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Special Education Teachers' Sense of Efficacy and Reading Achievement of Students with Severe Disabilities

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COLLEGE OF EDUCATION

This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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2016

Abstract

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MA, Teachers College, Columbia University, 2012

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Dissertation Submitted in Partial Fulfillment

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Abstract

Assessment scores indicated students with severe disabilities (SWSD) have not been performing to their maximum potential, which may lead to lower quality of life after graduation. Teacher efficacy has been shown to impact student achievement; thus, this study involved exploring the teacher efficacy of the teachers of SWSD. Tschannen-Moran, Woolfolk Hoy, and Hoy's teacher efficacy conceptual framework guided this nonexperimental correlation study to investigate if levels of self-efficacy, years of overall teaching experience, and years of teaching experience with Grade 3 to 8 SWSD were predictors of student reading achievement in a New York City school district. Two open-ended questions were added to explore challenges teachers of SWSD encounter. Student New York State Alternate Assessment (NYSAA) scores were collected from all classroom teachers of students who participated in the 2014-2015 NYSAA at the study site. A regression analysis indicated no significant relationship between teachers' sense of efficacy and the achievement of SWSD in the area of literacy. TSES responses were triangulated using data from 2 open-ended questions, which revealed that teachers face specific challenges when educating students with severe disabilities. At the organizational level, changes to address the needs of teachers could be made to address the challenges found in this study. Positive social change will occur by helping to inform new policies that will reduce challenges indicated by teachers of SWSD and address the needs of teachers to improve the education of SWSD.

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Dedication

This doctoral project study and my doctorate degree are dedicated to my wonderful family, colleagues, and students past, present, and future. To my family, your unending support and love has fueled my perseverance. To the dedicated individuals I have been blessed to call colleagues, I am inspired by your abilities to bring happiness into the lives of your students. Lastly, to the students who have changed my life. I thank you for entrusting me to provide you guidance and knowledge to develop you into the wonderful individuals you are.

Acknowledgments

Thank you God for this accomplishment and blessing me with wonderful individuals throughout my life. “In his grace, God has given us different gifts for doing certain things well. So if God has given you the ability to prophesy, speak out with as much faith as God has given you. If your gift is serving others, serve them well. If you are a teacher, teach well. If your gift is to encourage others, be encouraging. If it is giving, give generously. If God has given you leadership ability, take the responsibility seriously. And if you have a gift for showing kindness to others, do it gladly.” Romans 12:6-8

I must thank my loving family for their support. Endless gratitude to Michael, my father and Phyllis, my mother for relentlessly reminding me of the end result and never accepting less than what they knew I could achieve. My appreciation to Jennie and Mikey for being not only siblings but built-in best friends. I am truly blessed to still have my grandparents Gus and Rita who’s pride in their grandchildren, and in my achievements, has driven me to this achievement. For my husband Andrew, with constant support, love, and listening. I love you forever. Lastly, to my future son Beckett for providing me with the inspiration and dedication to pursue my goals.

Thanks to my committee members, Dr. Miller, Dr. Schroll, and Dr. Jameson, the Cadillac of committees. Dr. Miller, we have been through so much together throughout these few years, and I am so thankful we experienced it together. I sincerely hope this doctoral project study, which has made such a huge impact on my life, will also impact the lives of other educators and students, specifically students with severe disabilities.

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Chapter 1: Introduction to the Study

Over the last 50 years, national and state-level legislation has been enacted to ensure that students with disabilities receive the support they need in the educational setting as a means of enabling them to attain identified standards of achievement. Among these pieces of legislation, the most notable are (a) the Elementary and Secondary Education Act (1965) and its subsequent reform reauthorization as the No Child Left Behind (NCLB) Act of 2001 (2002); (b) the Rehabilitation Act (Section 504; 1973), (c) the Education for All Handicapped Children Act (1975) and its subsequent reauthorizations as the Individuals with Disabilities Education Act (IDEA, 1997, 2004); and (d) the Americans with Disabilities Act (1990).

Owing to these changes, and, in particular, the introduction of IDEA and NCLB, student achievement has become the focus of educational initiatives (Lee & Reeves, 2012), resulting in many standards against which achievement is assessed (Sadler, 2014). NCLB (2002) authorized that schools afford students with disabilities access to the same general education curriculum as that available to their regular education peers. As discussed by Kleinert et al. (2015), NCLB required yearly student performance assessments in Grades 3 through 8 (and once in high school) on content linked to grade-level standards, while IDEA required all students with disabilities access to the general curriculum.

The purpose of this inclusion is to afford these students with the opportunity to demonstrate, based on statewide assessments, adequate yearly progress, along with their peers in regular education classrooms. Because the 2004 reauthorization of IDEA

included the alignment of IDEA with NCLB, their mandates were similar concerning achievement and assessment of students with disabilities (United States Department of Education, 2007). More specifically, IDEA (2004) mandated that all students with disabilities, even those with severe disabilities, be provided the opportunities to meet performance goals and make gains towards the state-level standards. Also, IDEA (2004) included a condition that students with disabilities can be evaluated using alternate assessment methods. Despite such efforts, students with severe disabilities have often failