are not viewed as universally negative, have led to a feeling that society/schools have done what they can to ensure the safety of students within the confines of legal mandates.

The risk of restraint can be divided into four categories: harm to self or others, the use of improper factors, secondary effects, and the risk of unwanted attention (Stewart, 2010). The greatest risk of harm is death. In addition to the death of a child, there are a number of physical and psychological traumas resulting from the use of restraint. Students who have been restrained have reported feeling dehumanized, assaulted, and traumatized by the event (Amos, 2004). Amos also argues that students with disabilities may be more vulnerable, less able to understand the justification, and may have physical conditions that could be exacerbated by the restraint. Students with asthma, a weakened heart, or on certain medication regimens are more susceptible to injury.

The staffs who restrain students may also be injured in an effort to respond to violent behavior (DosReis & Davarya, 2008). Injuries suffered can include both physical (from the result of a fall or blow from the student) and emotional. Staff encounter emotional stress because of the highly personal threats they receive as part of their job and that they feel distaste, discomfort, and guilt in needing to physically intervene (Bath, 1994).

There have been a number of studies that indicate that the use of restraint in schools is not based on clinical data or behavior research. Fisher (1994) reported that restraint is used because it is part of an organization's past practice, not on the premise of a therapeutic or safety basis. Fisher's literature review found that an array of factors such as cultural bias, staff role perceptions, and leader attitudes were more prevalent indicators of restraint than legitimate clinical factors. Persi and Pasquali (1999) reported on the disproportionate use of restraint according to race, gender, and culture. Young African-American males are restrained at a far greater rate than any other subgroup. Bath (1994) indicated that low staffing ratios, poor staff training, long hours, and other staffing problems can lead to more restraints. Finally, there are some indications that restraint is more commonly used on young children, because staff are either more fearful of older, larger students, or that it is simply more physically possible to do so with younger and smaller students (Ryan, Tetreault, Peterson, & Vander Hagan, 2007).

According to Chan, LeBel, and Webber (2012), there is significant dollar cost associated with restraints in schools and institutions. They contend it is actually more expensive to use restraints than to come up with positive alternatives to them. Restraint practices increase work related costs, reduce the quality and effectiveness of care, and drive up the systematic cost, the organizational cost, and the personal cost of the organization and the individuals involved. Costs such as insurance, training, health care, and worker compensation claims all rise as a direct result of restraint practices. Depending on the organization, restraints often lead to high staff turnover ratios, resulting in a further increase in training costs. A time/motion/task analysis of a typical restraint costs an organization an average of \$350, involves at least 25 different steps by 15 different staff, and claims more than 12 hours of staff time to manage and process (Chan et al., 2012).

Organizations that use restraints' procedures are at risk of receiving unwanted negative attention from the media, advocacy groups, and/or lawsuits. Parents and advocates have increasingly turned to the media when they feel schools are not receptive of their concerns. This media attention, regardless of the truth or accuracy of the concern, is generally not welcomed by schools, who simply issue a no comment statement to decrease the likelihood of a lawsuit. Advocacy organizations, like the Families Against Restraint and Seclusion, have sections on current deaths of children attributable to

restraint. Other advocacy groups routinely become involved, request meetings, review records, and scrutinize an organization's restraint procedures (Stewart, 2010). The number of lawsuits involving restraint practices has grown exponentially over the past 30 years. These lawsuits, whether valid or not, require school systems to pay huge legal fees and the time and resources needed to defend them. Federal law even allows a process for the attorneys of the parent to recover their legal fees from the school district (Stewart, 2010).

Current Investigation

In reviewing the definition of a physical restraint and how it is employed in public schools today, the history of restraints, how IDEA moved restraints into the school arena, the justifications for and against restraint, the lack of the national statutes and school leader qualities related to restraint, three questions persist: how often are physical restraints of students used in school settings; what constitutes the permissible use of restraint as far as administrators are concerned; and what are school administrators' attitudes towards physical restraint and the efficacy of physical restraint in public schools and how are these related to its use. The current investigation will be the first known research to shed some light on the answers to these questions.

Methods

Participants

The participants consist of a stratified random sample of public school principals and assistant principals in western Pennsylvania and NE Ohio. The sample was selected using educational directories. Once individual contact information was confirmed via the school district's website, and invitation to participate in the electronic survey was distributed. A total of 755 principals and assistant principals were invited to participate; 202 principals (26.75%) accepted the invitation.

Instrumentation

The survey instrument was created by Fogt (2005) in a study exploring leader behaviors and physical restraints of students with behavior disorders in approved private schools. Dr. Fogt's survey sampled elementary principals in residential and day treatment school programs (approved private schools) for students with emotional and behavior disorders. Fogt's *Administrative Activities and Behavior Interventions for Students with Behavior Disorders* includes 47 items regarding seclusion and restraint behaviors. Dr. Fogt's designed survey assesses school leader attitudes toward restraint and examines the extent to which physical restraint is used in a residential or day treatment program serving students with emotional or behavioral disorders in grades one to six. No psychometric data is currently provided (Fogt, 2005).

The current investigation also incorporated parts of the Instructional Leadership Inventory ([ILI], Maehr & Ames, 1988) in addition to items in Fogt (2005). *The Instructional Leadership Inventory* developed by Alig-Meilcarek (2003) is based on a 5-point Likert-type scale (1=strongly agree, 5=strongly disagree). Three factors were identified from the results of the exploratory factor analysis of the original version of the inventory. The internal consistency coefficient of the inventory for the total of the items was .95 and for each factor scale, the range was from $r = .81$ to $r = .88$. The ILI measured instructional leadership practices associated with improving student achievement.

The current investigation uses portions of the two surveys to target public school administrators in western Pennsylvania and eastern Ohio. In addition, an open ended question was added to collect any additional thoughts that the respondent has regarding the use of restraint. A full copy of the survey is provided in the Appendix.

Procedures

Prior to the administration of the questionnaire for the participants, the researcher received approval from the University's Institutional Review Board, after having submitted an application along with the survey and consent letter. A pilot of the survey was conducted with 15 participants. Each participant was given a hard copy of the survey. They were asked to complete the survey taking into consideration the following questions: (1) How long did it take you to complete the survey? ; (2) Were there any questions that were confusing or ambiguous?; and (3) What do you think were the overarching issues that the survey was trying to glean? Of the 15 surveys, the average time for completion was eight

minutes. All participants reported no confusing or ambiguous questions and all believed the survey was geared towards ascertaining the principal's role in the use of physical restraint in public schools.

From the stratified sample of 755 principals and assistant principals, an email listing was created. Each potential participant was sent an invitation to participate in the study via email with a code for a Survey Monkey electronic survey. The potential participants were asked to complete the survey by entering the code which took them directly to the Survey Monkey website. The researcher sent a follow-up email one week after the initial mailing to any potential participants who had not responded to the survey. After each additional week, the researcher sent another invitation to potential participants who had not responded.

Results

Demographic Information

School leaders ($n=202$) who responded were from western Pennsylvania and eastern Ohio. There was not an equal representation from each state. Fifty-two (26%) of the respondents were from Ohio and 150 (74%) were from Pennsylvania. Pennsylvania has significantly more school systems in the western part of the state than Ohio has in the eastern counties.

Survey participants were 66% ($n = 134$) males and 33% ($n = 67$) females. The majority of participants indicated that they were 40-49 years of age (42%), followed by 50-59 years of age (27%) and 30-39 years of age (26%). Ninety-five percent of respondents indicated that they identified as "white", while 3% identified as African American. Participants indicated that their official title is identified as principal (76%), director (4%), assistant principal (19%), and district level superintendent (2.5%). In order to become an administrator in the states of Pennsylvania and Ohio, a person must have a minimum of a Bachelor's Degree and at least 30 hours of post graduate work for licensure.

Participants indicated that they 21% had 1-5 years of experience, 27% had 6-10 years of experience, 21% had 11-15 years of experience, and 19% had more than 16 years of experience. While there is a sizable group (21%) of respondents with less than five years of experience, the majority of the school leaders have six or more years of experience (79%).

Regarding school arenas, 41% of the participants worked at elementary school, 19% worked at middle schools, 38% indicated that they worked in secondary education, and 1.5% indicated that they worked at a vocational school. Five percent of the participants indicated that they work across all grades, K-12. Participants indicated that most (45%) work in a 201-500 pupil school, with 27% working in a 501-800 student school, and 23% working in a school with more than 800 students. Nearly half of the participants indicated that they do not utilize restraints in their school setting, and that 82% of all participants use less than one restraint per month. Of those responding to use restraint techniques, 76% indicate that they use basket holds.

Interestingly, 36% of the participants indicated that they had no training on the use of physical restraint. Over half of all respondents (58%) utilize the Crisis Prevention and Intervention training (CPI). CPI is a program offered by Crisis Prevention Institute. It consists of an eight to 16-hour course focusing on both crisis de-escalation techniques and restraint procedures. Devereux, Professional Assault Crisis Training (PART), Therapeutic Crisis Intervention (TCI), and Quality Behavior Solutions (QBS) have limited numbers of participants. Of the 18 respondents responding "other" to this question about type of training, seven receive trainings from companies not listed and 11 have training in something but the respondents did not know the name of the company providing the training.

Participants indicated that only one third ($n=66$, 33%) of all schools spend no time on training for physical restraints. Another third of all respondents ($n=63$, 32%) report four hours or less of training time on the use of physical restraints. Eighty percent of participants reported that they would utilize a physical restraint in the case of Physical Aggression (aggression towards staff, a peer or self), a significant number of respondents indicated that they would utilize restraints in other situations. Fourteen percent ($n=28$) of all respondents would utilize a restraint if a student left an assigned area (leaving an assigned area but staying on school grounds, leaving the school building, and leaving school grounds). Twelve respondents (6%) indicate that they would utilize a physical restraint for a threat, and 16 for property destruction. Fifteen respondents (8%) would utilize a physical restraint for other reasons such as for refusal to follow a teacher's direction, for non-compliance, for horseplay, and for verbal aggression.

Preliminary Analysis

A number of preliminary analyses were conducted in order to answer the following research questions:

- What is the frequency of physical restraint in school districts in western Pennsylvania and eastern Ohio?
- What specific behaviors led to the physical restraint?
- What is the relationship between the application of a physical restraint and the school administrator's attitude toward physical restraint and the efficacy of physical restraint in public school?

In order to examine the relationship between the research objectives and the data gathered, certain questions from the survey were tested to find the reliability between the questions and the responses. Items 20 through 28 were examined for potential factor building. From these nine questions, three factors developed. Questions 20 and 21 indicate the school administrator's personal feelings regarding the use of a physical restraint as a means of keeping schools and students safe.

Factor One: Safety

20.c The use of Physical Restraint is needed to keep our school safe and orderly.

21. The use of Physical Restraint increases safety in our school.

Questions 23 through 25 indicate the school administrator's perception of the staff's use of a physical restraint in a school setting.

Factor Two: Staff Attitude

23. Staff members are adequately trained in the use of physical restraint.

24. Staff members know how to recognize potentially violent situations.

25. Staff members know how to de-escalate potentially violent situations and employ least restrictive measures prior to resorting to physical restraint.

Questions 26 and 27 indicate the efficacy of the use of a physical restraint. These two questions were used to build the third factor: Efficacy.

26. There is sufficient research supporting the use of Physical Restraint to decrease violent behavior in children.

27. Physical Restraint decreases violent behavior of students in my school.

Question 22 (Physical restraint constitutes punishment) and question 28 (physical restraint tends to be overused in my school) reveal small, non-significant correlations with the items in the other factors. Physical Restraint tends to be overused in my school. Table 1 summarizes the reliability estimates for the constructed factors.

Table 1. *Reliability of Constructed Factors*

Reliability	Cronbach's Alpha	N of items
Questions 20, 21	.912	2
Questions 23, 24, 25	.747	3
Questions 26, 27	.752	2

Respondents were asked to describe when a restraint would occur in the school setting (question 15). While all of the restraint and de-escalation trainings advocate the use of a physical restraint in cases involving some sort of physical aggression, and some advocate in the case of leaving assigned areas or property destruction. None of the training methodologies advocate a restraint on the basis of refusal to complete academic tasks, refusal to follow teacher directions, non-compliance, horseplay, or verbal aggression. Responses were factored using either an advocated or non-advocated approach. An Advocated Score was computed from each participant's responses. This score was based on the sum of

advocated reasons for physical restraint, thus the respondent identifying more reasons to advocate physical restraint had a higher advocated score.

Item ten specifically asked respondents to indicate the frequency of physical restraint applied in their school. Participant responses were re-categorized into four levels of responses due to the frequency of responses at each level. The “four or more” level was constructed to include participants indicating either four through 10 or 11-30 physical restraints a month. The resulting response levels were: None, less than one a month, one to three a month, and four or more a month. These categorical responses are used as the dependent variable for this investigation. The frequency of responses is summarized in Table 2.

Table 2. *Frequency of Responses Regarding Use of Physical Restraint*

Frequency	<i>f</i>	%
0	96	48
Less than 1	69	34
1 to 3	27	13
4 or more	9	4

Multinomial Logistical Regression

A multinomial logistic regression analysis was performed in SPSS in order to assess the reported frequency of physical restraint based on four levels of response (none, less than one, one to three, and four or greater) in relation to the four created factors (safety, staff attitude, efficacy, and advocated responses). Gender was included as a demographic variable in the analysis. Algorithmic imputation was used to impute missing responses for three of the factors: safety, staff attitude, and efficacy for approximately 1% of the cases.

Analysis reveals that the proposed multinomial logistic model supports the presence of a relationship between the dependent variable and combination of independent variables based on the statistical significance of the final model chi-square, $\chi^2(15) = 77.89, p < .001$

In this analysis, the probability of the model chi-square (77.89) was $p < .001$, less than the level of significance of 0.05. A null hypothesis that there was no difference between the model without independent variables and the model with independent variables was rejected. The existence of a relationship between the independent variables and the dependent variable was supported (Tabachnick & Fidell, 2009). Additionally, goodness of fit statistics demonstrate that this model is tenable, Pearson's $\chi^2(480) = 442.637, p = .888$. The model results are summarized in Table 3.

Table 3 *Likelihood Ratio Tests of Model*

	Value	Df	Asymp. Sig. (2-sided)
Safety	13.131	3	.004
Staff Attitude	6.571	3	.087
Efficacy	4.362	3	.225
Advocated Score	25.129	3	.000

Gender	12.011	3	.007
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The first factor to be found significant was the school administrator's feelings about the use of a physical restraint to keep schools and students safe, questions 20 and 21, ($p < .05$). The majority of respondents either agreed or strongly agreed that restraint is utilized to keep schools safe and orderly ($n=111$). However, a sizable minority ($n=54$) disagreed.

The second factor found to be significant was the school administrator's perception of the staff's use of physical restraint in the school setting, questions 23 through 25, ($p < .1$). The majority of school administrators either strongly agree or agree that their staff is adequately trained to utilize a physical restraint, recognize potentially violent situations, and know how to de-escalate potentially violent situations using least restrictive measures.

The third factor, efficacy, did not significantly present, and should be considered for deletion from the model in an effort to see if removal significantly improves the model. Utilization of zero or less than one restraint per month resulted with 77.4% of all respondents; 18.5% of respondents utilized a physical restraint one to three times a month, and 4% of all respondents used a physical restraint more than four times a month. This data, when correlated with other variables, did not present as significant. While the efficacy factor is correlated with the dependent variable, the weakness of this factor in the model may be attributed to the distribution of efficacy responses across the different levels of the dependent variable. The failure might also be attributed to the correlation of the efficacy factor with other independent variables.

The fourth factor found to be significant was the advocated use of physical restraint ($p < .001$). As mentioned above, this score indicated how many reasons for the use of physical restraint were endorsed by the respondent. The higher the score, the more reasons endorsed. This significant result reflects the strong correlation, $r = .383$, found between the dependent variable and the Advocacy score.

The final variable analyzed was gender. Gender was recorded as a dummy variable, a person was male (1), or was not male (0). These results indicate that there is a significant relationship between the respondents' indicated gender and their response regarding the frequency of the utilization of physical restraint in public schools. Significantly, more males than females do not utilize a physical restraint for any reason in their school, 55% to 30%. Conversely, 3% of male school administrators utilize a physical restraint four or more times in a month, compared to 8% of female school leaders.

Overall, Model 1 demonstrated a good fit, Pearson's χ^2 (480) equals 442.64, $p = .888$, and the model demonstrated good utility based on Nagelkerke's $R^2 = .362$ (Tabachnick & Fidell, 2009). The log likelihood ratio test indicates all variables are related to the frequency of physical restraint with the exception of Efficacy. A second model was examined, which excluded the non-significant variable of Efficacy to see if an improvement on the model occurred with the deletion of the variable. Model 2 resulted in a minimal reduction in model fit; the remaining variables are all significant contributors to the model.

Discussion

The purpose of this study is to ascertain the frequency of physical restraints used in public schools, the reasons those restraints are occurring, and school administrators' attitudes or beliefs regarding physical restraint. This study has three objectives:

1. What is the frequency of physical restraint in school districts in western Pennsylvania and eastern Ohio?
2. What specific behaviors lead to the physical restraint?
3. What is the relationship between the application of a physical restraint and the school administrator's attitude towards physical restraint and the efficacy of physical restraint in public schools?

The first question explored in this study was the frequency of physical restraint in public school districts in western Pennsylvania and eastern Ohio. A sizable number of school administrators surveyed, 46.7%, reported zero incidents of restraint in 2012-2013 school year; 35.2% of respondents reported less than one physical restraint utilized per month. A small but significant number of school administrators, 14.1%, reported one to three physical restraints and 4% reported four or more restraints utilized per month. For the population sampled, there were significant differences in the frequency of physical restraints employed.

The second question explored were the specific behaviors that lead to the use of a physical restraint in a public school. For purposes of the analysis, specific behaviors were factored together and a wide range of behaviors that lead to a physical restraint occurring were combined. Some of these reasons are universally endorsed by all training protocols as acceptable for utilizing the restraint. There was a wide range of responses that were both not advocated and prohibited by not only the training protocols, but also the mandates from Pennsylvania and Ohio Departments of Education.

This study continues to support the research that physical restraints continue to be utilized in public schools contrary to local and state mandates. While all of the training protocols advocate the use of a physical restraint to deal with potentially violent situations such as physical aggression and some advocate for potentially dangerous situations like property destruction or leaving assigned areas, there are no training protocol exposes the use of a physical restraint for non-compliance, refusing to complete academic work, or horseplay.

The third question explored was the relationship between the application of a physical restraint and the school administrator's attitude towards physical restraint and the efficacy of physical restraint in public schools. This study found a significant relationship between the school administrator's attitudes toward restraint and the frequency of physical restraint.

Discussions and Implications

The use of physical restraint with public school children continues to generate concern and stimulate controversy. Little research exists about the prevalence or use of physical restraint in public schools. The purpose of this study is to ascertain the frequency of physical restraints used in public schools, the reasons those restraints are occurring, and school administrators' attitudes or beliefs regarding physical restraint. This study revealed a strong relationship between the frequency of physical restraint and the school administrator's attitude toward safety, staff attitude, efficacy and gender. While a large percentage of respondents reported zero or less than one restraint, a sizable number of respondents averaged three or more physical restraints a month.

School principals are accountable for a myriad of activities and responsibilities. They set the tone for learning, provide leadership, motivate staff and students, set curricular standards, prepare budgets, are familiar with all district, state and federal requirements, hire and evaluate staff, and create a positive school environment that maintains an effective discipline plan and creates a safe environment for students and staff. If one of the paramount duties of a school administrator is to create a safe environment for students and staff, why is the use of a physical restraint utilized in such an inconsistent and potentially dangerous manner?

If there is such a strong correlation between school administrator and staff attitudes towards safety and restraint, why is there such a discrepancy in how and why physical restraints are utilized in public schools?

After an extensive search, there is no known research in regard to school administrators' attitudes associated with physical restraint in public schools. It is arguable that school leaders who view physical restraints as necessary to a positive and safe school culture are more likely to adopt policies and procedures that encourage its use. Administrators finding restraints unnecessary are more likely to emphasize preventative programming and other positive behavior supports (Fogt, 2005).

For a variety of different reasons, the use of physical restraint in public schools has increased dramatically (Ryan & Peterson, 2004). Schools, school systems, and school employees are finding themselves dealing with students who present behaviors that impose significant risks on themselves, the staff, and the system. Over the last several years, print and television media have brought to the attention of the public numerous incidents of death and injury as a result of physical restraint in public schools (Freeman & Sugai, 2014). The risks associated with restraints range from injuries to students or staff from kicks, punches, bites, falls, psychological trauma from being involved in involuntary restriction of movement of students to asphyxia, aspiration, and blunt trauma to the head or chest (Couvillon et al., 2010). This study demonstrates a significant correlation between school administrators' attitudes toward restraint and the frequency of physical restraint in public schools.

Why are some school leaders showing very little use of physical restraint, while others are showing significant utilization of physical restraint to control student behavior? School administrators come from a wide variety of different backgrounds, teaching experiences, and leadership programs. Is the school administrator's background important in

establishing their attitudes toward physical restraint? With more education, would school administrators who have higher incidents of physical restraint opt for other measures to control student behavior?

Do administrators use or believe in physical restraints because they do not know of anything else that works, and they see it as the only alternative to decrease potentially dangerous situations?

The documented use of physical restraints started in France in the 18th century. Although from their initial usage, it has been a controversial procedure (Ryan, 2004), restraint continues to be utilized by law enforcement, health care providers, and schools. According to Masters (2002), health care workers in the United States originally viewed physical restraint as a form of therapeutic treatment and adopted it as an accepted practice for dealing with violent patients in order to keep the patient and the staff safe. This view of using physical restraints to prevent people from harming themselves or others continues today.

Proponents of physical restraint in public schools contend that it is a practice necessary to maintain or ensure the safety of all students (Stewart, 2010). Restraint is seen as a means to prevent harm to a person (including self-injurious students), to prevent property damage, or to reduce disruption in a school environment (Stewart, 2010). Proponents contend that there is no universal alternative that works and, that when used properly and when warranted, the effective use of physical restraint keeps schools safe and orderly.

A key component to school leadership is establishing the culture of the school. The leaders' attitudes towards safety and restraint in school in many ways shape the culture regarding student behavior and staff responses to student behavior. In other words, principals who utilize restraint procedures are more likely to work in a building where there are more restraints. Conversely, principals who do not utilize other types of behavior modifications are more likely to work in a school with fewer restraints. Currently, research that supports implementing PBIS is gaining more credibility as more schools are using the strategies with some evidence of social and academic success (Horner & Sugai, 2010).

Although the implementation of a Positive Behavior Support (PBS) or Positive Behavioral Intervention and Supports (PBIS) programs have been effective in reducing the amount of problem behaviors in schools, many school systems do not utilize it and there is the belief among certain professionals that (a) PBS is ineffective in dealing with violent behaviors, and (b) it should not be the function of the school to reward students for acting as they should act anyway.

Recommendations for Practice

The findings of this study emphasize some areas that may help school leaders create safer environments. Some implications for improving practice include:

1. School leaders should re-examine their policies and ensure that physical restraints should be employed as an emergency procedure to ensure the safety of students and staff only;
2. School leaders should collect and analyze data to identify patterns and develop interventions to reduce the need to use a physical restraint;
3. Given the number of students and staff injured in restraint procedures, school leaders should ensure that all staff who may become involved in a restraint injury, participate in a certified training program;
4. School leaders should re-examine their training program and staff development to include prevention, intervention, counter aggression, de-escalation, and principles of applied behavior analysis to identify the function of student behavior and determine replacement behaviors and coping skills of students to reduce the amount of restraints performed in a public school; and
5. School leaders should examine the role of systematically and consistently debriefing the staff and student after the restraint has occurred. Teaching the student replacement behaviors or teaching staff how to avoid escalating the student behavior may reduce the amount of restraints performed in a public school.

Conclusion

The use of physical restraint in public schools continues to generate concern and stimulate controversy, polarizing the educational community. Although physical restraint practices are widely discussed, there is little research conducted in

public school settings. This study answered several important questions regarding the use physical restraint in public schools. First, it supports the paucity of existing research that the use of physical restraints is occurring with some frequency in public schools. Second, it demonstrates the specific behaviors that lead to the physical restraint. These behaviors range from aggressive behaviors to non-compliance. This wide range of behaviors that lead to the restraint illustrate the lack of national standards in regards to restraint in public school, the widely divergent state and local standards, and illustrates an even wider gap on the faithful implementation of those standards across school districts. Finally, the study shows a strong correlation between school leaders' attitudes toward physical restraint and the amount of physical restraints that occur. The multinomial logistical regression analysis demonstrates that the school administrators' perceptions of safety, staff attitude, and efficacy, and advocated conditions to perform a physical restraint, as good predictors of the frequency of physical restraints occurring.

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Appendix 1

Survey Instrument

1. What is your gender?
 - a. Male
 - b. Female
2. What is your age?
 - a. 20-29
 - b. 30-39

- c. 40-49
 - d. 50-59
 - e. 60 +
3. What do you consider yourself to be?
- a. Asian or Pacific Islander
 - b. Black or African American
 - c. Latino or Hispanic
 - d. Native American
 - e. White, not of Hispanic origin
4. What is your title?
- a. Principal
 - b. Director
 - c. Assistant Principal
 - d. Other (Please specify) _____
5. How many years (including the current year) of experience do you have as an administrator?
- a. 1 to 5
 - b. 6 to 10
 - c. 11 to 15
 - d. 16 to 20
 - e. More than 20 years
6. Which educational certifications do you currently hold? (Please check all that apply)
- a. None
 - b. Principal, Administrator, or Supervisor
 - c. Special education teacher
 - d. Elementary education teacher
 - e. Secondary education teacher
 - f. School psychologist
 - g. Guidance counselor
 - h. Emergency certificate
 - i. Other (Please specify) _____
7. Which best describes your school type?
- a. Elementary
 - b. Middle/Intermediate
 - c. Secondary
 - d. Vocational
 - e. Other (Please specify) _____
8. How many students does your school serve?
- a. 1-200
 - b. 201-500
 - c. 501-800
 - d. 801-1000
 - e. 1001-1250
 - f. 1251 +
9. How many students receive special education services?
- a. 0 – 20
 - b. 21-40
 - c. 41-60

- d. 61-80
- e. 81-100
- f. 101+

Directions – Please respond to each item below based on information from the 2012-2013 school year.

For the purpose of responding to the following items, physical restraint is defined as an emergency response procedure by one or more staff that directly restricts a student's movements by applying force or restraint to his or her limbs, head or body as a means of regaining behavior control, and establishing and maintaining safety for the out of control student and other persons in close proximity.

10. Which best describes the average number of physical restraints that occur in your school?
 - a. None
 - b. Less than 1 a month
 - c. 1-3 per month
 - d. 4-10 per month
 - e. 11-30 per month
 - f. More than 30 a month
11. Which best describes the type of physical restraint training that is offered to your staff? (Please check all that apply)
 - a. None
 - b. CPI
 - c. Devereux
 - d. Mandt
 - e. PART
 - f. TCI
 - g. QBS Safety Care
 - h. Other (Please specify)
12. Which best describes the number of hours of physical restraint training that is required annually for your staff?
 - a. None
 - b. Less than 1 hour
 - c. 1-4 hours
 - d. 5-8 hours
 - e. 9-12 hours
 - f. More than 12 hours
 - g. Unknown
13. How much of the training is spent on de-escalation techniques as opposed to the physical restraint techniques?
 - a. No Training
 - b. 20%-39%
 - c. 40%-59%
 - d. 60%-79%
 - e. 80%-100%
 - f. Unsure
14. Which best describes the types of physical restraints used by your staff? (please check all that apply)
 - a. None
 - b. Basket holds
 - c. Mechanical restraints
 - d. Prone restraints
 - e. Other (please specify)

15. Which best describes the conditions under which physical restraints are used at your school? (Please check all that apply)
- a. Leaving assigned area, but remaining in building
 - b. Leaving school building
 - c. Leaving school grounds
 - d. Physical aggression towards other students
 - e. Physical aggression towards staff
 - f. Physical aggression towards self
 - g. Physical threats
 - h. Property destruction
 - i. Refusal to complete academic tasks
 - j. Refusal to follow teacher directions
 - k. Non compliance
 - l. Horseplay
 - m. Verbal aggression
 - n. Other (please specify)
16. Which best describes your school's policies and procedures governing the use of physical restraint in your school? (please check one)
- a. No written policy exists
 - b. Written policy available upon staff request
 - c. Written policy disseminated to all staff
17. Which best describes how physical restraint episodes are recorded by your staff?
- a. No record keeping system in place
 - b. Informal notes kept by staff
 - c. Standard form used by all staff
 - d. Verbal reporting
 - e. Other (please specify)
18. Which best describes how often students are injured as a result of physical restraint use?
- a. Never
 - b. Seldom
 - c. Usually
 - d. Always
19. Which best describes how often staff are injured as a result of a physical restraining a student?
- a. Never
 - b. Seldom
 - c. Usually
 - d. Always

Directions – Please respond to each item below based on your beliefs/feelings about the use of physical restraints in schools.

20. The use of Physical Restraint is needed to keep our school safe and orderly.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
21. The use of Physical Restraint increases safety in our school.

- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
22. Physical restraint constitutes punishment.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
23. Staff members are adequately trained in the use of physical restraint.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
24. Staff members know how to recognize potentially violent situations.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
25. Staff members know how to de-escalate potentially violent situations and employ least restrictive measures prior to resorting to physical restraint.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
26. There is sufficient research supporting the use of Physical Restraint to decrease violent behavior in children.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
27. Physical Restraint decreases violent behavior of students in my school.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
28. Physical Restraint tends to be overused in my school.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
 - e. Unsure/Do not know
29. What is your feeling about the use of Physical Restraint in Public Schools? (open ended response)

**Examining the Attitudes and Concerns of the Kenyan Teachers Toward the
Inclusion of Children with Disabilities in the General Education Classroom: A
Mixed Methods Study**

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The philosophy of inclusive education aims at enabling all children to learn in the regular education classrooms. It is widely believed that the successful implementation of any inclusive policy is largely influenced by teachers being positive about the expectations.

Grounded in Positioning Theory, this study was conducted to examine the attitude, perceptions and concerns of Kenyan teachers toward the inclusion of children with disabilities in the regular education classrooms. The study participants were 142 Primary School teachers from 10 Primary Schools in a school district in Western Kenya deliberately selected from schools identified as actively implementing inclusive education programs. The overall findings indicate that teachers have a positive attitude towards inclusion of children with disabilities in regular classrooms. Overall, the study showed that attitudes, perceptions, and concerns of the teachers influence their acceptance and commitment to the implementation and success of inclusive education.

Introduction

Overview of Special Education in Kenya

The inclusion of students with special educational needs was recently adopted as the national educational policy in Kenya (Republic of Kenya: Ministry of Education, Science, and Technology, 2009). The intention of this policy is to increase the quality of education and equity for all students as outlined in the Salamanca Statement. A key element in the successful implementation of the inclusion policy is the views of the teachers who have the major responsibility of implementing it. (Avramidis & Norwich, 2002).

There are currently three different placement opportunities for children with disabilities in Kenyan public schools. From most to least restrictive, they are: (a) special schools with and without residential/boarding facilities where only children with disabilities are being educated and there are no opportunities to contact and interact with typically developing peers; (b) special classrooms in regular school (integrated units) where children with disabilities are being educated separately but have opportunities to interact with non-disabled children during arrival in the morning, recess and departure times as well as during teacher planned activities that aim to promote interaction among children with and without disabilities; and (c) inclusive classrooms where children with and without disabilities are being educated in the same classrooms.

Need for Inclusion of students with disabilities in the Kenyan schools

According to the school mapping data set, there are 3,464 special needs institutions in Kenya with 2,713 integrated institutions and 751 special schools (Republic of Kenya, 2012). These figures show that access and participation of children with special needs is relatively low across the country. Significant numbers of children and youth with disabilities are largely excluded from educational opportunities for primary and secondary schooling. Special education has for a long time been provided in special schools and units attached to regular schools. The demand for services for children with special needs has increased at all levels as a result of the government's commitment to universal primary education. Special schools and units in primary schools only cater for children with hearing, visual, mental and physical challenges. This means that not all children with special education needs are included. Children who are gifted and talented, and those with autism spectrum disorder, multiple disabilities, specific learning difficulties and communication disorders are left out.

Purpose of the Study

The purpose of the study was twofold. First, the study was designed to inform the relevant stakeholders on some of the factors influencing the successful implementation of the inclusion policy. Second, the study was designed to add to the existing knowledge base regarding the provision of special needs education in Kenyan general education schools.

Research Design

This Concurrent Mixed Methods study was designed to answer the research questions below:

Research Questions for the Study

- Q1. What is the nature of the concerns that teachers have towards the inclusion of children with disabilities in the general education classrooms?
- Q2. What is the relationship between teachers' concerns and their experience with inclusion of children with disabilities?
- Q3. What are the teachers' perceptions of their concerns towards successful inclusion of children with disabilities in their classrooms?

Significance of the Study

This study will serve to create awareness among policy makers, practitioners and other stakeholders of the specific challenges that teachers face in the inclusive classrooms in the aftermath of the implementation of inclusive education in Kenyan schools. Secondly, it is expected that the findings and suggestions of this study will be important in designing teacher preparation and development programs. In this sense, it is expected that the findings will address the teachers' needs and concerns regarding the implementation and development of inclusive education in the Kenyan schools. Lastly, the study will be important in adding to the body of knowledge regarding inclusive education.

Theoretical Framework

Positioning Theory

The theoretical framework for the study is positioning theory (Harre & van Langenhove, 1999). The concept of positioning allows researchers to make sense of the dynamics of evolving social interactions: how people position themselves and how they are positioned by others within a specific context. This theoretical framework helped in understanding the attitudes, perceptions and concerns of general and special education teachers regarding the demands of inclusion in Kisumu district in Kenya. Positioning theory is a conceptual framework used to interpret classroom dynamics. Specifically, the theoretical framework focused on : (a) how the policy “positions” the general education and special education teachers relative to inclusive practices; (b) how general and special education teachers “position” themselves in response to new policies reflective of demands for inclusive policies; and (c) how general education teachers position students in need of special education services.

Two relevant perspectives on positioning were important to the study. One mode of positioning is intentional positioning. Davies and Harre, (1990) refer to this as “reflexive positioning in which one positions himself. Whatever the positions that teachers take, that positioning directs and motivates them in the way they interact with students in the classroom.

The second mode of positioning is interactive positioning “in which what one person says positions another” (Davies & Harre, 1990, p.47). The characteristics of interactive positioning can be used to understand teachers’ positioning of special needs students in their classrooms. Teachers can intentionally or unintentionally position the students in more positive or negative ways through their teaching ways (Yoon, 2008). Teachers might position special needs students without realizing that they may be limiting the student’s opportunities to develop a positive sense of themselves as learners. If there are strong attitudes within a school regarding inclusion, teachers are more likely to re-arrange their beliefs to fall in line with the prevailing attitudes of other teachers (Dupoux, Wolman & Estrada, 2005).

Literature Review

In the early 1980’s UNESCO carried out a survey on teacher education in 14 countries involving all world regions (UNESCO, 1994). The findings showed that regular classroom teachers were willing to take on the responsibility for special needs children, but were not confident whether they had the skills to carry out the task. Most teachers felt they needed training in the special needs field. These findings suggested the need for in-service training for regular classroom teachers, through teacher training.

Overview of Studies on Inclusion

Numerous studies and research summarizing the attitudes of teachers towards the inclusion of children with disabilities in the regular education classrooms have been reported. Most important, a majority of these studies have reported a positive correlation between the type of attitude and the success of the inclusion program implemented by schools. Teachers are more inclined to have a positive attitude regarding inclusion with an increased level of special education training, knowledge and experience in working with children with disabilities. Several experts have noted that critical components for successful inclusion are teacher attitudes towards the principle of inclusion of students with disabilities (Avramidis et al., 2002; Forlin et al., 1996). A study by Vaughn, Schumm, and Sinagub (1996) examined general and special education teacher’s perceptions of inclusion through the use of focus group interviews. The teachers identified several factors that would affect the success of inclusion, including class size, inadequate resources, the extent to which all students would benefit from inclusion and lack of adequate teacher preparation (Avramidis & Norwich, 2002).

Similar findings were reported by LeRoy and Simpson, (1996) who looked at the impact of inclusion over a three year period of time. Their study showed that as teachers’ experience with children with special educational needs increased, their confidence to teach these children also increased. Whereas the above cited studies were carried out in the USA, similar findings have been reported from studies carried out in the United Kingdom (Avramidis et al., 2002). They have provided evidence which seems to indicate that teachers’ negative or neutral attitudes at the beginning of an innovation such as inclusive education may change over time as a function of experience and the expertise that develops through the process of implementation.

Teachers' Attitudes

Attitudes guide and influence people's behaviors in their daily lives (Parasuram, 2006). Since it is believed that teachers and their attitudes toward inclusion are very important variables in the implementation of successful inclusive practices (Avramidis & Norwich, 2002; Larrivee & Cook, 1979; Parasuram, 2006), a lot of research has been conducted on teachers' perceptions of and attitudes towards inclusive education and their beliefs about their ability to teach children with disabilities in regular education classrooms.

Attitudes are important insofar as they predict behavior. According to Berry, (2010), "a teacher who believes that inclusion is unfair to typically achieving students may act in subtle (or not so subtle) ways that negatively affect students with disabilities in that classroom. It may be that the presence or absence of positive attitudes and a sense of commitment to principles of inclusion can tip teachers toward making or avoiding efforts to effectively teach students with disabilities" (p.76). Teachers who have favorable attitudes toward inclusion generally believe that students with disabilities belong in general education classrooms, that they can learn there, and that the teachers have confidence in their abilities to teach students with disabilities (Berry, 2010).

Importance of Teachers' Perceptions of Inclusive Education

The following section presents an overview of the literature regarding the variables that may influence a teachers' attitude and perceptions toward the inclusion of students with disabilities into the general education classrooms.

Type and severity of the disability

Several studies have found a strong relationship between teachers' attitudes and pupils' type of disability. Glaubman and Lifshitz, (2001) found that teachers differentiated their attitudes according to type of disability. In their study, the teachers showed greatest willingness to include those students with physical disabilities or sensory impairments. Previous research has found that teacher's attitudes are influenced by the nature and severity of the disability (Scruggs & Mastropieri, 1996)). Teachers were more accepting of students with physical disabilities than those with cognitive, emotional and behavioral problems.

Ward, Center, and Bochner (1994) assessed teacher attitudes towards inclusion of children with special educational needs whose disabling conditions or educational difficulties were defined behaviorally rather than categorically. Teachers were unanimous in their rejection of the inclusion of children with severe disabilities. This group consisted of those with profound visual and hearing impairments and moderate intellectual disability. Children with profound sensory disabilities and low cognitive ability (mentally retarded) were considered to have a relatively poor chance of being successfully included. In their review of the inclusion literature published from 1984- 2000, Avramidis and Norwich, (2002) found that teachers attitudes towards inclusion were influenced by the type and severity of the child's disability and by the teachers' access to instructional supports. More positive attitudes were related to the inclusion of children who had less severe disabilities or with physical or sensory impairments.

Prior contact with students with disabilities

Positive attitudes and confidence in the ability to teach in an inclusive classroom can be seen as a learned process that is strongly influenced by the amount and kind of contact teachers have with pupils with special needs education. Research also suggests that teacher perceptions may be influenced by student characteristics such as disability label (Soodak, Podell, & Lehman, 1998) and severity of the disability (Cook, 2001). Leyser et al., (1994) found that overall teachers with much experience with disabled persons had significantly positive attitudes toward inclusion than those with little or no experience.

Teachers' experience with inclusive education

Greater experience in inclusive educational contexts favors a more positive attitude toward the education of children with special needs. Possession of previous experience as an inclusive teacher appears to positively predispose teachers towards inclusive education (Avramidis et al., 2000). Avramidis and Kalyva, (2007) found a significant difference between schools that had much experience and those with little or no experience with inclusive education. Direct

experiences of including children with disabilities into regular education settings appeared to be an essential factor in shaping teachers' views towards inclusive settings.

Teachers' perceptions of administrative support

Villa et al., (1996) found that administrative support and collaboration were indicators of positive attitude among school staff toward inclusion, thus making inclusion more successful. Guzman (1997) and Praisner, (2003) considered the role of school head teachers to be significant in developing inclusive education because they can promote inclusive practices in schools, foster new meanings about diversity and build relationships between schools and community. Inclusive minded administrators look to educate their entire school communities, promote dialogue, adopt inclusive policy and incorporate whole school approaches and cultures (Ryan, 2006).

Training in special education or inclusive education

Positive attitudes in schools can be fostered both through training in inclusive education and constructive experiences with students with disabilities (Avramidis et al., 2002; Subban & Umesh, 2006). Pre-service training period may be an appropriate time to address teachers' concerns and possibly modify attitudes towards teaching learners with special needs. The results of the studies investigating the influence of special education training on teachers' attitudes towards inclusion indicate that training is an important factor in the formation of more positive teacher attitudes towards inclusion (Avramidis & Norwich, 2002). Research tends to suggest that there is a positive correlation between the amount of disability education a teacher has received and educator's positive attitudes towards inclusion. Avramidis and Kalyva, (2007) found in their study that teachers with long term training in inclusive education were significantly more positive towards statements about the general philosophy compared to those who had no training at all.

Role of on-going/in service teacher training

General education teachers need professional development training on inclusion. Fox and Ysseldyke, (1997) identified training that is "concrete, specific and ongoing" as necessary for promoting successful school changes regarding inclusion. In a study done by Rakap and Kaczmarek, (2010) regarding teachers' attitudes towards inclusion in Turkey, they found that teachers with in-service education and special education certificates and those who received special education courses while in college had relatively more positive attitudes towards inclusion. These findings are similar to those of Avramidis et al., (2002).

Teacher supports for inclusive practice

Avramidis and Norwich, (2002) in their review of inclusion literature found that teachers' access to instructional supports was an important variable affecting teachers' acceptance of the inclusive principle. More positive attitudes were also related to teachers having greater access to supports, including teaching materials and other educationally relevant resources, and to special service personnel.

Summary

The importance of teacher attitudes toward inclusion is evident from the number of studies conducted in that area. Teachers must believe that their behaviors can affect the education of their students. Bandura, (1992) stated that even when individuals perceive that specific actions will likely bring about the desired behavior, they will not engage in the behavior or persist after initiating the behavior, if they feel that they do not possess the requisite skills.

Methods

A survey was used to measure the relationship between teachers' years of experience with inclusion, amount of contact time with children with disabilities (independent variables) and teachers' attitudes, perceptions and concerns towards inclusion of children with disabilities (dependent variables). At the same time, teachers' perceptions of their concerns towards inclusion of children in the regular education classrooms were explored using qualitative focus groups with the teachers at the research sites.

Quantitative Phase

This phase of the study gathered and analyzed quantitative data to answer the quantitative research questions of the study.

Participants and sampling

The data for this study were drawn from a convenience sample of 142 primary school teachers currently teaching in the schools in the district. The participants were general and special education teachers teaching in the public schools. The sample consisted of 100 general education teachers and 42 special education teachers all drawn from 5 administrative divisions in the district. Two schools were selected from each division for a total of 10 schools.

Measures

To answer the research questions in this study, participants completed 18- item survey called a modified adaptation of The School and the Education of All Students Scale (SEAS). This study adapted a survey designed by Pearman, Huang & Mellblom, (1997). See Appendix 1

Background /Demographic Information Questionnaire

This scale was developed by Horne and Timmons, (2009). Participants completed a Background Information Questionnaire containing a series of questions measuring other variables that have previously been demonstrated to impact attitudes and perceptions towards inclusion. This scale was designed to elicit participant demographic and background information across six areas. These areas included each participant's: (a) years of teaching experience; (b) duration at the current school; (c) duration of involvement with inclusive practices; (d) level of expertise or training in special education, (e) duration of direct contact hours with students receiving special education and (f) disability categories.

Teachers Concerns Scale.

The concerns scale of the SEAS consisted of 20 items addressing the participants' concerns about how inclusion would affect them and their schools. The teachers' concerns scale required the participants to rate the level of concern that the move towards inclusion of all students into the regular classroom may have created. The items on the concerns scale were coded so that a higher score (4-very concerned) indicated greater impediments towards inclusion while a lower score (1-not-at- all concerned) indicated less impediments towards inclusion. The total scores ranged from 20-80 and the scale had a calculated Cronbach alpha reliability coefficient of 0.92 indicating a high degree of internal consistency and reliability. Research related to teacher attitudes, perceptions, and concerns regarding inclusionary practices were used as the conceptual underpinning in the choice of the instrument. Using the literature as a basis, some sections of the instrument were modified to make them applicable and relevant to the Kenyan situation.

Data analysis procedures

Quantitative data were entered into the Statistical Package for Social Sciences (SPSS) version 17.0 for statistical analysis. Descriptive statistics such as means, standard deviations and percentages were calculated.

Qualitative Phase

The purpose of this qualitative focus group study was to identify and examine the nature of concerns that teachers have towards the inclusion of children with disabilities in general education classrooms in Kisumu district, Kenya. Concerns were generally understood as those impediments to successful inclusion of children with disabilities in the general education classrooms. Two focus group sessions were used as the source of data collection. There were 10 general education teachers and 10 special education teachers who participated in this phase of the study on different dates. There were 10 questions for discussion by the focus group. (See Appendix 2)

Results

Research Question 1

What is the nature of the concerns that teachers have towards the inclusion of children with disabilities in the general education classrooms?

To answer this question, descriptive analysis of teachers' concerns was done. Out of the 20 questions in the scale, concern 1 (enough time to meet the educational needs of all students); concern 4 (staff had not been trained to work with increasingly diverse students); concern 6 (maintaining discipline would be difficult) and concern 9 (evaluating work of diverse students) were identified as posing the highest amount of challenge to the teachers. Frequency means and standard deviations were generated to show the named areas of concern. See Table 1 for the distribution of the concerns.

Table 1

Means and Standard Deviation for the Teachers' Concerns towards Inclusion

Concerns 1-20	Total	Mean	Standard Deviation
1 (Enough time to meet the education needs of all)	142	3.36	.75
4 (Staff had not been trained for diversity)	142	3.30	.84
9 (Evaluating work of diverse students)	142	3.21	.75
6 (Maintaining discipline would be difficult)	142	2.99	.93
2 (Instructing students with a wide range of needs)	142	2.98	.82
7 (Staff lacked training to manage diverse classes)	142	2.98	.82
12 (Lack of on-going training/in-service)	142	2.96	.93
3 (Class standards would change)	142	2.96	.93
8 (Not able to individualize instruction)	142	2.96	.93
11 (Sufficient planning time)	142	2.87	.98
5 (All students not adequately challenged)	142	2.87	.98
15 (Ability to evaluate effectiveness of program)	142	2.86	.99
17 (Additional meeting times)	142	2.86	.99
19 (Student acceptance of special needs children)	142	2.86	.99
20 (Other teachers do not support inclusion)	142	2.85	1.0
14 (Students' attitude towards inclusion)	142	2.65	1.2
17 (Additional meeting times)	142	2.62	1.3
18 (Parents would not understand reasons for inclusion)	142	2.60	1.4
14 (students acceptance of those with special needs)	142	2.60	1.4
10 (Able to work cooperatively with other staff)	142	2.60	1.4

The table (Table 1) shows that of the four main areas of concern about inclusion of children with disabilities, teachers were most concerned about not having enough time to meet the educational needs of all students in an inclusive classroom ($M=3.36$, $SD=.75$). Discipline is the lowest concern in the top four category ($M=2.9$, $SD=.93$) compared with other major concerns (time, $M=3.36$, $SD=.75$); training, $M=3.30$, $SD=.84$; and evaluation, $M=2.99$, $SD=.75$). Responses to individual items in the concerns sub-scale indicate that the participants have concerns about including all students in the general education classrooms. The four main concerns according to the survey responses were:

- (a) Having enough time to meet the needs of students with disabilities: Of the 142 teachers participating, 121 participants (85.1%) were concerned and very concerned about having enough time to meet the needs of students with disabilities in the regular classroom.
- (a) Teachers' concern for training to teach children with disabilities: There was a high concern about training of teachers for inclusion suggesting that training of teachers to include children with disabilities is a major concern. Of the total number of teachers who responded to this item 84% ($n=119$) indicated that they were very concerned and concerned about their training needs to meet the demands of an inclusive classroom.
- (b) Evaluating the work of diverse students: The third identified concern was the participants' concern for evaluation of work of diversified students due to inclusion. Of the total number of teachers who responded to this item 83% ($n=118$) indicated that they were very concerned and concerned about evaluating the work of diverse students.

(c) Maintaining discipline in a diversified classroom: The last of the four identified major concerns was the teachers' concern for class discipline. The teachers indicated that maintaining class discipline in an inclusion classroom would be difficult. Of the total number of teachers who responded to this item 73% (n=103) indicated that they were very concerned and concerned about evaluating the work of diverse students.

The teachers' responses to the items in the concerns sub-scales indicate that they have a higher level of concern for how the inclusion of students with disabilities in their classrooms will affect them personally. There was lower concern in other areas.

Table 2 shows the frequency and percentage distribution for the four major concerns identified by the participants.

Table 2

Frequency and Percentage Distribution for the Four Major Concerns

1	1/7.0	20/14.10	48/33.80	73/51.40	142/100
4	6/4.20	17/12.00	47/33.10	72/50.70	142/100
6	2/1.40	22/15.50	62/43.70	56/39.40	142/100
9	11/7.70	28/19.70	54/38.00	49/34.50	142/100
Concerns	Frequency/% Not at all Concerned	Not Very Concerned	Concerned	Very Concerned	Total

Research Question 2

What is the relationship between teachers' concerns and their experience with inclusion of children with disabilities in the classroom? To answer the research question, bivariate correlation was performed to examine the relationship between the teachers' concerns and their experience with inclusion of children with disabilities. Table 3 shows the relationship between the teachers' experience with inclusion and their concerns.

Table 3

Correlation between the Teachers' Years of Using Inclusive Education and Their Concerns about Successful Inclusion of Children with Disabilities

Mean Concern	Total Concern	Years of using inclusive education
Years of using inclusive education	.17*	-

*The correlation is significant at $p < .05$

Bivariate correlation was used to measure the relationship between the total concerns and the teachers' years of experience with inclusion of children with disabilities. The results of the correlational analysis are presented in Table 3 above. The correlation of the teachers years of experience with inclusion and their concerns about inclusion of children with disabilities as reported in the table above is $r = .17$, $p < .05$. The correlation is significant at the 0.05 level. In general the results suggest that there was no strong relationship between the teachers' years of experience with inclusion of children with disabilities in the classrooms and their concerns.

Research Question 3

What are the teachers' perceptions of their concerns toward successful inclusion of children with disabilities?

Qualitative analysis was used to answer this research question. The special education and general education teachers who participated in this qualitative phase of the study outlined common concerns within their classroom contexts that affected their success in educating children with disabilities in the general classroom setting. Once data was transcribed, the researchers embarked on reading and looking for things that were pertinent to answering the research question. The researchers engaged in an inductive process of coding data to identify major themes in the data. The researchers carefully read the transcribed data and divided the data into meaningful analytical units/segments. Coding

process was done by segmenting and labeling text to form descriptions and broad themes in the data.

The following categories and themes emerged from the analysis of common areas of concern as they relate to the feelings of the general education teachers (GEN-ED) and special education teachers (SPED), (a) concerns about inclusion, (b) experience of inclusion/training in special needs education, (c) examination culture of ranking classes/schools/divisions and districts according to performance in national examinations, (d) teachers' perceptions of supportive services, (e) inability to complete syllabuses and failure in exams, (f) inadequate physical access/facilities and, (g) teachers' perceptions of the difficulties they encounter. The categories and themes that emerged are discussed separately in this section. The quotations from the teachers' discussions are used to illustrate the themes from the discussion groups.

Table 4

Categories and Themes from the General Education and Special Education Teachers' Focus Group Sessions

Category		Theme	Focus Group Questions
Concerns about inclusion	1.	Mutual development in education with benefits	6,7 & 8
	1.	Good for both children with and without disabilities	
Experience of inclusion/Training in special education.	1	Role of additional ongoing training.	1,4, & 5
	1	Lack of professional experience (GEN-ED)	
	2	Additional training in methodology of instruction	
	3	Good understanding of disabilities (GEN-ED)	
Examination culture of ranking schools	1.	Practice of academic selection in schools not good for inclusive education	8
	1.	Fear and concern about academic success of their schools	
Teachers' perceptions of supportive services.	1.	Teachers need support from school administration	9 & 10
	1.	GEN-ED teachers need support from SPED teachers	
	2.	GEN-ED felt not supported.	
Physical access /Facilities in schools	1.	Difficulties of access presented by the school buildings and classrooms	2
Inability to complete syllabuses	1.	Inclusion would affect academic performance	6
	1.	Difficulties in individualizing instruction in large classes	
Teachers' perceptions of their difficulties	1.	Class control in an inclusive environment	3
	1.	Time constraints	
	2.	Large class sizes	

Theme 1: Concerns about inclusion.

Most general education teachers showed positive attitudes towards inclusion. Some considered it to be a mutual development in education and indicated mutual benefits for their students with and without disabilities. The teachers demonstrated a good understanding of the social function of inclusion by indicating that their students without disabilities in the regular education classrooms learned to accept and understand people who were different from them. Inclusion was

cited as being good for not only the school, but also to the wider community. *“Inclusion is a good initiative but when there is a problem with its implementation, it is a problem to the learner who has special needs. When the children are together, they learn from each other and also this does away with superstitions about disabilities. Long time ago, people used to fear those who are challenged in one way or another. Without that government support, we cannot achieve our aims of providing inclusive education”* (SPED Teacher 10)

“Inclusive education can work but not in all schools. There are some disabilities like autism and mental handicap, those ones cannot learn in general education, and they should go to special schools. Only those with learning disabilities, hearing impairment and visual impairment can be included in the general education classrooms” (SPED Teacher 1)

Theme 2: Experience of inclusion/ training in special needs education.

Training in special needs was a major issue mentioned by the teachers as a requirement for successful implementation of inclusion. The teachers also talked about the need for additional on-going training and expressed their concern for lack of personal professional experience. The teachers mentioned that they needed additional training in methods of instruction to meet the needs of all students with special needs in their classrooms. A majority of the teachers also pointed out that they needed specialized training in specific cases of disabilities especially in areas with great challenges. They agreed that further training was necessary for the effective inclusion to be achieved.

The teachers indicated that unless they understood the disability and how to deal with it, they may experience frustration and guilt of not being able to do their best in the inclusive classroom. The regular education teachers reported that they did not feel confident in their abilities to provide for special needs children in terms of adapting the curriculum to meet their needs.

“Most of the teachers have not gone for training in special needs education and most of them have not had a chance to meet students with special needs so they find it difficult to deal with them. Those who have had that training have no problem but those who have not cannot deal with these students” (GEN-ED Teacher 3)

Theme 3: Examination culture of ranking classes/schools/divisions/districts and provinces according to performance.

The teachers expressed fear and concern about the academic success of their schools. They expressed fear that because majority of them do not have the required knowledge and expertise to teach students with disabilities who are included in the regular classrooms, this is contributing to low mean scores in the examinations. The teachers stated that because of the practice of academic selection into the schools right from Standard 1, adopting inclusion in practice will be a major shift for all schools and the teachers. Teachers also pointed out that the schools head teachers base admission of children in schools on academic ability and so children with disabilities will always have difficulty securing admission in some schools because they are believed to be of low academic ability. In the end, the teachers pointed out there will be a distinction between the inclusive schools and those that do not. Teachers also discussed the implications of inclusion and its effects on the teaching time in the schools.

Theme 4: Teacher's perceptions of supportive services.

The fourth theme that emerged and was supported by the interviews stated that the teachers needed support from the administrators; this was a concern for both special and general education teachers. In addition to this, the general education teachers also requested for support from the few special education teachers in the schools. All the participants reported that support was a contributing factor to the success of inclusion. The teachers specifically singled out the support from the school administration as the most important towards the success of inclusion in their schools. This support includes finding appropriate ways for teachers to be involved in the decision making process in their classrooms, working collaboratively with special needs children and getting the required basic equipment for teachers to use in the classrooms with special needs children. The teachers pointed out that the head teacher is the most important link between the school and the community.

The teachers talked about the need for stronger collaboration between the school head teacher and the community. A common example cited by teachers was when teachers requested to have a meeting with a parent of a child with special needs. Some parents are very negative and the teachers need the support of the school administration to facilitate such meetings. Some head teachers took long to facilitate such meetings while at the same time some parents do not honor such

meetings leading to a lot of frustration by the teacher. Both groups of teachers (regular and special education) supported the position that successful inclusive education, to a large extent is dependent upon the positive attitudes of the teachers and the amount of support they receive towards the implementation of the program.

“When there is a child with a problem, sometimes we ask the school administration to call the parents so that we sensitize. Sometimes the administration provides funds for some teachers to attend workshops or meetings on inclusive education”. (GEN -ED Teacher 8)

Theme 5: Inadequate physical access/facilities in the schools.

Several teachers pointed out the difficulties of access presented by the school buildings and the classrooms. Both special education and general education teachers explained the difficulties of classroom access, the lack of suitable toileting facilities, and the hardships that would be experienced in providing privacy and efforts to maintain the dignity of the child with the disability. The teachers pointed out that the difficulties in educating children with disabilities increases with an increase in the variety of special needs children a teacher has in the classroom.

“I have not taught children on a wheelchair before, and again, wheelchairs physically in our school and classrooms would cause major problems because our classes are not wheelchair structured”. (GEN-ED Teacher 2)

Theme 6: Inability to complete the syllabus and failure in national examinations.

The teachers also believed that if students with disabilities were included in regular classes, it would affect the academic performance of their peers without disabilities. The teachers pointed out that because of the long attachment to academic selection as the model for education in Kenyan schools, adoption of total inclusion in practice will be a radical change for all schools and the teaching staff. The teachers pointed out that with the regular education system requiring schools to follow a common policy implementing a national curriculum, whole class instruction, identical textbooks, similar and strict timetables and a competitive examination culture, it is very difficult for the regular education teachers to include students with special needs and to individualize instruction especially with big classrooms sizes. The teachers also expressed the fear that total inclusion may hinder the progress of other children and lower the overall performance of the school. In turn, this will affect the allocation of classmates to “good” secondary schools.

“This inclusive education idea is still a big problem in Kenya. We are always far behind in completing our syllabi. It is also resulting in low output of work and we teachers are always blamed when KCPE results (Kenya Certificate of Primary Education) are out at the beginning of the year. The government should make the school system to be disability friendly. The government should stop categorizing schools according to how they perform in the national examinations. Most head teachers will reject the students with special education needs and they will be forced to attend the so called small schools. Inclusive education is a good thing but it cannot be accepted in some schools” (GEN-ED Teacher 2)

Theme 7: Teachers’ perceptions of the difficulties they encounter.

Teachers pointed out several important issues and problems. Several teachers pointed out that it is difficult to control classroom behaviors when several students with disabilities are included, especially those with multiple disabilities and behavior problems. The teachers felt that a factor contributing to this is the teachers’ own lack of special education training. Some teachers also complained about inadequate time, necessary conditions, and material supports in the schools to help them with the successful implementation of inclusive practices. Large class sizes was also mentioned by the teachers and identified as slowing down of other students’ progress. The teachers pointed out that one way of making inclusion work more successfully in their classrooms is by limiting the number of children with special needs in an inclusive classroom.

“We must not only be thinking about the placement of students with disabilities into general education classrooms, we must also think about how their placement is going to disturb the emotions and academic performance of other students without disabilities in the school” (GEN-ED Teacher 1). *“We need to think carefully about placement in the class because of the wheelchair, having a wheelchair in the classroom could cause problems. My class has three steep steps to be climbed, each day I have to request other students to lift the student and the wheelchair into the classroom”* (GEN ED Teacher 3)

Practical Implications and Recommendations

This study provided insight into a range of possible views held by teachers regarding aspects of inclusion. Such information may be useful to teacher educators as they seek to (a) understand what these teachers bring to inclusion contexts and (b) provide course content and educational experiences that will help teachers develop the knowledge and dispositions that will prepare them to be successful teachers for all students. This includes knowledge of how to provide instruction that meets the needs of a wide range of students, how to access and effectively manage resources and a strong commitment to teaching students with disabilities.

The findings of this study have implications on the inclusion agenda and the manner in which the government through the Ministry of Education Science and Technology has responded to it. With government policy and eventually legislation supporting inclusive education in place, it is important that teacher training institutions prepare teachers who are confident in their ability to cater for diversity in their classrooms. Such teachers are in turn likely to have beneficial impact on the attitudes of children without disabilities towards their fellows with disabilities. To facilitate effective inclusive education, support must be provided that promotes change in attitudes, beliefs, values and habits. Issues identified in this study regarding large class sizes, teacher training, student needs and resources are particularly important for inclusive practices to be successful in Kenya. The existing pre-service and in-service teacher programs need to be re-evaluated and strengthened to develop specific programs for training regular teachers so that they can effectively respond to the needs of all students.

Results suggesting that the teachers are particularly concerned about lack of resources have an important implication for the initial teacher education/training in Kenya. There is need to provide grounded information and training to pre-service teachers during their initial teacher training regarding the range of resources available to support children with disabilities. It may also be important to review the Special Needs Education Policy Framework so that its provisions are anchored in the country's legislation.

There is need for urgent policy change because without this change to reflect the teachers' current attitudes, perceptions and concerns, driving the inclusion agenda forward may face serious obstacles. What the current study found is that the dominant culture of the people and the historical contexts mediate the interpretation of inclusion and therefore the policies to guide implementation should be generated rather than transplanted or imposed. In a way, the results of this study emphasize the need for the Kenyan Ministry of Education Science and Technology to interpret the inclusion agenda from local perspectives. The government should involve classroom teachers in all stages of inclusive policy development and decision making that would affect them in their schools. A synchronization of these support systems and the involvement of teachers would be a catalyst in reducing their negative attitude and concerns about inclusive education in Kenya.

It may be necessary for the government of Kenya to harness and take advantage of the enthusiasm that the teachers have shown towards inclusive education by giving full support to the efforts of the teachers. One aspect towards successful inclusion agenda that the government needs to focus on is the quality of teacher training programs. There is some research that suggests that too much focus on causes and characteristics of different disability types during initial teacher training programs may develop negative attitudes among teacher trainees (Forlin et.al., 2009). Rather, the training focus of teacher education should be on sociological aspects of disability and on the strategies that have been shown to enhance inclusion of all children in the learning process.

The teachers expressed concerns about some aspects of inclusion. One major concern expressed by the teachers was that they believed that they have not been consulted enough as part of the process. It would appear that the regular classroom teachers view inclusive education as a top-down decision, which has subjected them to additional pressure. The teachers also felt that they have not been given adequate guidelines or directives regarding the inclusion of students with disabilities in the regular classrooms. What the current study shows is that teacher characteristics and school contexts mediate the interpretation of inclusion and therefore policies need to be generated rather than imposed.

The teachers in the study pointed out that because of the long attachment to academic selection as the model for education in Kenya, adoption of total inclusion in practice will be a radical change for all schools and the teaching staff. The teachers expressed fear and concern about the academic success of their schools. They expressed fear that because majority of them do not have the required knowledge and expertise to teach students with disabilities who are included in the regular classrooms, this is contributing to low mean scores in the examinations. While schools tend to be blamed for not being more inclusive, the teacher training college and colleges of education at the universities must acknowledge and

embrace their role more fully to ensure that they are producing graduates who have the appropriate knowledge, skills and attitudes to be more proactive in furthering the inclusion agenda. Teachers must be prepared to differentiate their curricular to ensure that they meet the dissimilar needs of children with disabilities.

The results of this study lead towards a few areas of potential intervention; in-service awareness programs and attitude change workshops for teachers is important towards the success of the inclusion agenda. Since research concerning attitude change towards people with disabilities and towards inclusive education is almost lacking in Kenya, attitude – change workshops are necessary to help focus the inclusion agenda.

In conclusion, the government should address the issue of teacher training and the system of ranking of schools in national examinations. In general, the teachers from Kisumu who took part in the study were positive about including children with disabilities in their classrooms. They did, however, express the belief that they were not adequately prepared to meet the needs of children with disabilities. They also stated that they were not well supported in terms of administrative support, planning time and disability-specific teaching skills and resources.

It has been posited that a process of affirmative and rewarding personnel engagement with people with disabilities is most likely to continue to promote inclusion (Forlin, 2006). This is one good direction that the Ministry of Education, Science and Technology through the Teachers' Service Commission can implement in order to make special education attractive. Special education teachers should also be considered for special allowances just like their counterparts in Math, English, and Science.

Future Research

Several international studies have concluded that teachers' attitudes and perceptions towards inclusive education determine their commitment to inclusive practices and influence the outcomes of their practice. Since inclusive education is concerned with the identification and minimization of barriers to learning, then more studies should focus on highlighting the critical role of teachers' professional development as a crucial factor influencing teachers' understandings of, and commitment to the development of inclusive education.

First, this study has indicated that a good understanding of how educators relate to inclusion is crucial since they are the key resource that will make inclusion a reality, more comparative research is therefore required. More research is needed to examine additional factors that influence the development of positive attitudes and perceptions towards inclusion and how these variables interact. There is need for a good understanding of the complexity of factors that shape teacher attitudes and perceptions towards inclusion in order to learn which are the most important. Future research needs to focus on the quality of training opportunities for teachers and should include details such as duration, content, intensity and relevance. Training of teachers should also focus on the quality of their experiences with different categories of disability or special needs. Again, if experience with inclusion promotes positive attitudes, then future research should also focus on ways of supporting teachers (the main agents of the implementation of the policy) as schools become more inclusive so that their experiences become more positive.

Second, this study has shown that contact is an important variable in the attitude of teachers towards children with disabilities and towards inclusive education. Since inclusive education is relatively new to Kenya, this finding would be very valuable in the planning and implementation phase. As part of teacher training programs, potential teachers should have planned contacts such as extended time for teaching practice (practicum). Such measures would increase the success of inclusion. Future research is needed to examine this variable critically and with a larger population of teachers so that if the results continue to show the significance of this variable, then increasing quality contact time should be part of programmed teacher training in Kenya.

Third, one of the challenges in designing this study was a lack of published literature on inclusive education in Kenya. This presents a shortcoming for researchers and call urgently for more studies about attitudes, perceptions and concerns. For example, it would be valuable to compare the attitudes of those teachers with and without experience of teaching inclusively. Further work is also needed to identify the factors that hinder and challenge the effective implementation of inclusion in Kenya. Clearly, the implementation of inclusion is an important area for investigation, not only because of the immediate implications for the children and their families, but also because of the wider issues related to shifting attitudes and increasing acceptance of disability in the society.

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APPENDICES

APPENDIX 1

Modified adaptation of The School and the Education of All Students Scale (SEAS)

I. BACKGROUND INFORMATION

In this section, please circle the best answer that applies to you

1. How many years
have you been
working in
education?

- 1) 1 or less 1) 2-3 2) 4-5 3) 6-10
2. How many years have you been at your current school?
1) First year 1) 2-3 2) 4-5 3) 6-10
3. How many years have you been using inclusive educational practices in which you have been formally trained?
1) None 1) ____ (years) 2) ____ (years) 3) ____ (years)
4. Please indicate your present level of training/education.
1) Primary Education Teacher (PI) 1) Diploma in Education 2) BEd in Special Education
3) MEd in Special Education. 4) Support Teacher
5. Approximately what part of most days do you work with students receiving special education services?
1) None 1) Half time or less 2) More than half time

6. This year, will you or are you working with students who have the following disabilities? Please circle the answer that applies to you.

	Yes	No	Don't Know	Doesn't Apply	Rank
Deaf/Hearing Impairment	1	2	3	4	
Learning Disabilities	1	2	3	4	
Emotional Disturbance	1	2	3	4	
Physical Disability	1	2	3	4	
Speech/Language	1	2	3	4	
Blind/ Visual Impairment	1	2	3	4	
Developmental Delay	1	2	3	4	
Mental Retardation	1	2	3	4	
Traumatic Brain Injury	1	2	3	4	
Autism	1	2	3	4	
Multiple Conditions	1	2	3	4	
Deafblindness	1	2	3	4	

7. Which of the above disability category(-ies) will you find yourself most comfortable working with? Rank the categories from 1 to 12, with 1 being *“the most comfortable”* and 12 being *the least comfortable*.

II. TEACHERS' ATTITUDES, PERCEPTIONS, AND CONCERNS

In this section, circle your level of agreement or disagreement with the statements below:

Survey Topic	Strongly disagreed	Disagreed	Agreed	Strongly agreed
Attitude				
8 Inclusion is the best way to meet the needs of all students.	1	2	3	
9 Inclusion causes more problems than it solves.	1	2	3	
10 Diversity in the classroom enriches learning	1	2	3	
11 Leadership of the head teacher is necessary for inclusion	1	2	3	
12 Head teachers enable regular and special education staff to communicate with each other.	1	2	3	
13 Inclusion of students with special needs into regular classrooms creates tension in their schools.	1	2	3	
14 Inclusion would work well in your school	1	2	3	
15 Inclusion depends solely on staff/teacher involved	1	2	3	
16 Inclusion of students with special needs is detrimental to the education of other students.	1	2	3	
17 Inclusion creates too much additional work for teachers	1	1	2	
Perception				
18 Parents are willing to accept a philosophy of full inclusion.	1	2	3	
19 School committees support efforts of including all students into the classroom.	1	2	3	
20 Colleagues support full inclusion of students with special needs	1	2	3	
21 Department of education supports inclusion	1	2	3	
22 Staff at school resists inclusion.	1	2	3	
23 Special education staff support full inclusion	1	2	3	
24 There is adequate head teacher support.	1	2	3	
25 Teachers currently need training in inclusive practices	1	2	3	
26 School staff members are adequately prepared for inclusion	1	2	3	
27 Students in your school accept children with special needs in their classrooms.	1	2	3	
28 Parents are more satisfied with their child's education as a result of inclusion	1	2	3	
29 Regular and special education staff are provided time to plan together for instruction.	1	2	3	
Survey Topic	Not at all concerned.	Not very concerned	Concerned	Very Concerned
Concerns				
30 Enough time to meet the educational needs of all students	1	2	3	
31 Concerned about instructing students with a wide range of needs in one class.	1	2	3	

32	Concerned that class standards would change.	1	2	3
33	Staff had not been trained to work with increasingly diverse students	1	2	3
34	All students would not be adequately challenged	1	2	3
35	Maintaining discipline would be difficult	1	2	3
36	Staff lacked training to manage diverse classrooms	1	2	3
37	Not able to individualize instruction.	1	2	3
38	Evaluating work of diverse students	1	2	3
39	Able to work cooperatively with other staff	1	2	3
40	Sufficient planning time	1	2	3
41	Lack of ongoing training/in-service	1	2	3
42	Additional paperwork/documentation.	1	2	3
43	Students' attitude towards inclusion.	1	2	3
44	Teacher's ability to evaluate the effectiveness of inclusion programs	1	2	3
45	Whether all school staff are responsible for all students (staff ownership)	1	2	3
46	Additional meeting times.	1	2	3
47	Parents would not understand the reasons for inclusion.	1	2	3
48	Student acceptance of classmates with special needs	1	2	3
49	Other teachers in this school do not support inclusion	1	2	3

APPENDIX II**Focus Group Questions**

1. What training/professional development did you receive prior to and during the time you have been having special needs students in your class?
2. Could you tell me about the needs of the special needs child/children in your class?
3. Which disability/disabilities do you consider more challenging/less challenging to work with in your classroom?
4. In your opinion, do teachers have the resources to implement inclusive education in your school?
5. In your opinion do the teachers have the knowledge and skills to implement inclusive education? Why or why not?
6. Tell me your feelings about inclusive education
7. How much good do you think inclusive education is doing?
8. How much do teachers believe in the ideas of inclusive education?

Comparative Investigation of Differences between Special and General Education Teachers' Perceptions about Students with Autism in Turkey

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Increased rates of students with Autism Spectrum Disorders (ASD) are documented throughout the world. In Turkey, there are currently 100,000 students under the age of 14 with ASD and increasing each year by approximately 5,000 students. As a result of the current population and increased prevalence, special education and general education teachers are providing educational services to increasing numbers of students with ASD. The purpose of this study is to examine teachers' perceptions of students with ASD. The Autism Attitude Scale for Teachers was administered to 117 general education (n= 53) and special education (n= 63) teachers in 19 Education Centers for Children with Autism in Turkey. Results indicate both groups are receptive to students with autism, but special education teachers have more positive perceptions of students with ASD. Implications for teacher certification programs and continued professional development initiatives are presented.

Introduction

Autism Spectrum Disorder (ASD) is a developmental disability with a neurological basis that affects the normal functioning of the brain (Leblanc, Richardson, & Burns, 2009). Since Leo Kanner first described it in 1943, the disorder has garnered a great deal of interest in the field and research environment. Although many questions remain unanswered, our understanding of 'autism' has significantly progressed to the point where it is seen as a spectrum of difficulties rather than a singular condition (Humphrey, 2008). Prevalence findings are of particular interest to researchers around the world.

Researchers identified significant increases in the prevalence of ASD over time within certain populations and across many regions of the world (Oulette-Kuntz, Coe, Lloyd, Kasmara, Holden, & Lewis, 2006). The Turkish educational system is one region experiencing increased rates of students with ASD. According to the Turkish Ministry of Education, there are currently about 500,000 people with ASD and 100,000 are children under the age of 14. This means that 1 in 80 children in Turkey are diagnosed with ASD. Moreover, these numbers are increasing by approximately 5,000 per year.

In response to the growing numbers of students with ASD, the Educational Centers for Children with Autism (OCEMs) were established in 1999 by the Turkish Ministry of Education as part of the Education Project for Students with Autism. OCEMs are independent schools that include one-on-one and group education classrooms for students with ASD who are between 3 and 15 years old. Each OCEM includes preschool education (ages 3-6), elementary education (ages 7-11), and secondary education (12-15). The general purposes of the OCEMs include: 1) to provide the least restrictive environment possible for students with ASD while helping these students to improve their educational performances, social skills, and practical skills with the support of their families; 2) to provide supportive services to improve students'

Individualized Education Plan's (IEP) and help students reach their goals; and 3) to provide and perform family education programs to fortify families and their perspective about students and/or school. The OCEM teachers are special education teachers who have graduated from special education programs and general education teachers who have obtained special education certificates or have earned graduate degrees in the field of special education.

A central aspect to the effectiveness of teachers delivering education programs to students with ASD is the teacher's perceptions of their students. Teachers' perceptions of students with ASD are important for many reasons, including a teacher's perception may positively or negatively influence their own expectations for students, and in turn, influence students' success both academically and socially (Silverman, 2007). Teachers who have negative perceptions of students with autism may negatively impact their students. It is likely that there is a difference in perceptions between general education teachers and special education teachers due to the varied training and experiences of teachers.

Typically, special education teachers have more educational training, knowledge of and experience with students with ASD than general education teachers. Demographic variables (e.g., age and gender) and types of exposure to children with disabilities can impact individuals' attitudes towards children with autism (Rosenbaum, Armstrong, & King, 1988). Since students with ASD receive educational services in OCEMs from both general and special education teachers, it is logical to investigate the potential differences in teacher's perceptions of students with ASD. The information that is ascertained about current teachers' perceptions can be used to inform teacher certification programs and continued education initiatives.

The overall purpose of this study is to examine general and special education teachers' perception of students with ASD to better inform teacher education programs in Turkey. The research questions addressed are:

1. What are the Special Education and General Education teachers' perceptions of students with ASD in OCEMs?
2. What differences exist between Special and General Education Teachers based on the Autism Attitude Scale for teachers?

Method

The Autism Attitude Scale for Teachers (AASST) was used to measure teachers' perceptions of students with ASD and investigate the perceptions of both general and special education teachers in OCEM's in Turkey. All participants completed the same survey anonymously across nineteen different locations. Participants' survey responses were analyzed at three levels using descriptive statistics and ANOVAs to determine similarities and differences between general and special education teachers.

Setting and Participants

This study took place in 19 different OCEM's across 10 different cities in Turkey. At the time of this study, there were approximately 70 OCEMs in operation. All of the OCEMs provided educational services to children with ASD ranging in age from 3 to 15 years. One hundred thirty five teachers consented to participate in this study. Due to incompleteness or incorrect markings, 18 surveys were excluded from the analysis and include 53 general educators and 64 special educators. Demographics of respondents including the number of teachers who previously had a student with Autism in their classes are presented in Table 1.

Table 1
Demographics of Respondents

Demographics	General Educators	Special Educators
Female	37	44
Male	16	20
Mean Age	32.16	28.25
Previously had a student with	9	46

Autism in class

Measures

Teacher Survey. The AAST is a well-established and widely used survey by educational researchers. The AAST scale was developed in order to determine teachers' beliefs about students with autism and their involvement in public schools (Olley, DeVellis, DeVellis, Wall, & Long, 1981). The AAST has two parts and each part contains seven questions for a total of 14 questions including positively and negatively worded questions. According to the authors, this design prevents respondents from indicating the same number on the Likert scale for every question (Olley et. al., 1981). The highest score possible is 70 and a higher score indicates more positive attitudes about students with ASD.

The AAST survey was translated to Turkish by the lead researcher. In addition, the researchers developed a questionnaire for gathering information specifically related to issues in Turkey from participants who completed the AAST form.

Open-Ended Questions. Two open-ended questions asked participants to give advice to general education teachers who work in public schools. They asked to provide their opinions on the importance of OCEMs in the field of special education in Turkey.

Procedures

After contacting and explaining the purpose of this research to the principals at each OCEM a date was scheduled for administration of the survey. On the scheduled date the lead researcher, returned to the OCEM. The researcher distributed both forms to teachers during a regularly-scheduled meeting. After explaining the forms and the purpose of the study, the researcher asked participants to begin completing the forms. The forms were then collected. Teachers were not asked to identify themselves on the survey to maintain confidentiality and anonymity.

The researcher then scored all completed surveys following the scoring guides described by Olley et. al. (1981). Reliability was completed by a trained research assistant. Reliability check was completed on 100% of both surveys and scoring reliability was demonstrated at 100%.

Results

To determine if there were differences between general education and special education teacher data was analyzed at three levels: (1) overall AAST survey scores were examined, (2) scores by question was compared, and (3) responses to open-ended questions were analyzed to determine differences by question.

General education and special education teachers provided different responses on the AAST, which led to a statistically significant difference between the two groups. Special education teachers generally exhibited higher mean scores than general education teachers did on the 14 questions of the AAST.

General education teachers' responses ($n=53$) to the AAST revealed that the teachers generally had positive perceptions ($M=40.91$, $SD=.516$) of students with autism. However, special education teachers' responses ($n=64$) to the AAST ($M=50.13$, $SD=.426$) showed that the special education teachers were more receptive to students with autism enrolled in OCEMs compared to general education teachers. Special education teachers had higher mean scores on the 14 questions of the AAST than general educators had indicated, as shown in Table 2.

Table 2
Overall Response Data on AAST

Teacher Group	N	M	SD
General Education Teachers	53	40.91	.516
Special Education Teachers	64	50.13	.426

The means and standard deviations for each teacher group per question were calculated. The closer the mean score to 5.00, the more positive the teacher group was in answering the specific question. Table 3 displays each question on the

AAST and the means and standard deviations for each teacher group. The t-score and p-value for each survey question was also included in the Table 3 after calculating using a two-sample t-test. There was significant difference between teacher groups on 10 out of 14 questions which is 71.42% of the questions on the AAST. The overall mean scores for the two groups may suggest possible tendencies toward positive perceptions by teachers.

Table 3
Teachers' Scores by Survey Questions

AAST Questions	Special Ed. M (SD)	General Ed. M (SD)	T	p
1. Only teachers with extensive special education can help a child with autism	1.88 (1.00)	2.74 (1.22)	-4.18	<0.001*
1. Mealtime behaviors of children with autism are disruptive and negatively influence the behavior of children around them.	2.91 (1.16)	2.70 (1.04)	1.006	0.31
2. Schools with both normal and autistic children enhance the learning experience of the normal children	3.64 (1.04)	2.66 (1.10)	4.91	<0.001*
3. Normal children and children with autism should be taught in separate schools.	3.59 (1.12)	2.15 (1.18)	6.75	<0.001*
4. Children with autism can learn from a good teacher.	4.36 (0.76)	3.98 (0.88)	2.47	0.015*
5. Regular schools are too advanced for children with autism.	3.72 (1.33)	2.66 (1.45)	4.09	<0.001*
6. I would not want the children in my class to have to put up with classmates who have autism.	3.53 (1.30)	2.32 (1.26)	5.05	<0.001*
7. Teachers not specifically trained in special education should not be expected to deal with a child with autism.	2.50 (1.40)	2.74 (1.36)	-0.91	0.36
8. Children with autism are too impaired to benefit from the activities of a normal school.	3.48 (1.12)	2.81 (1.14)	3.19	0.002*
9. Schools with both normal and autistic children enhance the learning experience of the autistic children.	4.09 (1.00)	3.04 (1.12)	5.36	<0.001*
10. If I had a choice, I would teach in a school where there were no children with autism.	4.05 (1.07)	3.06 (1.27)	4.55	<0.001*
11. A good teacher can do a lot to help a child with autism	4.34 (0.91)	3.98 (0.90)	2.14	0.034*
12. Children with autism cannot socialize well enough to profit from contact with normal children	3.75 (1.02)	2.98 (1.16)	3.79	<0.001*
13. 14. It is unfair to ask teacher to accept children with autism at their school.	4.28 (0.91)	3.09 (1.31)	5.72	<0.001*

*indicates significant difference at .05 level

The mean differences between the two teacher groups were analyzed, and the researcher used ANOVA analysis

to compare general education teachers' and special education teachers' reported mean scores on the 14 questions of the AAST. Table 4 shows the descriptive statistics associated with the ANOVA results. The sample size, means, standard deviation, standard error, confidence interval, minimum score, and maximum score of general education and special education teachers on the 14 questions of the AAST are displayed in Table 4.

Table 4
Descriptive Statistics Associated with ANOVA Results

95 % CI

Teacher Group	N	M	SD	SE	LL	UL	Min
Special Ed. Teachers	64	3.58	.426	.05	3.47	3.68	2.50
General Ed. Teachers	53	2.92	.516	.07	2.77	3.06	1.86

In order to compare the means of the general education teachers and special education teachers on the 14 questions of the AAST, an ANOVA analysis using an alpha coefficient of .05 was completed. ANOVA determines whether a statistically significant difference exists between the means of two or more groups. Table 5 shows the ANOVA results when comparing the means of special and general education teachers on the 14 questions of the AAST.

The overall ANOVA results indicate that there is a statistically significant difference ($p\text{-value} = <.001$) between the mean scores of the general education and special education teachers. This suggests that the groups differed more than would be expected. According to the comparison of the means of the groups, special education teachers were more receptive to students with autism enrolled in OCEMs than were general education teachers.

Table 5
ANOVA Results on the AAST

	SS	df	MS	F	p-value
Between groups	12.572	1	12.572	57.138	<.001
Within groups	25.304	115	.220		
Total	37.876	116			

During the research, some of the participants asked general clarification questions, but the most frequently asked question related to the "good teacher" term used in questions 5 and 12. The researcher noted the difference about the perceptions of the "good teacher" term among teachers. In addition, there is a major difference in the results of standard deviations between special education and general education teachers on AAST question 14. To further clarify and explore these differences, cross tabulation and chi-square analysis were completed for these three questions (5, 12 and 14) to determine the differences between special education and general education teachers' responses. The cross tabulations state the observed and expected frequencies between teacher groups. Chi-square results indicated whether there was a difference between them for the observed frequencies of responses.

All cross tabulation results were reported with the actual response given on the survey, not taking into account reversed scoring for the 14th question to prevent confusion. However, in Chi-square analysis, results used reversed scoring for the 14th question, because it was negatively worded question. For instance, if the participant scored 4 on the 14th question, the response was recorded as a 2. The Likert scale used in the scoring of the AAST was as follows; 5= strongly agree, 4= agree, 3= uncertain, 2= disagree, 1= strongly disagree.

Question 5 on the AAST stated, "Children with Autism can learn from a good teacher." The scores for question 5 were analyzed based on observed count and expected count for each teacher group. There was a difference between the special education teachers ($n=30$) and general education teachers ($n=15$) who scored strongly disagree (5) on question 5. There is no large difference in standard deviations between special education (0.76) and general education teachers (0.88), the chi-square statistic (0.058) indicated there was not statistically significant difference between teacher groups. However, there is insufficient evidence to support this as 50% of the cells have expected frequencies less than 5, which means one of

the assumptions of the chi-square was violated and the results may not be meaningful. Table 6 shows the chi-square tests for question 5 on the AAST.

Table 6
Chi-Square Tests for Question 5

	Value	Df	Asymp. Sig. (2-sided)
Pearson chi-square	9.120 ^a	4	.058
Likelihood ratio	9.505	4	.050
Linear-by-linear association	5.877	1	.015
N of valid cases	117		

^a Five cells (50.0%) have expected counts less than 5. The minimum expected count is .91.

Question 12 on the AAST stated, "A good teacher can do a lot to help a child with Autism." There is also no large difference on the standard deviations between special education (0.91) and general education teachers (0.90). The reported answers on the AAST were explored further using cross tabulation and chi-square statistics. As in question 5, the results for question 12 state a large observed difference between the frequency of responses of special education teachers (n=34) and general education teachers (n=15) who entered strongly agree (5). Table 7 shows the chi-square statistics for question 12 on the AAST. According to the statistics reported, a statistical significance exists between the answers by special education and general education teachers as $p(0.024) < \alpha(0.05)$. However, there is insufficient evidence to support this as 60% of the cells have expected frequencies less than 5, which means one of the assumptions of chi-square was violated and the results may not be meaningful.

Table 7
Chi-Square Tests for Question 12

	Value	Df	Asymp. Sig. (2-sided)
Pearson chi-square	11.252 ^a	4	.024
Likelihood ratio	11.910	4	.018
Linear-by-linear association	4.456	1	.035
N of valid cases	117		

^a Six cells (60.0%) have expected counts less than 5. The minimum expected count is .91.

Question 14 on the AAST stated, "It is unfair to ask teachers to accept children with Autism at their school." This question was the last question to be analyzed using cross tabulation and chi-square statistics. Question 14 was chosen for the difference in standard deviations between special education (0.91) and general education teachers (1.31) was greater than for other questions. In the strongly disagree category (1), 34 special education teachers responded while 9 special education teachers responded. The chi-square statistics for question 14 show that there was a likely difference between the responses of special education and general education teachers (Table 8). There was statistically significant difference between the response of special education and general education teachers on question 14. The evidence of this is $p(.000) < \alpha(0.05)$. Moreover, there is an evidence to support this as 20% of the cells have expected frequencies less than 5, which means one of the assumptions of chi-square was violated and the results may not be meaningful.

Table 8
Chi-Square Tests for Question 14

	Value	Df	Asymp. Sig. (2-sided)
Pearson chi-square	26.302 ^a	4	.000

Likelihood ratio	30.213	4	.000
Linear-by-linear association	25.705	1	.000
N of valid cases	117		

*Two cells (20.0%) have expected counts less than 5. The minimum expected count is 3.62.

In open-ended questions, both groups offered suggestions to other teachers who work with students with autism; they also provide their opinions on the importance of OCEMs. Generally speaking, the teachers focused on the importance of collaboration. Collaboration among professionals and cooperative work between all members during educational processes are necessary within the field of special education. The respondents wrote responses indicating the advices they would need to successfully include students with Autism in their classroom. The top five suggestions identified by educators are listed in the Table 9 in order of frequency of the responses.

Table 9

Top 5 Suggestions to Other Teachers

Frequency of Response	Support
22	Prepare IEP for each student
21	Information and reading materials
19	Being patient
13	Special education teachers help
9	Training specifically about Autism

Discussion

General education and special education teachers working at Educational Centers for Children with Autism (OCEMs) reported positive, neutral, and negative perceptions about students with autism in their classrooms and schools. Their perceptions are significant for students with autism as well as the overall atmosphere of OCEMs. The results of this study indicate that general education and special education teachers are positively receptive to students with autism; however, a significant differences exists between general education teachers' and special education teachers' perceptions of students with ASD. Special education teachers are more receptive than general education teachers to the students with autism in the OCEMs.

It was expected that special education teachers would have more positive perceptions because of the differences between their educational background, training, and experiences. For locations providing services to students with ASD, it is imperative that all teachers, both general and special education, regardless of their education background, training, and experiences have positive perceptions of their students. Our results indicate this is not necessarily true and highlights potentially important implications for teacher certification programs and continuing education initiatives at OCEMs.

Specialized Training and Experiences

Special education teachers in Turkey, especially those who graduated from special education programs received more specialized training about the learning characteristics, instructional needs, behavior challenges, and evidenced based practices for students with ASD during their education program. This more specialized and in-depth training likely influences teachers' perceptions in a positive fashion because they have the knowledge, background, and specialized training to feel confident and prepared to teach students with ASD.

Providing specialized training to pre-service teachers and practicing teachers warrants more attention. Specifically, education training programs should focus on providing teachers more information related to students with ASD in three areas: (a) learning characteristics, (b) behavioral characteristics, and (c) evidence-based practices.

Based on our experiences, we recognize that what works for one student may not work for another, and students with ASD have their own individual personalities that we need to take into consideration (Marks et al., 2003). However, there are learning characteristics of student with ASD that teachers should know. Researchers identified that some of the important characteristics are: a) deficits in paying attention to relevant cues and information, b) receptive and expressive language impairments, c) deficits in abstract reasoning, d) impairment in social cognition including deficits in the capacity to share attention and emotion with others, and understand the feelings of others, e) inability to plan, organize and solve problems (Minschew & Goldstein, 1998; Minschew, Goldstein, Taylor & Siegel, 1994). The more information and expertise that teachers have about the specific characteristics of students with ASD, the more likely teachers will have the necessary skills to more effectively work with students with ASD and increase their students' positive outcomes.

Besides learning characteristics, there are also behavioral characteristics of students with ASD. Individuals with ASD may have challenging behaviors, such as aggression, self-injurious behaviors, and/or tantrums. Given that most individuals with ASD have difficulties in effectively communication, it is not surprising that they rely on their behavior to convey specific messages (Alberta Learning, 2003). Teacher should understand that students with ASD have their unique behavioral characteristics. Teachers need to look below the surface to identify the message a student is trying to convey (Alberta Learning, 2003). Awareness and familiarity with communication strategies focused specifically to students with ASD will increase the appropriateness and efficacy of strategies to develop communication skills in students ASD.

Another essential aspect for teachers to develop expertise is with the evidence-based practices for students with ASD highlighted in the literature base. There are many evidence-based practices with demonstrated effectiveness through high quality scientific research such as functional behavior assessment (Blair, Lee, Cho, & Dunlap, 2011; Kodak, Fisher, Clements, Paden, & Dickes, 2011), functional communication training (Gibson, Pennington, Stenhoff, & Hopper, 2010; Kuhn, Hardesty, & Sweeney, 2009), prompting (Ingvarsson, & Hollobaugh, 2011; Ostry, C., & Wolfe, P. S., 2011; Thomas, Lafasakis, & Sturmey, 2010), video modeling (e.g., Plavnick, MacFarland, & Ferreri, 2015; Yakubova, Hughes, & Hornberger, 2015), visual support (Angell, Nicholson, Watts, & Blum, 2011; Cihak, 2011; Stringfield, Luscre, & Gast, 2011). Bringing evidence-based practices to classrooms increases teachers effectiveness and will increase the likelihood of more positive outcomes for students with ASD. Although translating research into classroom practices is a major challenge, teachers' understanding and familiarity with these research based practices will better facilitate the implementation of these practices into classroom. The movement from science to practice is a continuous challenge for implementers/teachers and also an important step for the field of education (Wong et al., 2014) continued and focused professional development is necessary to address this ongoing challenge.

Implications for Practice

Both teacher groups and other members of the special education field in Turkey may benefit from the results of this research by broadening their knowledge and ultimately improving the services for students with ASD. We learned both general and special education teachers in general have positive perceptions about students with ASD; although, special education teachers, as expected, tended to be more receptive. It is important for future and current teachers to receive additional specialized training opportunities focused on practices to better support students with ASD in their classrooms. Specialized training on learning characteristics, behavioral challenges, and evidenced practices for students with exceptional needs is advantageous for general education teachers by providing the necessary background, knowledge and improved understating of educational needs of students with ASD.

In addition to improving teachers' knowledge and perceptions of students with ASD, it is important to help ensure collaboration between special and general education teachers. Collaboration between special and general education teachers has at least three benefits for students with ASD. First, increased collaboration facilitates the blending of special education teachers' knowledge and content knowledge of general education teachers. Second, collaboration can bring students closer to achieving their short and long term academic goals. Besides the impression on blending knowledge and helping students to perform better in academic tasks, collaboration also increase the quality of instruction by increasing productivity and cooperative working over time.

One obvious barrier to increased collaboration and co-teaching classrooms is the limited number of special education teachers at most OCEMs. The smaller number of special education teachers makes it very difficult to create co-teaching classrooms. Improving collaboration to the maximum extent possible given the limitations is highly recommended to better facilitate the sharing of knowledge, resolution of challenges, and planning as a team.

Limitations

There are at least three limitations to this analysis that are important to consider in combination of the results. First, the AAST was developed in 1981, when autism was not a well-known category of special education. Second, the definition of Autism Spectrum Disorder may vary and teachers' interpretations often differ. The difference in interpretation may have influenced the way general and special education teachers answered the survey and open ended questions. Third, the AAST survey was translated from English to Turkish and may have impacted our results. The difference between the effect of English and Turkish languages may cause misunderstandings in the wording of the questions. One of the most important implications for future studies is to develop a new survey with more recent and Turkish specific educational terminology. Despite these limitations, the results of this study have important and useful implications for the Turkish Educational system.

Conclusion

This study has important implications for educational practices in OCEMs and public schools. There are many inclusion classes for students with ASD in public and private schools as well as OCEMs. These inclusion classroom settings are increasing each year as more and more students are identified with ASD and therefore, teachers in these inclusive classrooms must exhibit positive perceptions about students with ASD. While educational programs and continuing educational opportunities focused on students with ASD are becoming more widespread, the hope is that special and general education teachers' perceptions will continue to improve not just in OCEMs, but every part education.

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THE EFFECTS OF A MUSIC AND MOVEMENT PROGRAM ON GAIT, BALANCE AND PSYCHOLOGICAL PARAMETRES OF ADULTS WITH CEREBRAL PALSY

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The purpose of this investigation was to examine the effect of a music and movement intervention program on gait, balance and psychological parameters of 10 male athletes in throwing events (ball and disc) with Cerebral Palsy (CP) (spastic hemiplegia), all coming from a sport club in Thessaloniki. Participants were divided randomly by methodical selection into two groups, the Intervention Group (IG) (n=5) and the Control Group (CG) (n=5). The IG participated in a music and movement program of 16 sessions (8 weeks, with a frequency of 2 times/week for 50 minutes per session), which designed on the base of the theory of Rhythmic Auditory Stimulation (RAS) method. Audit results showed differences on gait, balance and psychological parameters were statistically significant ($p \leq .05$) prior and after the intervention program for the IG, but not for the CG ($p > .05$). In conclusion, the application of a music and movement program designed on the base of the theory of RAS method had a positive and significant influence in motor and psychological skills.

Introduction

Cerebral palsy (CP) is a non-progressive disorder occurring in early brain development that results in abnormal movement and posture (Rosenbaum, et al., 2007). The main features of participants with CP are impaired movement and posture that involves gait and upper body coordination as well as problems with balance and psychological problems such as negative emotional image and low self-esteem (Fairhurst, 2012; Graham & Selber, 2003; Krigger, 2006; Murphy & Such-Neibar, 2003; Reddihough & Collins, 2003; Rapp & Torres, 2000; Sandström, 2007; Steenbergen & Utley, 2005).

Spastic Hemiplegia (SH) is a type of CP that affects partially or totally only one half molecule of the body and common problems for those with SH include motor difficulties, such as small stride length, asymmetric walking, slowness, and reduced ability to coordinate movements, which affects the posture and walking as well as symmetrical proper use of the trunk and upper-extremity (Boyd, et al., 2010; Kułak & Sobaniec, 2005; Motta, Antonello, & Stignani, 2011; Staudt et al., 2004; van der Slot et al., 2007; Willis, Morello, Davie, Rice, & Bennett, 2002).

Studies showed that people with CP due to difficulties in physical and mental function, social support and other features have difficulty with rhythmic perception, rhythmic performance of movement and responsiveness rhythmic auditory stimuli (Kwak & Kim, 2013; McRorie & Cooper, 2004). The difficulty of understanding rhythmic sounds restricts the efficiency of movement and creates psychological distress, with consistent tendency for isolation and negative emotions towards familiar environment and self (Manuel, Naughton, Balkrishnan, Paterson-Smith, & Koman, 2003; Shields, Murdoch, Loy, Dodd, & Taylor, 2006).

In intervention studies involving persons with mobility limitation it was observed that the use of music and rhythm programs activated the motor and auditory system and consistently, improved balance, walking and mental health conditions (Jeong & Kim, 2007; Kim et al., 2011). Moreover, it seemed to be of significant benefit as regards to coordination of movements and at the same time, improvement of gross and fine motor skills, enhancement of tactile sensation and improvement of emotional and social development, especially in the case individuals with CP participated in music and motor activities basically designed on the theory of rhythmic auditory stimulation (Rhythmic Auditory Stimulation-RAS) (Chung, 2002; Farrell, Bagley, Davids, Foti, & Moore, 1999; Jiang, 2013; Kim et al., 2011; Kim, Kwak, Park, & Cho, 2012; Kwak, 2007; Kwak & Kim, 2013; Thaut, Hurt, Dragon, & McIntosh, 1998; Varsamis, Staikopoulos, & Kartasidou, 2012).

Rhythmic Auditory Stimulation (RAS) is a neurological technique using the physiological effects of auditory rhythm on the motor system to improve the control of movement in rehabilitation and therapy (Thaut, 2005, p. 139). Rhythm is an essential element of motor movement including motor control and output (Molinari, Leggio, De Martin, Cerasa, & Thaut, 2003), since rhythmic auditory cuing facilitates movement by providing a mechanism for planning movements (Thaut, et al., 2007).

It has been reported that intervention programs based on RAS method may improve upper and lower extremity function and gait in terms of velocity, stride length and rhythm (Abbud, Li, & De Mont, 2009; Amatachaya, Keawsutthi, Amatachaya, & Manimmanakorn, 2009; Kim, et al., 2007; Richards, Senesac, Davis, Woodbury, & Nadeau, 2008; Thaut, et al., 2007), as well as psychological stress parameters such as depression, anger, wellness and quality of life to people with various kinds of neurological diseases ([Hayashi](#), [Nagaoka](#), & [Mizuno](#), 2006; Jeong & Kim, 2007; Pacchetti, et al., 2000).

Previous researchers have incorporated music components into rehabilitation exercise programs as a means of motivating stroke patients and adding a “fun” component to the repetitive and sometimes painful rehabilitation exercise routines (Kim & Koh, 2005; Purdie, Hamilton, & Baldwin, 1997). Another study concluded that the soothing quality of music invites people to initiate and maintain motivation to exercise for a longer period (Olderog-Millard & Smith, 1989). Additionally, it has been reported in a recent study that an 8 week RAS music and movement intervention program can improve physiological and psychological factors in patients who have experienced a stroke (Jeong & Kim, 2007).

In this regard, it was hypothesized by the authors that a music and movement intervention program based on RAS method, would maximize the therapeutic benefit of combining music and physical exercise. Although it was considered very difficult to persuade the participants to follow other than their typical training program, the combination of music and exercise was assumed to keep athlete’s interest throughout the whole duration of the intervention program. Therefore, the purpose of the present study was to evaluate the effectiveness of an 8 week training intervention program, which based on RAS method, on gait, balance and psychological parameters of 10 male athletes in throwing events with CP.

Method

Participants

The sample consisted of 10 male athletes in throwing events (ball and disc) with Cerebral Palsy (CP), all coming from a sport club in Thessaloniki. All individuals had ambulatory cerebral palsy (spastic right and left hemiplegia) and volunteered to participate in the study.

For the classification at the Gross Motor Function level (GMFCS), the participants were classified according to the GMFCS with Borderline Intelligence Quotient (IQ= 68-83) into two Levels I and II. The IQ level was derived from the official developmental files assigned by the Greek State, using the Wechsler Adult Intelligence Scale (WAIS) in previous years.

Next, participants were divided randomly by methodical selection into two groups of 5 individuals. The first intervention group (IG) (mean age 35.20 ± 13.01 years) followed an 8 week music and movement intervention program designed according to the theory of Rhythmic Auditory Stimulation (RAS) at a frequency of twice per week for 50 minutes each session. The program included gait and balance with music exercises. The Control group (CG) individuals (mean age 38.80 ± 12.28 years) followed only their regular training program in ball and disc. All participants provided a written informed consent form prior participation was approved by the Institutional Review Board, to ensure the rights of all participants.

Test procedures and instruments

First, all the anthropometric data were collected for all participants. Next, all participants answered the Profile Of Mood States (POMS) and Self-Esteem (RSE) questionnaires. Finally, procedures of measurement for gait and balance took place, using two relative tests and a balance platform. All participants of both groups, were tested prior and after the application of the RAS intervention program.

Gait tests

Two tests were used for the purposes of this study. The Timed Up and Go test (TUG) used to assess the mobility, which measures the gait time (sec) (Podsiadlo & Richardson, 1991) derived from the scores of five efforts and the 10 Meter Walk Test (10 MWT), which evaluates the normal and fast gait speed (m/s) (Bohannon, 1997) measuring the scores of the first three efforts.

Balance tests

The Berg Balance Scale (or BBS) is a widely used clinical test of a person's static and dynamic balance abilities (Blum & Korner-Bitensky, 2008), named after Katherine Berg, one of the developers (Berg, Wood-Dauphinée, Williams, & Gayton, 1989). For functional balance tests, the BBS is generally considered to be the gold standard (Langley & Mackintosh, 2007). The test takes 15–20 minutes and comprises a set of 14 simple balance related tasks, ranging from standing up from a sitting position, to standing on one foot. The degree of success in achieving each task is given a score of zero (unable) to four (independent), and the final measure is the sum of all of the scores (Berg, Wood-Dauphinée, Williams, & Maki, 1992).

For static and dynamic balance control an EPS pressure platform (Loran Engineering S.r.l., Bologna – Italy) was used. The system uses 2304 force sensing resistors in an active area of 70x50 cm to record plantar pressure at 25Hz. All participants performed a double-leg stance (DLS) and they were instructed to stand erect, as motionless as possible, on a normal comfortable posture, with opened eyes looking straight ahead at a cross marked at approximately eye level on a black board three meters away and barefoot with feet shoulder width apart on the platform with the arms by their sides. Each participant was requested to keep a quiet stance posture for 30 seconds. The assessment included four measurements, and a five-minute rest was provided between successive trials. The best trial was further analyzed (Ageberg, Roberts, Holmström, & Fridén, 2003). Ample time was provided for familiarization. A computer program (Footchecker 3.2, Engineering S.r.l., Bologna- Italy) was used to compute peak-to-peak amplitude (CoPmax) and standard deviation of the COP from the mean value of COP in antero-posterior (SDy) and medio-lateral (SDx) axis in mm, often defined as sway amplitude.

The assessment of dynamic balance, was measured by recording the push-time to right leg (ms), to left leg (ms) and the mean value push-time both right and left leg. The participant following the examiners signal covered a distance of two meters in passing of the foot pressures analysis, with hands free beside the thighs and legs in dimension equal to the opening of the basin. The effort was performed four times and the examiner obtained the score of efforts, both on the right and left leg, and also the value of both legs.

Psychological parameters

Assessment of psychological parameters included the use of the Self Esteem Scale (RSE) questionnaire (Rosenberg, 1965), that consists of ten-items on a four-point scale with the final high or low scoring of the test determining the relevant self-esteem percentage. Furthermore, the Profile of Mood States (POMS) consisting of 65 items on a four-point scale from 0 («any») up to 4 («very»), was used to evaluate the factors of [tension](#), [depression](#), [anger](#), [fatigue](#), activity, confusion and total profile score (McNair, Lorr, & Droppleman, 1971; Shacham, 1983; Zervas, Ekkekakis, Psychoundaki, & Kakkos, 1993).

An electronic metronome (KORG INC, 2002) with tempo (70-90 beat per minute) was used for the recording of music time (tempo). Listening of music tracks (songs) included the use of a CD with several tracks in 4/4 music meter and a sound CD machine.

Intervention program

The music and movement intervention program had a duration of 8 weeks with frequency twice per week for 50 minutes per session.

At the beginning, the participants were encouraged to sing to improve mood at the beginning of each session.

The warm-up period included stretching exercises from the upper and particularly lower body accompanied with music tracks of 4/4 music meter and music time (tempo) of 70 beat per minute.

During the main par, participants were walking to the rhythm, when we changed the original music track (song) with other, but with the same musical measure 4/4 and other music time (tempo) (90 beat per minute) while the same time done various movements with their body parts. The aim was to facilitate the integration of rhythm in movement. Then the participant's continued to move with pace in the space, with layout in a straight line, a distance of 10 m with forward steps, back, right and left, also called in intermediate, to remain standing on one leg with change for some seconds. This choice of exercises aimed the integration of rhythm in movement as well as improve balance, so in non-affected as to affected side, even if it is difficult.

Cool down included relaxation exercises, breathing and attention when we changing the original music track (song) with other, but with the same musical measure 4/4 and other music time (tempo) (70 beat per minute) so that to calm the body and return all bodily functions to early levels. In particular, the breathing exercises are helping to improve rhythm breathing, in order to facilitate the integration of rhythm in movement.

At the end, the participants were encouraged to sing to improve mood and motivation for active participation in program at the next time at the ending of each session.

Results

Gait tests

Timed Up and Go Test (TUG-Test)

ANOVA repeated measurement test revealed a statistically significant main effect of time or group in gait time (sec) ($F_{1,8}=13.60$, $p=.006$, $\eta^2=.630$). Statistically significant group x time interaction difference was also noticed in gait time (sec) ($F_{1,8}=6.14$, $p=.038$, $\eta^2=.434$).

The post hoc paired t-test revealed statistically significant differences in the IG between the two measurements regarding gait time (sec) ($t=3.95$, $df=4$, $p=.017$). Means and SD values of gait tests pre and post training for Intervention and Control group are represented in Table 1.

10 Meter Walk Test (10 MWT)

ANOVA repeated measurement test revealed a statistically significant main effect of time or group in normal gait speed (m/s) ($F_{1,8}=8.53$, $p=.019$, $\eta^2=.516$), but not in fast gait speed (m/s) ($F_{1,8}=4.84$, $p=.059$, $\eta^2=.377$). Additionally, statistically significant group x time interaction difference was also noticed in normal gait speed (m/s) ($F_{1,8}=17.71$, $p=.003$, $\eta^2=.689$) and fast gait speed (m/s) ($F_{1,8}=31.17$, $p=.001$, $\eta^2=.796$).

The post hoc paired t-test revealed statistically significant differences in IG between the two measurements regarding normal gait speed (m/s) ($t=-5.95$, $df=4$, $p=.004$) and fast gait speed (m/s) ($t=-5.53$, $df=4$, $p=.005$).

The means and SD values of gait tests pre and post training for IG and CG are represented in Table 1.

*Balance tasks**Berg Balance Scale (BBS)*

ANOVA repeated measurement test revealed a statistically significant main effect of time or group in Berg Balance score ($F_{1,8}=18.01$, $p=.003$, $\eta^2=.692$). Additionally, statistically significant group x time interaction difference was also noticed in Berg Balance score ($F_{1,8}=15.013$, $p=.005$, $\eta^2=.652$). The post hoc paired t-test revealed statistically significant differences in intervention group between the two measurements regarding Berg Balance score ($t=-8.63$, $df=4$, $p=.001$).

Digital Footchecker

The ANOVA repeated measurement test revealed a statistically significant main effect of time or group in CoPmax ($F_{1,8}=23.37$, $p=.001$, $\eta^2=.745$) and CoPsd ($F_{1,8}=11.81$, $p=.009$, $\eta^2=.596$), in balance task (double leg stance) in M/L direction, and CoPmax ($F_{1,8}=17.80$, $p=.003$, $\eta^2=.690$), and CoPsd ($F_{1,8}=51.164$, $p=.000$, $\eta^2=.865$) in A/P direction, respectively.

Additionally, statistically significant group x time interaction difference was also noticed CoPmax [$(F_{1,8}=7.425$, $p=.026$, $\eta^2=.481)$, ($F_{1,8}=15.626$, $p=.004$, $\eta^2=.661$)], and CoPsd [$(F_{1,8}=13.963$, $p=.006$, $\eta^2=.636)$, ($F_{1,8}=27.251$, $p=.001$, $\eta^2=.773$)] in M/L and A/P direction respectively. However, there was not significant main effect or interaction in time right foot (ms) [$(F_{1,8}=1.847$, $p=.211$, $\eta^2=.188)$, ($F_{1,8}=4.048$, $p=.079$, $\eta^2=.336$)], in time left foot (ms) [$(F_{1,8}=4.244$, $p=.073$, $\eta^2=.347)$, ($F_{1,8}=.905$, $p=.369$, $\eta^2=.102$)] and time right and left foot (ms) [$(F_{1,8}=3.538$, $p=.097$, $\eta^2=.307)$, ($F_{1,8}=2.267$, $p=.171$, $\eta^2=.221$)], respectively.

The post hoc paired t-test revealed statistically significant differences in intervention group between the two measurements regarding static and dynamic balance score ($t=-8.63$, $df=4$, $p=.001$), CoPmax ($t=4.53$, $df=4$, $p=.011$), CoPsd ($t=6.98$, $df=4$, $p=.002$), in M/L direction and CoPmax ($t=4.83$, $df=4$, $p=.008$) and CoPsd ($t=6.82$, $df=4$, $p=.002$), in A/P direction.

The means and SD values of balance (static and dynamic) tasks PRE and POST training for Intervention and Control group are represented in Table 1.

*Psychological tests**Self-Esteem Scale (RSE)*

The ANOVA repeated measurement test revealed a statistically significant main effect of time or group in self esteem (score) ($F_{1,8}=8.00$, $p=.022$, $\eta^2=.500$).

Additionally, statistically significant group x time interaction difference was also noticed in self esteem (score) ($F_{1,8}=8.00$, $p=.022$, $\eta^2=.500$).

The post hoc paired t-test revealed statistically significant differences in intervention group between the two measurements regarding self esteem (score) ($t=-9.49$, $df=4$, $p=.001$).

Profile Of Mood States (POMS)

The ANOVA repeated measurement test revealed a statistically significant main effect of time or group in sprightfulness (score) ($F_{1,8}=41.26$, $p=.000$, $\eta^2=.838$), total score ($F_{1,8}=5.82$, $p=.042$, $\eta^2=.421$), but not in intention (score) ($F_{1,8}=1.733$, $p=.224$, $\eta^2=.178$), depression (score) ($F_{1,8}=2.84$, $p=.131$, $\eta^2=.262$), aggressiveness (score) ($F_{1,8}=3.65$, $p=.092$, $\eta^2=.314$), fatigue (score) ($F_{1,8}=2.86$, $p=.129$, $\eta^2=.263$) and confusion (score) ($F_{1,8}=4.744$, $p=.061$, $\eta^2=.372$).

Additionally, statistically significant group x time interaction difference was also noticed in intention (score) ($F_{1,8}=9.86$, $p=.014$, $\eta^2=.552$), depression (score) ($F_{1,8}=7.879$, $p=.023$, $\eta^2=.496$), aggressiveness (score) ($F_{1,8}=11.502$, $p=.009$, $\eta^2=.590$), confusion (score) ($F_{1,8}=5.502$, $p=.047$, $\eta^2=.407$), sprightfulness (score) ($F_{1,8}=41.263$, $p=.000$, $\eta^2=.838$), total score ($F_{1,8}=9.845$, $p=.014$, $\eta^2=.552$), but not in fatigue (score) ($F_{1,8}=5.26$, $p=.489$, $\eta^2=.062$).

The post hoc paired t-test revealed statistically significant differences in intervention group between the two measurements regarding intention (score) ($t=2.93$, $df=4$, $p=.043$), aggressiveness (score) ($t=2.78$, $df=4$, $p=.050$), sprightfulness (score) ($t=-7.48$, $df=4$, $p=.002$), total score ($t=2.86$, $df=4$, $p=.046$), but not in depression (score) ($t=2.41$, $df=4$, $p=.074$), fatigue (score) ($t=1.33$, $df=4$, $p=.255$) and confusion (score) ($t=2.45$, $df=4$, $p=.070$).

The means and SD values of psychological tests PRE and POST training for Intervention and Control group are represented in Table 1.

The control of normality distribution with test Kolmogorov-Smirnov Z to all data of Intervention and Control group PRE and POST training showed that the data values followed a normal distribution.

Table 1. The measurements of gait, balance and psychological parameters; PRE and POST training for intervention and control group

	Intervention Group (n=5)		Control Group (n=5)	
	Pre	Post	Pre	Post
Gait				
Timed Up and Go Test (TUG-Test)				
Gait time (sec)	10.21±1.93	7.52±1.46*	10.32±2.37	9.80±1.40
10 Meter Walk Test (10 MWT)				
Normal gait speed (m/s)	.59±.13	.73±.10*	.60±.11	.57±.12
Fast gait speed (m/s)	.86±.17	1.05±.16*	.85±.24	.77±.18
Balance				
Berg Balance Scale (BBS)				
Berg Balance (score)	41.00±4.12	49.80±5.67*	41.60±4.45	42.00±4.30
Digital Footchecker				
CoPmax-M/L (mm)	11.67±4.62	6.87±3.40*	14.27±4.26	12.93±4.31
CoPsd-M/L (mm)	3.63±1.31	2.15±0.95*	4.36±1.67	4.42±1.88
CoPmax-A/P (mm)	19.81±5.28	14.20±5.14*	21.65±4.32	21.47±4.15
CoPsd-A/P (mm)	6.29±1.42	3.87±1.76*	7.30±1.97	6.93±1.88
Time Right Foot (ms)	1545.2±468.2	1243.6±331.5*	1673.4±535.9	1731.8±317.1
Time Left Foot (ms)	1504.4±601.7	1145.4±382.0*	1806.0±651.9	1673.8±261.3
Time Right and Left Foot (ms)	1524.8±517.9	1194.4±342.4*	1739.4±586.3	1702.8±280.2
Psychological parameters				
Self-Esteem Scale (RSE)				
Self Esteem (score)	30.40±4.22	36.40±4.10*	30.40±4.62	30.40±3.85
Profile Of Mood States (POMS)				
Intension (score)	5.80±3.42	1.40±1.67*	7.40±4.88	9.20±5.76
Depression (score)	7.60±6.80	.40±.55	5.40±6.19	7.20±5.72
Aggressiveness (score)	9.60±8.17	1.00±1.73*	6.80±4.97	9.20±6.53
Fatigue (score)	5.00±7.00	1.00±1.00	6.00±8.94	4.40±6.19
Confusion (score)	7.00±5.61	1.60±1.67	6.40±4.51	6.60±3.71
Sprightfulness (score)	16.00±3.39	21.60±2.88*	20.20±2.77	20.20±3.70
Total score	119.00±32.57	83.80±7.82*	111.80±25.06	116.40±25.80

Discussion

This study has demonstrated that an 8 week RAS music and movement intervention program can produce increased the gait, balance and psychological parameters of athletes with CP. Although the measurements of outcome have varied from one previous study to another, the findings of this study are consistent with previous music and movement intervention studies indicating that interventions incorporating the rhythmic elements of music can improve the function of the lower limb on the affected side, decrease the walking variances of the people with CP (Chung, 2002; Farrell, et al., 1999; Jiang, 2013; Kim, et al., 2011; Kim et al., 2012; Kwak, 2007; Kwak & Kim, 2013; Thaut, et al., 1998; Varsamis, et al., 2012). On the other hand, the score of depression, fatigue and confusion of participants has not been statistically significantly increased by previous interventions. In this study, however, whereas the control group showed a reduction in gait, balance and psychological parameters, the experimental group showed a clear pattern of improvement. Although these changes were not statistically significant, the magnitude of the changes may be significant, as discussed below.

The music and movement intervention program, that used in this study was designed to increase the gait, balance and psychological parameters of the joints in the intervention group. To measure the gait, the researchers used the Timed Up and Go test (TUG) (Podsiadlo & Richardson, 1991) and the 10 Meter Walk Test (10 MWT) (Bohannon, 1997). For the balance ability we used the Berg Balance Scale (BBS) (Berg et al., 1992) and the EPS pressure platform (Loran Engineering S.r.l., Bologna – Italy).

The psychosocial benefits of music in a movement intervention program have been well documented (Aldredge, 1994; Kim, 1998). Many studies have reported the benefits of music in terms of enhancing motivation and endurance in movement regimens. This study also demonstrated that the RAS music and movement intervention program has several positive effects on psychological outcomes, as demonstrated by improved mood state and self esteem, that measured with the Self Esteem Scale (RSE) (Rosenberg, 1965) and the Profile of Mood States (POMS) questionnaires (McNair et al., 1971; Shacham, 1983; Zervas et al., 1993).

The RAS music and movement intervention program was effective in improving the physical and psychological state of athletes with CP. A unique and potentially significant contribution of this study to research in this field is related to the use of the RAS theory to explore the theory on which music and movement intervention programs are based. Unlike many of the preceding studies that have concentrated on physical recovery from CP and have used music only as a background to the intervention, this study placed a much greater emphasis on music (dynamic rhythm) in the intervention, with the music being the major intervening variable.

While this study was not designed to discover the precise physiological mechanisms of the intervention, the study may assist future researchers in building a physiologically plausible theory to support the RAS intervention. Dynamic rhythms are known to exert a strong stimulus effect on brain plasticity and the nervous system through the auditory system. The powerful neurological stimulus induced by dynamic rhythm and by physical movement that reinforces the stimulus can have a strong beneficial effect on increasing the plasticity of the nervous system. More rigorous future research efforts are necessary to understand the precise physiological mechanism behind RAS music and movement intervention programs and to cross-validate the positive findings, which obtained in this investigation program.

This study is also limited in terms of explicating the differential effects of the intervention component such as movement, psychological support and stimulating music. Also, future research should be conducted on separating the effect of each component of this intervention to clearly understand the mechanism of the intervention.

The results of this intervention program support the view that a well-designed program of music and movement intervention based on the theory of the RAS method, helps to improve gait, balance and psychological parameters of athletes with CP. Thus, the auditory rhythm increases the excitability of motor neurons in the spinal cord, which is directly influenced by the descending pathways from the brain stem and reticular formation, thus bypassing cortical areas (Paltsev & Elner, 1967; Rossignol & Jones, 1976). Moreover the auditory rhythm activates the brain motor areas including the supplementary motor area (SMA), pre-SMA, premotor cortex (PMC), the basal ganglia and the cerebellum (Bengtsson, Lau, & Passingham, 2009; Chen, Penhune, & Zatorre, 2009; Grahn & Brett, 2007; Grahn & Rowe, 2009). Activation of the brain motor areas through rhythm improves muscular activation and results in better movement control (Thaut, McIntosh, Rice, & Prassas, 1992; Thaut, McIntosh, & Rice, 1997).

The findings of this study have several implications. First, a structured music and movement intervention program of CP athletes should be offered for these people. Although the study participants were never part of a structured rehabilitation program prior to this study, and many of them were suffering from various several physical limitations, this intervention was able to produce significant improvement in major functional attributes. Second, clinicians should actively incorporate rhythmic music into movement intervention programs for people with CP because rhythmic music can be a powerful enhancer of the program. In particular, clinicians should pay attention to the choice of music and put more emphasis into making rhythm as the center of the intervention rather than the background. Finally, this study also underscores the importance of an environment based program for people with CP. Given that the incidence of CP is on the increase in many parts of the world, it is essential to address the need for adequate programs along with increased prevention efforts. In particular, because a music and movement intervention program can reach and improve the health outcomes of many poor and under-served individuals who have CP, such programs should be considered a viable means of reducing health disparities among this population in many countries.

In other words, an intervention program with music and movement of short duration may be a suitable alternative form of intervention to improve the aforementioned factors. In action with music and movement, people are active participants in a number of movement activities, which can be enjoyable while improving skills at the same time.

In conclusion even, the people with disabilities and especially CP, which increased systematically, specialized movement programs, which include the element of music, harmony with the movement, have too much to offer to participants, at multiple levels. The findings are very encouraging in this study, but the programs accompanying music and movement, should be extended to other groups of athletes and other neurological problems, and a greater number of participants to be able to generalize the results.

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Primary to Post-primary Transition for Students with Special Educational Needs from an Irish Context

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This paper explores primary to post-primary transitions for students with Special Educational Needs (SEN) within mainstream schooling in an Irish context. A questionnaire was distributed to a cohort of sixth class students (n=58) from four different primary schools in advance of their transfer and results were then compared with a similar cohort of first year students (n=63) from two post-primary schools following the transfer. The perspectives of the key stakeholders involved in the transition process were gained through questionnaires (n=10) and semi-structured interviews (n=5). Findings indicate that while a minority of first-year students experience transition difficulties, students with SEN encounter greater obstacles during this crucial time of transfer with increased anxiety and are more vulnerable and prone to bullying than their typically developing peers. Schools should place greater emphasis on transitions involving those with SEN due to their increased vulnerability.

Introduction

The transition from primary to post-primary school has long been recognised as an important stage in young children's schooling development and has been viewed as a critical educational step for many children (Smyth et al., 2004). Research and reports tend to suggest that the transition is an exciting time for most with the provision of new experiences and challenges, a variety of teachers, varying subject choice and the opportunity to establish new friendships. While for the majority of students, the move is seamless, for others, the transition can present a lot of anxiety and fear (O'Dalaigh & Aherne, 1990).

Transitions can be more difficult for students with a visual, hearing or speech and language impairment; those who have specific learning difficulties such as dyslexia and dyspraxia and those who are on the autistic spectrum. The NCSE Implementation Report (2006) estimated that 17.7% of children in Ireland aged 0-17 had a special educational need, by virtue of a disability or other condition, as defined in the EPSEN Act (Government of Ireland, 2004). Most children will cope with transition adjustments and adapt within the first couple of weeks, while in contrast the child with SEN may require a number of school terms or additional supports to successfully engage with and access the curriculum.

Historically, students with disabilities were excluded from many elements of society, and often did not access equal educational prospects as their peers without disabilities, consequently opportunities were somewhat limited. Education for students with Special Educational Needs (SEN) has vastly changed in recent years with the evolution of laws leading up to the introduction of the EPSEN Act (Government of Ireland, 2004) which sets out that students with SEN have the right to be treated with equity, educated in an inclusive environment and supported throughout their schooling. While this is extremely positive, there are still many daily aspects of life and school that present challenges and stresses for students with SEN.

Some 58,000 children made the transition from Ireland's primary schools in 2014 (Department of Education and Skills, 2015), but in excess of 1500 students are only progressing as far as first or second year before dropping out of education (Dept. of Education, 2010). Anderson et al. (2000, p.325) claim that "the process of disengagement from school too often follows unsuccessful transitions" and although no exact figures exist regarding the number of SEN students involved, the aforementioned high prevalence of such students nationally would raise concerns.

In order to promote social inclusion and combat educational disadvantage, a better understanding is required about factors that have an impact on student's experiences at school. There is an ever increasing body of literature exploring these factors, with specific emphasis on social class of student, types of school, varying curriculum and modes of assessment. Research indicates that problems students encounter tend to be centred on the new school environment, academic adjustment involving curriculum change and higher expectations and social change as Hargreaves et al. (1996) refer to it as a triple transition for students, the move from a familiar school culture to a new one, moving from established friendships and peer groups to new peer groupings and the move from childhood to adolescence.

The movement toward de-institutionalisation has resulted in the inclusion of the vast majority of SEN students in their local schools, yet the structures and support to enable these transitions have predominantly lagged behind the process (Rasmussen et al., 2012). There has been an increased interest in educational transitions in recent years as the level of success can be a critical factor in determining children's future progress and development. International studies refer to school transitions as a pivotal time where students are particularly vulnerable to disengagement from school and is viewed as one of the most difficult phases in students educational careers (Zeedyk, 2003) but findings at one level appear mixed (Sirsch, 2003).

Bernt and Mekos (1995) suggest that students experience generally positive perceptions and experiences of transition whereas on the other hand Mertin et al. (1989) report negative experiences. Stradling and MacNeil (2000) concluded that young people can respond to transition in a number of ways with some responding positively, whereas others may adopt a more reactive coping strategy. On balance, this mix of views points to a continuum of transition experiences, which at its best, research suggests causes slight apprehension, while on the flip side of the coin, can provoke deeply felt anxiety (Hargreaves & Galton, 2002).

Many factors impact on the life experiences of students with SEN as they negotiate transition and yet little attention has been paid to the issue of transfer in the academic and educational discourse in Ireland. Relative to the large body of research on student transitions in general (Hargreaves and Galton, 2002; Naughton, 2000; O'Brien, 2001; Smyth et al., 2004), the transition experiences of students with SEN have received less attention at both international and national levels with only limited research on the Irish situation with a study conducted by Maunsell et al., (2007) and more recently by the NCSE (2013). In Ireland most of these studies investigated the issue of pre-transition expectations and anxieties amongst students with findings of pre-transition concern and slight apprehensions evident amongst the majority of students. The NCSE (2013) study on the transition for students with SEN reported the need for coordination across schools and other services to ensure a continuum of support to address the individual needs of students. The existing evidence base to date on the primary to post-primary transition has been described as incomplete (NCSE, 2013) as it fails to address the more complex realities for students with SEN, thus paving the way for further investigation and provides a basis for this study.

This research sets out to investigate both student and staff attitudes towards primary to post-primary transitions with a specific focus on those with SEN. It is intended that findings from the study will make a significant contribution to the understanding of potential obstacles facing SEN students on transition and explore mechanisms to address any issues raised, along with the ability of schools to deliver quality support structures to students with SEN when negotiating the transition phase.

Research Method

As this study was carried out around real-life events and circumstances, close attention was attributed to ethical considerations. Full ethical review was not necessary given the nature of the study which guaranteed anonymity for all respondents, where consent was required from all participants and the research conformed to the Child Protection Guidelines and Procedures (Department of Education and Science, 2001). Several schools required ethical applications to school-based ethics boards and in each of these cases approval was granted before the research commenced. Ethnographic research formed the basis of this study while employing a mixed methods approach, drawing on both qualitative and quantitative research methods. Participant observation was utilised, involving the immersion of the researcher in the participant's educational surroundings allowing the researcher capture behaviour in the different contexts of everyday life. After the initial observation and settling in period, a more systematic program of formal interviews was conducted involving questions related to transition experiences. This research was carried out in a typical Irish town and investigated attitudes to transition in both denominational and non-denominational schools, with four local primary schools and two post-primary schools serving a population of 950 students.

Table 1. School types, gender, size of school

Level	Code	Gender	No of students enrolled
Primary School	PS1	Boys	182
	PS2	Girls	161
	PS3	Mixed	66
	PS4	Mixed	51
Post-Primary School	PPS1	Girls	363
	PPS2 (Disadvantaged)	Mixed	127

Initial information for the study was sourced through questionnaires that were sent to four local feeder primary schools in an attempt to explore pupils' perceptions of the transition to post-primary education. Convenience sampling was utilised to recruit participants following permission from the Board of Management in each school. All sixth class students (n=58) from each of the four schools where two schools were mixed with one all-girls and one all-boys schools were recruited. In secondary school a total of 63 first year students from two of the three post-primary schools in the town, one all-girls convent school and a mixed vocational school formed the representative sample to seek student's views following the transition. From this group eight students presented with SEN from the primary sample and nine from the post-primary sample as represented in the table below.

Table 2. Special Educational Need

Category	PS1	PS2	PS3	PS4	PPS1	PPS2
Moderate General Learning Disability	2					
Severe/Profound General Learning Disability	1					
Specific Learning Difficulty		1	2	1	2	4
Specific Speech and Language Disorder					1	
Multiple Disabilities	1				1	1

The questionnaires were distributed in January of the school year and consisted of ten questions formulated by the researcher drawing on research literature on transition into post-primary school focusing on the following issues: school choice and pre-entry contact, level of anxiety before transition, perceptions of new school, issues of worry and school related issues (timetable, more subjects, additional teachers, lockers etc.) Students were asked to respond to a series of

yes/no questions with relation to whether a principal visited prior to transfer, did they know which post-primary school they want to attend, did their parents attend an open evening and had they received information about their school prior to transfer. This provided a quantitative overview of their experiences and students were then asked to add their own comments on how the transition process could be improved in order to provide a qualitative insight into their experiences. This dual process provides the statistical data both for quantitative purposes and for qualitative insights into student's experiences.

Two focus group sessions also took place with four students being purposively sampled from primary school, two with SEN and a second focus group session with four students from post-primary school, two of which also were categorised as having learning difficulties and all would have completed questionnaires prior to the focus group session. Focus group questions were derived from the literature that addressed issues related to five key areas; (a) expectations, (b) transition support, (c) curriculum, (d) adjustment and (e) new school environment. The data were transcribed and interpreted by the researcher to confirm the key issues associated with the transition process. To analyse the interview data, thematic analysis as outlined by Braun and Clarke (2006) was implemented. The data were analysed in keeping with Creswell's (2008) six steps for analysing and interpreting qualitative data: (a) organising the data, (b) exploring and coding the database, (c) forming themes, (d) reporting findings, (e) interpreting the findings and (f) validating the accuracy of the findings.

Finally the perspectives of the key stakeholders involved in the transition process were gained through questionnaires and semi-structured interviews. Key personnel were interviewed included two school principals at primary level (only two out of four agreed), with one SEN co-ordinator, home school community liaison officer and a deputy principal all at second level, as these would be viewed as the people with closest contact with transitioning pupils. Staff who participated in the questionnaire were identified by using abbreviations to represent their position in the school (PP = Primary Principal; PPDP = Post-Primary Deputy Principal; PST = Primary Support Teacher; PPST = Post-Primary Support Teacher; HSCL = Home School Community Liaison; PCT = Primary Class Teacher and PPCT = Post-Primary Class Teacher).

In addition questionnaires were conducted with five primary teachers, four of the current teachers and one who would have taught sixth class students in the past and five post-primary teachers out of 24 (21%) were purposive sampled as they all had dealings with 1st year students. Permission was sought from school principals to enlist the staff prior to interview. These personal accounts were then corroborated with statistical evidence from questionnaires in order to develop shared meaning and an understanding of the difficulties facing students with SEN in this transition period.

Findings

Phase One: Primary School Students Perspectives

A total of 58 primary school students were surveyed with 27 males (47%) and 31 (53%) females representing the sample. From this group of students, eight presented with SEN which represents 14% of the total which is in keeping with NCSE figures. From the student sample, teachers reported that four have specific learning disabilities (two with dyslexia and two with dyspraxia), two have moderate general learning disabilities, one has a severe/profound general learning disability while another has multiple disabilities.

Figure 1 below illustrates the results of the question pertaining to factors contributing to school choice where the determining factor most influencing the decision making process was the fact that friends were also going to this school.

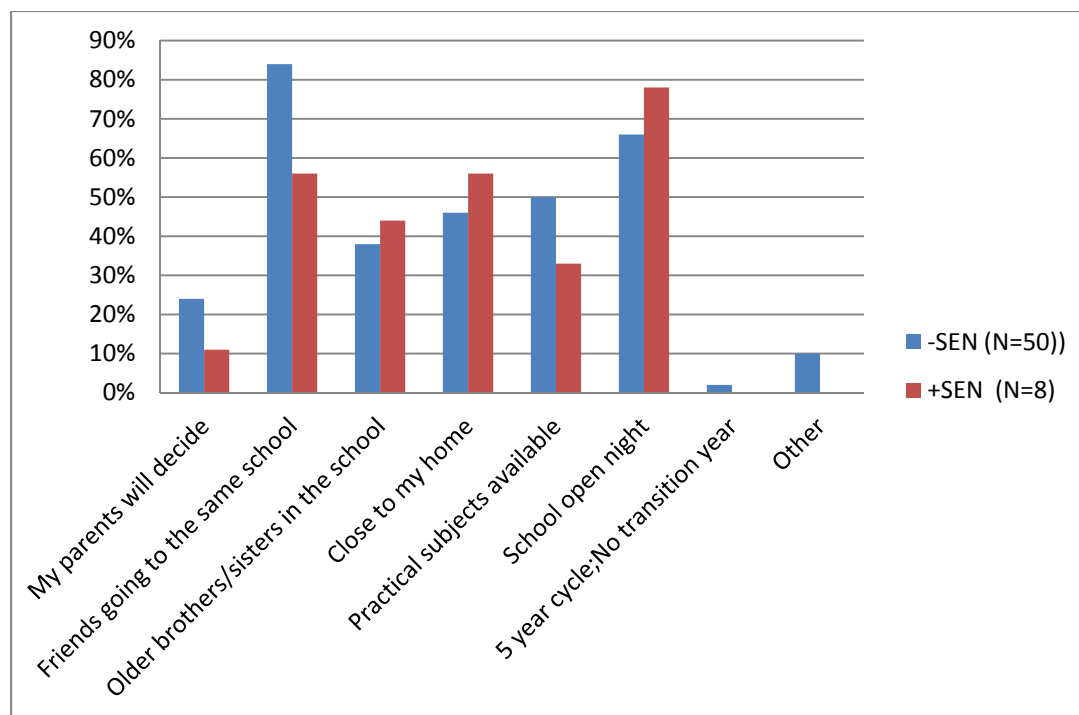


Figure 1: Factors contributing to school choice

When students were asked to rate on a scale from 1-10 (1 = Not Worried and 10 = Very Worried) how they were feeling about the move to post-primary school, (72%) of students indicated that they were not worried about the transfer with a number of students unsure, although 50% of students with SEN, (N=4) indicated that they had a sense of worry about the move, two of which reported being very worried.

On analysis of the data, over one third of the cohort of students surveyed (38%) expressed a concern about the move to post-primary. This fear and anxiety was mainly centred on anxiety about more difficult school work, more subjects to contend with, getting too much homework and making new friends (Figure 2). These findings were also identified in the focus group sessions corroborating findings. Typically developing students found that having too much homework, work being too difficult and extra subjects tended to play on their mind the most, while for the students with SEN the most concerning factor was finding their way around the school, with 75% of students highlighting this as a concern, with 50% citing bullying as an issue in comparison to 20% of the typically developing students. Being different also demonstrated contrasting views with 7% of the typical cohort citing it as a worry whereas 50% of SEN students were concerned about this.

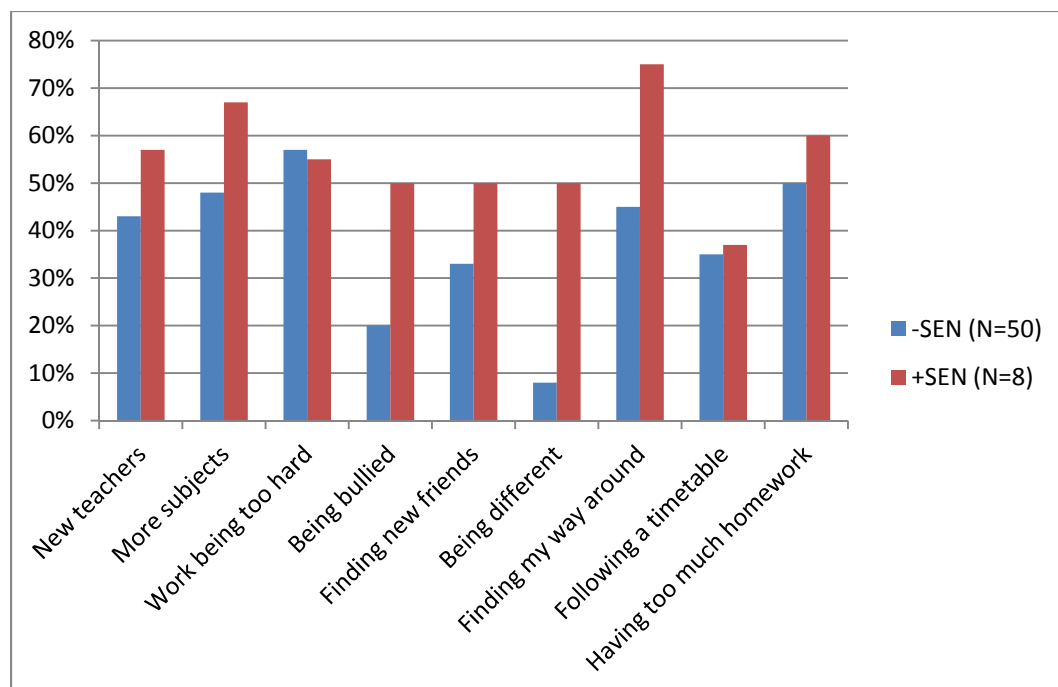


Figure 2: Specific worries of primary students

Phase Two: Post-primary School Students Perspectives

A total of 63 post-primary students were recruited with 14 males (22%) and 49 females (78%) representing the sample of all first year students from two local secondary schools. From this group of students, nine (14%) presented with SEN. Of these, six have specific learning disabilities (three have dyspraxia, two have dyslexia and one has attention deficit disorder) two have multiple disabilities and one has a specific speech and language disorder.

While the findings illustrate that many of the students are content with the transfer to second level, they still found the transfer experience challenging and a cause for worry. Students stated that post-primary school was difficult in terms of establishing new friendships with 67% of SEN students cited establishing new friendships as a worry in comparison to 50% of their typically developing peers. SEN students also experienced difficulty with following a timetable, more subjects and having to contend with more demanding school work.

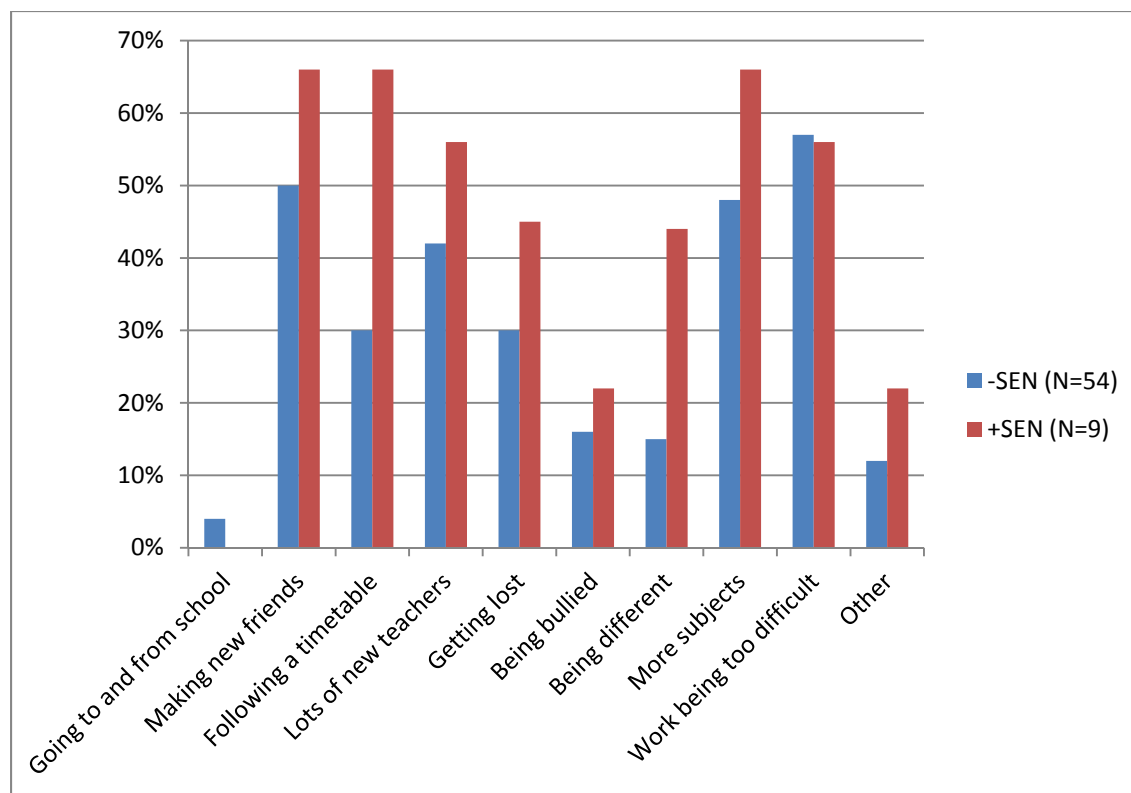


Figure 3: Specific worries of secondary school students

In the student questionnaires and the focus group interviews, students were asked about the extent to which their post-primary school differs from primary school. The responses focused on a variety of differences including the variety of subjects, the additional number of teachers, the length of the school day, the change from being the eldest student in the school to now being the youngest and smallest. For the majority of students, the major difference between primary and post-primary was having a number of different teachers with different expectations

“In primary school we had the same teacher for the whole year so you got to know him a lot better, every time you go into class in this school you have a different teacher for the 35 minutes so it’s a bit more difficult as some teachers are a bit crosser than others. You don’t know the teacher as well as you would at primary school.”

Students were asked about their experience of being bullied. Students who reported experiencing bullying stated the most common form to be verbal (86%) as opposed to physical aggression. While 76% of typically developing students reported never being bullied as illustrated in figure 4, only 56% of students with SEN reported the same, with 22% indicating that it only occurred occasionally, while 22% cited it as a regular occurrence.

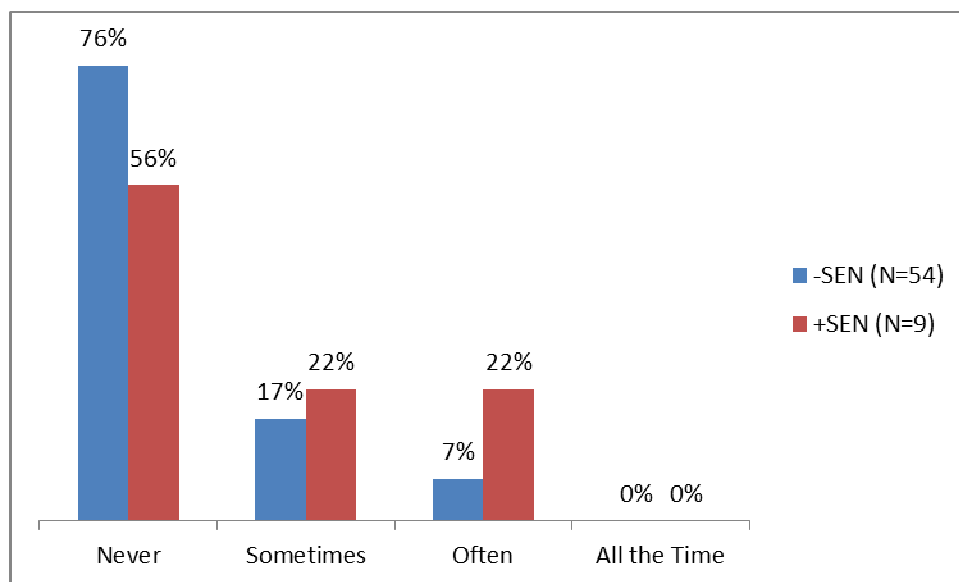


Figure 4: Incidence of bullying

Students were asked if they felt comfortable talking to their class tutor about any problems or incidents that may arise and while close to two thirds of the typically developing cohort (63%) students indicated they would not have any difficulty discussing issues with their tutor, only one third (33%) of students with SEN felt comfortable talking to their tutor.

Phase Three: Key Individuals Perspectives

The majority of second-level teachers in the study believed that the transition from primary to post-primary school was a significant event in the lives of the students. Teachers cited that the social and organisational demands of the second-level system were considerable challenges to students and more so for students with SEN. The social demands mentioned included the move to a bigger school, coping with and meeting a number of new teachers and establishing new friendships. Teacher's views about the significance of the transition in the questionnaire also correspond closely to the anxieties expressed by many of the students. A post-primary class teacher commented

"For some of the students it's a significant change as they are coming from small schools, where now they are faced with a much larger environment where they have to contend with more subjects, teachers and pupils." (PPCT 3)

The Home School Community Liaison Officer also makes a significant point when he referred to the main barriers and obstacles facing students on transition

"The parents of the eldest member of the family would often be very apprehensive because they wouldn't have gone through the process before of a student from the household changing into another school. I think the greatest fear of all really is if you have unsure parents whose fears have transferred onto the kids, you know the parents who would have had traumatic experiences at school themselves. The kids would have picked up on that." (HSCL)

Here the HSCL has identified a significant factor to be negotiated by students and indeed their families. He makes reference to the fear and anxieties of parents and the spatial transition from the familiar local school and community to a more distant and unfamiliar one, where Reay and Lucey (2000) highlight that such a change has been shown to have particular significance for working class students in disadvantaged communities.

During the course of the interviews, teachers reflected on the experiences of first year students and the factors contributing to sustained difficulties where they arose. Bullying repeatedly emerged as one of the most significant issues affecting students as they negotiated transition. One post-primary resource teacher stated

“It can be a traumatic time for students during the settling in period here as instances have arisen in the past where students, particularly students with SEN, have been bullied, mainly as a result of their learning need where they are verbally abused and isolated from the group.” (PPRT 2)

Establishing friendships from the teachers perspectives emerged once again as most concerning for students with SEN, with bullying being next on the list of concern for these students. This links in with anxieties and concerns expressed by students pre-transfer and further highlights its significance in relation to transition.

School management and teaching staff were asked whether information supplied to them from their main feeder primary schools was first of all accurate and whether it took the form of verbal communication or more formal, with structured reports on individual students. The general response was verbal communication where a post-primary resource teacher commented

“Probably a verbal communication is supplied and only if the school is contacted. Formal reports seem to have been dispensed with in recent years.” (PPRT 1)

During the course of this study it also emerged that the majority of teachers cited insufficient time allocated to communication between the primary and post-primary sectors and that it would be worthwhile to understand the demands of teachers at both primary and second-level to improve approaches to curricula and teaching methods. A post-primary deputy principal commented how there is a lack of information provided and that meetings are arranged by their staff where information provided is verbal and stresses the need for more formal and structured reports to be provided or

“many students will continue to slip through the net, where some go right through school.” (PPDP)

Satisfaction with learning support in the sample schools depended somewhat on the resources available. Findings from both questionnaires and interviews with staff indicate that the level of provision can only be described as adequate, as all students do not receive their allocation of support due to timetabling issues, lack of resources and the fact that it is carried out on a needs basis. It also emerged that staff were not fully informed of information pertaining to transitioning students as reported by a post-primary class teacher

“Perhaps we could have a more formal structure for sharing information among all staff. Confidentiality is of course very important but sometimes vital information is not passed onto staff.” (PPCT 4)

Staff found that having to deal with varying levels of ability in the classroom presented many difficulties, mainly preparing material for each learner as summed up in the following statements by both primary and post-primary teachers

“Breaking down mainstream subjects for special need students into a more manageable format is difficult for teachers and very time consuming.” (PCT 2)

“Having to prepare different questions based on ability and having to give different homework proves difficult.” (PPCT 5)

From interviews, teachers drew attention to the fact that in pre-service training, little was done to equip teachers with the necessary skills to cater for individuals with learning needs as alluded to by the following post-primary class teacher

“I would deem myself a competent teacher of students with SEN but this would be from little professional training but through my years of experience as a teacher and dealing with these students.” (PPCT3)

Discussion

This study investigated the primary/post-primary transition with particular reference to students with SEN and how their perceptions differ from students in the regular cohort. This research was carried out in an Irish town and investigated

attitudes to transition in both denominational and non-denominational schools and generated knowledge about the move from primary and secondary students and sought the perspectives of key stakeholders including teachers which previous studies have not carried out. The results illustrate that the factors influencing the transition process from primary to post-primary school are complex. Staff reported feeling that students experience some disruption and discontinuity when moving to post-primary school, thus highlighting that the information gained from the data collection is supporting reviewed literature. Three major themes in relation to transitions emerged from the questionnaires, focus groups, semi-structured interviews and literature reviewed. These included pupil retention, transition constraints and lack of communication. A number of sub themes emerged from the thematic analysis process where perceived constraints included bullying, lack of time, inadequate training, teacher resistance and adjusting to new environment.

Pupil Retention

Research and reports tend to suggest that most sixth class students should be looking forward to post-primary school with the prospect of a range of teachers, richer resources and a new style of learning builds up the anticipation of a fresh start but current evidence points to the contrary. Children starting post-primary school find that far from being launched into a brave new adventure, they are reassessed, ability grouped, taught by different subject teachers with different expectations, rules and regulations are stricter and teaching styles and methodologies differ from those used in primary schools. The latest school retention report (Department of Education and Skills, 2014) stated that approximately 1 in 10 students are failing to complete post-primary school with a significant number of these students leaving without any future plans for additional educational or training pathways. The Minister for Education and Skills stated in the report that

“This is a serious problem and those students who drop out of formal education as teenagers limit their life chances” (Minister Jan O’Sullivan, Department of Education School Retention Report)

It is also worth noting that an estimated 1,000 children do not move from primary to second-level education each year, but no official figures are available from the Department of Education because a long-sought primary database is still only being planned. The National Disability Authority make reference to the fact that Individuals who were physically disabled were the most likely group to leave school early, followed by individuals with an intellectual disability, and lastly individuals with a sensory disability (National Disability Authority; NDA, 2005b). While most discourse about early school leaving often takes place within the context of a consideration of the concept of ‘educational disadvantage’ the following school related perceived constraints identified in this study may be viewed as contributing factors.

Perceived Constraints on Successful Transitions

- *Bullying*

In the findings, bullying emerged as a major issue in the adjustment experience as Ross (2003) points out that the immediate effects of bullying can be extremely debilitating to victims. The seriousness of the issue was stressed by both students and staff in all sample schools where each reported having a strict anti-bullying policy in place. In the current study bullying of SEN students was found to be prevalent (44%). This is in keeping with recent research by Rose et al. (2011) who concluded that 50% of students receiving special education services experienced bullying compared to 20-30% of students in general education, unfortunately compounding the problems already faced by these students in this pivotal time of adjustment. Evangelou et al. (2008) study also established that students with SEN are bullied more often than students without SEN.

As students with SEN are increasingly being taught with their typically developing peers, they are subject to a different range of childhood experiences and may be at an increased risk of bullying. While these results are cause for concern, the fact that a lot of these incidents go unreported is significant where only one third (33%) of students with SEN felt comfortable talking to their class tutor. Unfortunately, these experiences are not always positive and they can have an enormous impact on student’s educational experiences.

- *Lack of Time*

Lack of time emerged as a major constraint for teachers as they found it difficult to attend to differentiated work in order to support the weaker students and also to communicate with the SEN team regarding interventions and teaching strategies to incorporate into their teaching to support SEN students (Drudy and Kinsella, 2009; Anderson, 2007). Teachers also have the added stress of completing the course curriculum in order to ensure examination success and that all students reach

their full potential. Travers et al. (2010) found that an overemphasis on academic results was proving a barrier to inclusive education. Time for collaboration amongst colleagues was cited as a major constraint and this was exacerbated by difficulties in accessing support from external agencies.

- *Inadequate Training*

Inadequacies in the training and support of both trainee and qualified teachers were cited constraints to creating inclusive environments for the support of SEN students. Limited pre-service training for staff to supporting students with SEN has resulted in an inability to develop and implement curricula appropriate to the needs of these students. This is cause for great concern as restricted access to professional development leaves a void and lack of awareness of supports and interventions to support SEN students. Drudy and Kinsella's (2009) research made reference to the lack of opportunities to engage in collaborative problem-solving relating to the effective inclusion of students with SEN. Shevlin et al. (2008) report that the current in-service days and short courses provided to staff as part of their continuous professional development are inadequate. Staff would certainly benefit from opportunities to learn about specialist support strategies used and information relating to how support teachers and class teachers can work as a team. Clarke et al. (2012) reported that the main sources of guidance for pre-service teachers are other teachers in their school who act as mentors and not university lecturers.

- *Teacher Resistance*

Teacher's attitudes are important to the successful integration and inclusion of students (Ainscow et al. 2012) and positive attitudes will enhance the transition process for students with SEN into their new school environment. Teachers set the tone of classrooms and thus, the successful integration and inclusion of students with SEN will depend upon the attitudes and positive interactions that they sustain with all students in their classrooms. Unfortunately during the course of the interviews with staff it emerged that a feeling exists among some teachers that the interventions and screening of students with SEN is the sole responsibility of the SEN team. They also feel resistant to differentiation due to the added workload and the fact that they perceive that the timetabled resource classes will attend to this. While streaming classes may resolve this issue, International studies have found that streaming results in very different educational outcomes, with students allocated to lower streams or bands taking longer to settle into their new school environment and making less progress academically (Applebee et al., 2003; Oakes, 1990, 2005). As a result of being labelled in this way, many students develop very negative views of their own abilities and disengage. The importance of instilling in staff an understanding that students learn in different ways is pivotal to a student's sense of belonging, self-esteem and engagement that will ultimately lead to him/her reaching their full potential.

- *Adjusting to New Environment*

On transfer, teachers made reference to the differences between the primary and post-primary sectors, with particular focus on the number of subjects and new teachers that the students have to contend with. Being used to having just one teacher in primary level, the students now have to adjust to the variety of teaching styles and demands of their new teachers. It was also pointed out that change in environment would impact students with SEN more so and ultimately may result in them taking longer to adjust and settle in than their typically developing peers. According to Smyth et al. (2004), 20 percent of students settle immediately; 43 percent in one week; 25 percent in one month; and 14 percent take longer. Staff also cited in interviews that a minority of students continue to experience sustained difficulties in making the transition to post-primary and these difficulties are more frequently reported by schools with a high concentration of literacy and numeracy problems, mainly vocational and designated disadvantaged schools (Smyth et al., 2004).

Lack of Communication

On analysis, it is clear that a good deal of contact between schools and parents/students pre-entry takes place prior to transfer. These commonalities include visits from principals of second level schools in the locality, distribution of literature, pre-screening assessment day, parent and home school liaison officer meetings, open nights and information evening for pupils and parents. While this is in line with best practice, students may also benefit from individual meetings with principal or deputy principal in January/February of the year of entry. Though good links between schools and

parents/students exist pre-entry, there appears to be poor communication and an inadequate flow of information between primary and post-primary schools at the time of this study. School staff were dissatisfied with the lack of information on in-coming first year students making it very difficult to put resources and structures in place to assist these students on transfer. Additional primary/post-primary teacher transition meetings and information pertaining to transitioning students being routinely transferred electronically would make for a more enriched transition process.

While it is widely known that schools vary in their intake and selection practices, the provision of learning support was also found to be somewhat variable. All staff interviewed in the study recognised the value of learning support but the vast majority viewed the levels of learning support being offered as only adequate. Coupled with this, the management and provision of support lies with the SEN co-ordinator, a significant role for one individual where undoubtedly an established support team would prove a lot more efficient and effective. This system adopted by many schools is difficult to sustain with resource constraints and proves challenging for the effective communication of information relating to students with SEN and is in keeping with earlier research on the inadequate dissemination of information.

The research highlights the continuum of experiences from both staff and students perspectives in relation to transition from primary to post-primary. While most students navigated the transition phase with limited difficulty others reported a less positive experience. This corroborates the findings of previous international research (Mizelle & Irvin, 2000; Zeedyk, 2003) and Irish research (O'Brien, 2004; Smyth, McCoy & Darmody, 2004) that has explored the experiences of young people who make the transition from primary to post-primary school.

While this study undoubtedly highlights some of the key problems that occur during transition, these problems are viewed to be somewhat short-lived and similar to international findings, evidence from Irish studies has indicated that most pupils settle in quickly after getting used to the new structures and demands of post-primary schooling (O'Brien, 2001; Hargreaves & Galton, 2002). Graham and Hill (2002) reported that the majority of first year's level of concern diminished shortly after transition while Evangelou et al. (2008) reported that 75% of students claimed to have adjusted well shortly after transition.

The present study is not without limitations. Principal among these is the fact that it was not longitudinal in design. Students were interviewed in the primary school setting and ideally these students should have been re-interviewed post transition to compare their initial views. Unfortunately time constraints meant that the study had to interview different groups of sixth class and first year students. Thus, it is recommended that this study should be replicated in a longitudinal design and extended to a wider cohort of schools to increase sample size and ensure a representative distribution of the student population and a means to share best practices and evaluation should be established. While this study attempts to create a picture of the transition experiences of students with SEN in Ireland, it only represents the practices in a small cohort of schools and thus is not appropriate to generalise the findings to every student in Ireland. Nevertheless, this study does help shine a light on the transition experiences of students and adds to the discussion and the story by focusing the spotlight on one group of students from an Irish town as one cross section of experience.

Conclusion

Findings from the study indicate that while a minority of first-year students experience sustained transition difficulties, students with SEN encounter greater difficulties during this crucial time of transfer. The importance of SEN supports in the transition experience must be recognised and it must be acknowledged that the student's needs are a dominant influence on their transition experience. Viewing transition planning as a support and not as an additional burden will help to enable SEN students to reach their full potential.

Implications and Recommendations for Future Research

The findings of this study shed light on the need for more co-ordinated and detailed planning with respect to the transition of students with SEN. For students with learning difficulties, it is reasonable to hypothesise that transitional planning will require close co-operation between schools, parents and outside agencies. While the importance of the primary to post-primary transition is widely acknowledged and the findings of Mizelle and Irvin (2000) and Zeedyk et al. (2003) are echoed in the current study where transitioning students are worried about bullying, new subjects, new teachers and the

new environment, further research is warranted as our understanding of this phenomenon is limited, due to the gap that exists in what little research has been carried out internationally in recent years.

While each school reported having an anti-bullying policy, evidence from this study highlights the ineffectiveness of these policies with 44% of SEN students having experienced some form of bullying and 67% of them not feeling comfortable informing staff. In spite of the pervasiveness of bullying, Mishna (2003) draws attention to the limited research that examines the relationship between bullying and students with disabilities, an area that requires further examination to understand the academic and psychological impact bullying has on students with SEN. With this in mind it must be stressed that the schools in question would certainly benefit from an improved anti-bullying strategy with particular attention focusing on students with SEN as bullying of students with disabilities has been “low on the radar screen” of educational policy makers (Holzbauer, 2008 p.162).

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PARENTS' PERCEPTIONS OF INTEGRATED EDUCATION IN POLAND

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Integrated education in Poland has been implemented since 1993. This alternative form of education very quickly resulted in an increased number of integrated classes in mainstream schools and a decreased percentage of students with disabilities in segregated education. Research indicates that the process of "opening of society to disability" is progressing. Despite the fact that the functioning of individuals with disabilities in the system of integrated education was investigated mainly through research conducted among teachers and students, there were not many studies indicating parents' attitudes towards the implementation of that idea. Therefore, the main purpose of this paper is to describe the results of research on parents' perceptions of integrated education in Poland. The presented article illustrates parents' points of view regarding benefits of integrated education for children with disabilities as well as their peers without disabilities. Moreover, it depicts levels of parents' satisfaction with integrated education. Findings revealed that 92 percent of parents, whose children had disabilities, were "very satisfied" and 8 percent of them were "fairly satisfied". On the other hand, 84 percent of parents with children without disabilities were "very satisfied" and 16 percent were "fairly satisfied".

Introduction

The socio-political transformation process in Poland initiated changes in the system of special education. Those transitions were related to the education of children with disabilities and their main goal was to include them in the mainstream education system. Such initiatives were undertaken in the name of integration, which requires members of the society to respect the rights of individuals without disabilities as well as people with disabilities.

The fundamentals of integrated education come from granting people with intellectual disabilities the right to be treated with appropriate respect that is common for the rest of the society and to allow them, due to the principle of fair support and education, to live in the community in an optimized and normal way. The most important catalogue of rights, which recognizes the dignity of a child as well as outlines its welfare, was included in the United Nations Convention on the Rights of the Child from 1989. The rights of children with disabilities to full participation and equal chances in social life were outlined more distinctly and expressively in the Salamanca Declaration adopted by World Conference on Special Needs Education: Access and Quality (Spain, 7th and 10th of June, 1994). The Declaration states that:

- every child has the fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning;
- every child has unique characteristics, interests, abilities and learning needs;
- the education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs; t
- those with special educational needs must have access to regular schools that should accommodate them within a child-centred pedagogy capable of meeting these needs;
- regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all;
- -moreover, they provide effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system (The Salamanca Declaration 1994, VIII).

The process of integrated education in Poland was introduced via Regulation No. 29 of the Ministry of National Education passed on 4 October 1993 regarding the rules of organizing care and education of students with disabilities in mainstream and integrated public kindergartens, schools, facilities and special education institutions (Journal of Laws of the Ministry of Education from 1993, No. 9, item 36). The Regulation has been modified many times. The currently valid legislative act is the Regulation of the Ministry of National Education passed on 17 November 2010 regarding the conditions of organizing education and care of children and youth with disabilities and socially maladjusted children in kindergartens, schools and mainstream or integrated classes (Journal of Laws of the Ministry of Education from 2010, No. 228, item 1490, as amended). The given possibility of education in the integrated system very quickly resulted in an increased number of integrated classes in mainstream schools and a decreased percentage of students with disabilities in segregated education at the expense of their increase in non-segregated education. As early as in the academic year of 1996/1997 in the integrated system there were 14,500 children with disabilities and in 1999/2000 their number increased to 24,723 (Krause, 2004, p. 230). In the academic year of 2007/2008 in integrated classes there were 27,918 children diagnosed as individuals with special educational needs (Apanel, 2009, p. 172). The above mentioned statistics clearly indicate that the number of children and youth with special educational needs who attend integrated schools is on the increase. It is noteworthy that this trend lingers in preschool and primary education, but on its higher levels the process of integration is breaking down. For example, in 380 kindergartens there were 4,245 children with disabilities and in 716 primary schools there were 15,369 students with special educational needs. In 378 gymnasiums there were 6,611 children with disabilities and in high schools there were only 1,666 (Apanel, 2009, p. 172). That negative perception of integrated education in Poland was continued by Starczewska, Hodkinson and Adams (2012) who conducted a critical analysis of perspectives and experiences of Polish teachers related to the inclusion and inclusive education. They found that the idea of integrated classes attended by small children in Poland ran efficiently. However, the integration of older children with disabilities in the mainstream schools did not run successfully.

The continuous dynamics of integrated education is mirrored not only by an increasing number of children with disabilities in mainstream schools but also by children's various types of disabilities. The best exemplification of this trend are statistics which indicate that "30 percent of the population are children with intellectual disabilities; students with physical disabilities constitute about 30 percent. Children with vision and hearing disorders (mostly mild) belong to the group of almost 20 percent of the population. The rest of the students with disabilities (20 percent) are children with emotional and behavioural disorders, autism and other disorders" (Krause, 2004, p. 231). However, there are still some regions in Poland where integrated education is not widespread and it encounters the resistance of local communities.

The idea of integrated education is implemented from kindergartens where, being involved in common play, children have as soon as it is possible a chance of becoming more sensitive to the needs of other people through their presence at mainstream schools of various levels. Górnicka outlines that contemporary education of children with disabilities involves the following forms: special classes within primary schools and gymnasiums; integrated classes within primary schools, gymnasiums and trade schools; individual inclusion of students with disabilities in mainstream schools; integrated and special schools (including educational and care institutions) (Górnicka, 2005, p. 382).

Integrated education in Poland is mainly based on Hamburg's model that requires from school authorities appropriate architectonic conditions within a range of providing necessary equipment and teaching aids for classes. It also requires cooperation from two properly prepared teachers. Apart from students without disabilities the class is attended by children

with various developmental disorders. Therefore, the school should keep on the payroll additional specialists such as speech-language pathologists, therapists, doctors, etc. (Gajdzica, 2009, p. 67). To implement this model financial support is needed. Local municipalities, responsible for education, receive insufficient grants to make economic conditions of integrated schools stable. Thus, schools with a good infrastructure for children with disabilities are more often built by rich municipalities and big cities.

Analysing the literature related to integrated education it can be noticed that the term *child with disabilities* is more often replaced by *child with special educational needs*. In the Ministry of Education the Work Group for the Reform of Educational System for Students with Special Educational Needs (SEN) was established which clarifies that *special educational needs* are defined as needs that, due to development of children and youth, arise from their disability or are caused by other learning problems (definition made by the Workgroup for the Reform of Educational System for Students with Special Educational Needs) (Kosiorek, 2010, p. 144). These needs are defined on the basis of the previously established scale with regard to how a child keeps up with his peers. His problems with learning require implementation of a special educational approach. Therefore, such children should be taught by a specialized pedagogical staff and in an appropriate environment (Bogdanowicz, 1996).

Recently the term *integrated education* has been replaced by the phrase *inclusive education* and, as it is emphasized by some of specialists, both expressions slightly differ from each other. Al-Khamisy notes that the term *inclusion* gives a broader perspective on matters of teaching, planning changes in the educational system and social policy (Al-Khamisy, 2009, p. 174). In its scope there is contained a need to include children with disabilities into the mainstream schools. However, it is emphasized that the specific feature of inclusive education is focused on capabilities of a child. In consequence it means that schools should be more flexible so that they could be more responsive to the needs of children. Inclusion is also related to the idea of helping teachers in taking over responsibility for teaching all children in home schools and preparing them to teach children who are currently excluded from their local schools, regardless of the reasons for exclusion. This term applies to all children for whom school education is not a benefit and not only for those who were currently labelled as pupils with special educational needs (Rękawek, 2006, p. 50).

Integrated education in previous studies

Several years have passed since integrated education in Poland has been implemented. This alternative form of education of students with disabilities brought about significant achievements in the field of practice and theory associated with implementation of this idea. These effects are well recognized in everyday social life and at school. Research indicates that the process of “opening of society to disability” is progressing (Ostrowska, 2002, p. 60). In many studies it is emphasized that the attitudes towards people with deviation from the norm and the expectations regarding disability have changed. The mentioned above change especially refers to the way of approaching people with disabilities as well as how they are perceived. Ostrowska, Sikorska and Gonciarz state that “a special attention should be paid to the change of social atmosphere toward problems of those who are partially without disabilities. The life problems of individuals with disabilities were discussed more often without any hesitation. This refers not only to people with disabilities but also to their environment which shows a growing tolerance and understanding for life problems of those people” (Ostrowska, Sikorska & Gąciarz, 2001, p. 33). However, students’ knowledge about disability is still poor, being usually gained from family members – parents or grandparents (Kazanowski, 2004, p. 128) or – as noticed by Figarska – it comes from myths and stereotypes functioning in the society rather than certain experiences or direct contacts with those individuals (Figarska, 1996, p. 166). Often it is based primarily on television broadcasts (Świda-Ziemia, 1997, p. 171). Therefore, the attitudes of youth, based on these resources, are often ambivalent.

On the other hand, studies on teachers’ attitudes towards integrated education show that most of them accept the idea of integration, but do not manifest their willingness to undertake teaching in such classes. Minczakiewicz in her study noted that “almost 70 percent of teachers from primary schools would not like to teach pupils with intellectual disabilities in their classes” (Minczakiewicz, 1996, p. 136). Also, Erenc presented in his research that 71 percent of teachers are against the idea of establishing integrated classes where students with intellectual disabilities could attend (Erenc, 2008, p. 288-289). The main reason for the teachers’ negative attitudes towards integrated education was the lack of adequate knowledge about this form of education and skills that would allow them to support a student in fulfilling his special needs (Chodkowska & Kazanowski, 2007, p. 21-22).

The results of the research conducted among school directors and teachers on changes in integrated education was analysed by Apanel. She stated that they perceive many positive as well as negative elements in this type of education. Among the

positive aspects of this kind of education they indicated: achievements of good results in internal exams by students with special educational needs; increase of parents' activity in mutual cooperation with schools; increase of specialists hired in schools in accordance with needs of students with disabilities; development of transparent and precise solutions for the assessment of students with disabilities; increase of confidence and decrease of parents' fears whose children without disabilities start their education in integrated classes; elimination of mental barriers both in the local community and the pedagogical staff; training of teachers who are outside from integrated classes in order to support students with special educational needs. The most frequent occurring difficulties that were outlined by the interviewed teachers and directors included: the accumulation of a few children with behavioural disturbances in one group; difficulties regarding integration of children with autism and profound intellectual disabilities with peers without disabilities; lack of sufficient methodological support and specialized training (Apanel, 2009, p. 173-174). According to the answers of the teachers, interviewed they also emphasized financial difficulties that prevent the purchase of teaching aids and hiring specialists as well as a lack of funds for specialized trainings for teachers. Apanel also noticed in school reality certain dangerous phenomenon that in fact schools begin to "specialize in education of children with disabilities and enrol a growing number of students with disabilities whose problems become dominant at school" (Apanel, 2009, p. 176) and not every child can be included in an integrated class or mainstream school for the benefit of all. It occurs that school directors are under pressure exerted by parents and municipalities when they enrol in their charters more children with disabilities than they should. It may cause numerous problems and difficulties in fulfilling the needs of those children and it hinders proper care over an entire class. However, the most significant problem of integrated education, perceived by Apanel, is lack of well-prepared pedagogical staff in this type of school. Krause, stating that "in the time when regulation entered into force we did not have appropriate human resources to fulfil its conditions and we did not educate specialists prepared to work as supportive teachers" (Krause, 2004, p. 232), because "teachers who support pupils with special educational needs must have specialized competencies that in mainstream schools allow children with various dysfunctions (disabilities) as well as on various educational levels to fulfil the compulsory schooling obligation" (Pańczyk, 2002, p. 263).

Some modification of teachers' attitudes and improvement of their practical skills within a range of work with students, diagnosed as individuals requiring special education, were established in a project entitled "School for everyone" conducted in 51 mainstream schools. Al-Khamisy (2009, p. 174), describing the assumptions and the realization of the project, noticed that the most difficult problem for teachers who work with children with special educational needs is the increasing number of pupils in one class (mostly 30 individuals), who prevent fulfilling special needs of students with various degrees of disability. Cooperation with those teachers within the framework of the project as well as methodical help for them became the most useful in the following areas: development of individual educational programs for students with disabilities; assessment of students with a disability degree certificate; organizing at schools campus support groups consisting of teachers; helping teachers in contacts with parents of children with disabilities. The mentioned above author suggested obligatory introduction of a new model of education for teachers at all levels that accommodates the specificity of disability (Al-Khamisy, 2009, p. 182). The studies, focused on integrated education, were also related to identifying how the needs of children with disabilities within a range of their contact with peers without disabilities were met in integrated school. It was assumed that further psychosocial development of children with disabilities as well as their ability to live independently depended on fulfilling their needs (Wiśniewska, 2009, p. 163). The positive outcomes from good contact of children with disabilities with their colleagues without disabilities was outlined by Minczakiewicz who stated that "these contacts allow them to preserve psychological stability and to go through the particular stages of social life that in the future will help them with better coping with difficult situations" (Minczakiewicz, 2000, p. 5). On the other hand Maciarz outlined that every child, despite his or her disability or dysfunction, like every child, wants to be loved and accepted, to achieve successes at school, to be accepted in peer groups, to participate actively in all events and activities in which their colleagues without disabilities participate (Maciarz, 1992, p. 14). The chance of meeting their needs is given to them by integrated education.

Wiśniewska, using the diagnostic poll method, tried to establish what are the needs of children with disabilities within a range of initiating and sustaining social contacts with other children at primary schools. She noted their significant diversity, depending on whether a child with disability was intellectually capable or not, or whether the child had additional behavioural disturbances. According to the results of her research, 44 percent of children with disabilities who were intellectually capable declared a large number of colleagues at school, whereas 83 percent of students with lower intellectual level stated that they have many peers. The same answer was provided by 50 percent of children with behavioural disturbances. As the author of the research wrote, in the case of students with a lower intellectual level, the differences within their answers were caused by the "unconsciousness of their own alterity" (being different from the others). Over a half of children with disabilities (56 percent) who were intellectually capable do not feel comfortable among their peers in the class (probably because of their low self-esteem). The majority of children with a lower

intellectual level (67 percent) felt well in their classes. Half of intellectually normal children preferred spending their breaks and free time with their peers without disabilities. In contrast, children whose intellectual level was low in the vast majority (77 percent) prefer the company of their peers with the same level of intellect and they chose their friends from the group of individuals with low intelligence (Wiśniewska, 2009, p. 73). A significant percentage of children with an average level of intellect (67 percent) admitted that they often had difficulties in establishing contacts with peers. The most common cause of difficulties in establishing social contacts by children with different types of disabilities with their peers was fear of rejection. It was found that despite numerous opportunities of initiating social contacts, a large number of students were not able to make contact with their peers without disabilities. The children with disabilities did not feel any acceptance and empathy from the others (Wiśniewska, 2009, p. 166). Therefore Krause sceptically noted that “also integration capabilities of the mainstream classes seemed to be, in many cases, illusive. That what seemed to be total integration became a trap within isolation and loneliness in misunderstanding, feeling different and worse than the others or funny” (Krause, 2004, p. 246).

Some information regarding causes of situation of children with disabilities in class rooms was provided by Rudek in her studies, conducted using a sociometric test in classes from the 4th to the 6th grade of elementary school. She stated that the position of children with disabilities depended on the type of disability as well as their personal characteristics. Children with disabilities but without behavioural disturbances were fully accepted and treated on equal rights with other students. Those children were also included in all matters of family life. In contrast, students with disabilities and behavioural disturbances, due to their personal characteristics such as quarrelsomeness and aggressiveness, were ranked lower and functioned usually on the fringes of the class, being isolated. They were kept away from significant problems for the majority of students and very often their behaviours were not accepted. The lower-level position was occupied by children with speech impediments and hearing impairments, because they were perceived as an obstacle in the process of communication with their peers (Rudek, 2005, p. 165).

Parents' perceptions of integrated education

The functioning of individuals with disabilities in the system of integrated education was investigated mainly through research conducted among teachers as well as students and persons who embodied the idea of integration in particular social conditions. There were not many studies indicating parents' attitudes towards the implementation of the idea of integrated education or describing their feelings and beliefs related to experiencing that idea by their children. Kazanowski in his study investigated the changes in attitudes of parents and children towards integration of students with intellectual disabilities at school. According to the results of his research, the parents interviewed had more positive attitudes towards the idea of integrated education of children with intellectual disabilities than their children (Kazanowski, 2011, p. 300). He stated that “individuals representing the generation of parents significantly more often than the generation of their children acknowledge that children with disabilities who attend integrated classes easily establish relationships with their peers out of school” (Kazanowski, 2011, p. 302). The most significant barriers which obstruct the engagement in supporting the concept of educating children with intellectual disabilities with peers without disabilities, in the perception of the both interviewed groups were “the requirement of teachers to devote more time to them than it is possible” and “probability that a child with disability would be isolated by pupils at an elementary school”. Moreover, from the results of his research it could be concluded that mothers were more convinced than their sons that integration of a child with intellectual disabilities is conducive to his independence and also positively effects peers without disabilities (Kazanowski, 2011, p. 307).

In order to explore parents' perception within a range of integrated education in 2012, a survey was conducted among 100 parents whose children attended institutions such as kindergartens or elementary classes of primary schools in the Opole district. Half of the people interviewed were parents of children with disabilities and the second half were parents of children without disabilities

The individuals, being asked about the idea (mission) that was implemented in integrated schools, similarly declared (approximately 40 percent in each group) that the above mentioned idea was teaching tolerance and acceptance for people with disabilities (table 1.). There appeared some differences between the answers given by the interviewed groups regarding the explanation of the term “mission”. For instance, parents of children without disabilities (28 percent) defined the term “mission” mainly as “inculcate respect and empathy towards people with disabilities”, whereas parents of children with disabilities (48 percent) explained it as “equality”. The statements were definitely related to the personal needs and

beliefs of the parents interviewed and proved that they were very aware of the general idea which became the basis for organizing integrated education.

TABLE 1. Mission implemented by integrated education institutions in the perception of the interviewed parents

Specification	Answers of parents					
	Parents of children without disabilities		Parents of children with disabilities		Total	
	N = 50	%	N = 50	%	N = 100	%
Teaching acceptance and tolerance for individuals with disabilities	20	40.0	20	40.0	40	40.0
Inculcate respect and empathy towards people with disabilities	14	28.0	4	8.0	20	20.0
Equality	6	12.0	24	48.0	30	30.0
Better development of individuals with disabilities	4	8.0	6	12.0	10	10.0
Education without dividing people and without prejudice	4	8.0	2	4.0	6	6.0

Attention: the percentages do not sum up to 100 percent because respondents could pick more than one answer.

The description of benefits of integrated education for children in the perception of their parents for both of the interviewed groups is presented in Table 2. The statistical data included in table 2 allow stating that the results of the research conducted were strongly diversified. Parents of children without disabilities distinguished the following important benefits of integrated education: “learning of tolerance and acceptance towards people with disabilities” (46 percent) and “greater sensitivity to the needs of individuals with disabilities” (30 percent) as well as “learning how to help others” (24 percent). In turn, parents of children with disabilities perceived integrated education as “specialist care” (44 percent) and “the possibility for better development in a normal environment” (32 percent).

TABLE 2. Benefits for children attending integrated education institutions in the perception of parents

Specification	Answers of parents			
	Parents of children without disabilities		Parents of children with disabilities	
	N = 50	%	N = 50	%
Greater sensitivity to the needs of individuals with disabilities	15	30.0	0	0
Better understanding of disability	7	14.0	0	0
Learning of perseverance and patience	6	12.0	0	0
Learning of tolerance and acceptance towards people with disabilities	23	46.0	0	0
Learning how to help the others	12	24.0	0	0
Specialist care	3	6.0	22	44.0
Chance for a new friendship	2	4.0	2	4.0
Sense of being accepted	0	0	10	20.0
Possibility for better development in a normal environment	0	0	16	32.0
Living with peers without disabilities	0	0	6	12.0
Self-acceptance	0	0	5	10.0

Attention: the percentages do not sum up to 100 percent because respondents could pick more than one answer.

Moreover, it was found that 92 percent of parents, whose children had disabilities, were “very satisfied” with integrated education, whereas 8 percent of them were “fairly satisfied”. In contrast, 84 percent of parents whose children without disabilities were “very satisfied” with integrated education and 16 percent were “fairly satisfied”.

Among the tasks fulfilled by integrated education the parents interviewed outlined “compensating deficiencies within the

intellectual sphere” as well as “stimulation of socio-emotional development”. The above findings were illustrated by the following statements: “I am very satisfied with the progress made by my daughter in learning. Now she began to work better and to cooperate. Since we have started attending Braille course we noticed that she has made considerable progress. She already knows the entire Braille alphabet and wants to learn it on her own. Now our daughter likes spending time with her peers. Before it was definitely worse. She did not initiate any contact with other children. Now it is changing and sometimes our daughter gets involved in playing with other peers” (the literal utterance of a mother who has a blind daughter).

Another example of parents’ opinions regarding integrated education was the case of a mother who had a son with cerebral palsy. The mother interviewed, being asked about the progress made by her child attending an integrated education institution stated that: “Now my child establishes relationships easily. He learns faster. He became more independent and outgoing. He is more physically active. He can work longer, for instance, he draws more”. In the meantime the mother of a girl with autism said: “It wasn’t easy at all. A child with autism in a classroom becomes a real challenge for everyone. I overcame the resistance and fear felt by teachers, because I believed that a regular school is the right place for my daughter. I knew that my daughter was smart and intelligent and that she would cope at school. We achieved that goal. Today I know that restoration of child’s ability to function wouldn’t be possible without attending regular school and contacts with other peers”.

The statements of parents with children without disabilities outlined the possibility of teaching them how to help the others. The best exemplification of the above mentioned parents’ position were the following statements: “Our child learns how to get to know life “with defect” and how to help and take care of such children”. It is to our children’s benefit - so when they meet such children in their everyday life they wouldn’t ask them and their parents some unnecessary questions”; “My child gains a lot while attending integrated class, because he learns how to cooperate with other children and how to help the others”.

Parents of children with disabilities, describing their progress related to integrated education, mainly emphasised that their child “has better communication skills with other people” (82 percent), “overcame fear of their peers and more often plays with them” (80 percent). Different point of view was presented by parents of children without disabilities who stated that one of the most positive outcomes from their children’s participation in integrated education was that they learnt to “accept children with disabilities” (84 percent), “how to help them with performing independently activities of daily living” (60 percent), “how to cheer them up when they are sad” (70 percent) as well as “how to protect them against any harm done by children who don’t understand what disability is” (60 percent).

From the perspective of parents of non-disabled children among the negative effects of integrated education were the following arguments: “children without disabilities can feel fear of non-typical behaviours of children with disabilities” (60 percent), “problems, caused by challenging behaviours of children with disabilities, can occur during classes” (20 percent) and “there can be time constraints in effective influence on children with and without disabilities” (50 percent). Amidst propositions which could improve the effectiveness of work in integrated classes, the parents interviewed suggested specialised courses for teachers and pedagogues as well as change of architectural conditions, especially removal of existing obstacles, including architectural barriers and montage of new elevators.

Discussion

The aim of the presented paper was to describe the results of research on parents' perceptions of integrated education in Poland. The findings can be summarized as follows. First, the results of research indicated that 92 percent of parents whose children had disabilities were "very satisfied" and 8 percent of them were "fairly satisfied". Furthermore, 84 percent of parents who had children without disabilities were "very satisfied" with integrated education, whereas 16 percent of them were "fairly satisfied". Second, 82 percent of parents of children with disabilities, who were asked to describe their progress related to integrated education, outlined that their children had better communication skills with other people. Moreover 80 percent of those parents stated that their children overcame fear of their peers and more often played with them. A different stand was taken by parents of children without disabilities. 84 percent of them claimed that one of the most positive outcomes from their children's participation in integrated education was that they learnt to how to accept children with disabilities. In addition, 60 percent of those parents stated that they learnt how to help their children with performing independently activities of daily living. 70 percent of parents whose children were without disabilities declared that they also learnt how to cheer them up when they are sad and 60 percent of them learnt how to protect them against any harm done by children who don't understand what disability is. Third, among the most important benefits of integrated education, parents of children with disabilities listed specialist care (44 percent) and the possibility for better development in a normal environment (32 percent). In contrast, parents of children without disabilities distinguished the following important benefits of integrated education: learning of tolerance and acceptance towards people with disabilities (46 percent) and greater sensitivity to the needs of individuals with disabilities (30 percent) as well as learning how to help others (24 percent).

While considering the results of this study it is noteworthy to emphasise that there were not many research works indicating parents' attitudes towards the implementation of the idea of integrated education. The above findings partly support the results of research conducted by Kazanowski, in which he found that parents had more positive attitudes towards the idea of integrated education of children with intellectual disabilities than their children (Kazanowski, 2011, p. 300). Moreover, the results gained also confirm the findings of the study conducted by Hanline and Halvorsen who found that although parents of children with disabilities identified areas of concern, they consistently expressed satisfaction regarding the outcomes of integrating their child, including professional and personal support (Hanline & Halvorsen, 1989, p. 487). Regarding the results, related to satisfaction from integrated education declared by parents who had children without disabilities, they seem to be similar to the findings of Peck, et al. who stated that 389 parents indicated that they generally perceived their non-disabled child to have benefited from this experience (Peck, et al., 2004, p. 135).

The results of the research conducted indicate a few implications for parents, as well as for teachers. First, parents of children with disabilities and their peers without disabilities should more constructively use their positive attitudes towards the idea of integrated education to encourage pupils to cooperate with their peers and teachers. Second, teachers must more often question pupils and parents about their fears associated with children's functioning in the classroom. Third, parents must ensure that children have more occasions to meet with their peers after classes to share some common interests. Fourth, teachers must be more involved in activities where parents and their children can participate together.

Although the results of this study indicate some useful implications a few limitations must be acknowledged. Because of the lack of present statistical data on the population of children with disabilities and their families living in Poland snowball sampling was used in this study. Despite the fact that the non-probability sample cannot be used to relate it to the general population, the results are still noteworthy and some assumptions can be made. Another limitation is that the studies were only focused on parents. The particular sample was chosen intentionally as our intention was to focus only on parents and their perceptions of integrated education in Poland. Although we did not create any theoretical construct within a range of parents' perceptions of integrated education we hope that researchers will undertake further investigations, improve and evaluate the empirical findings in this paper.

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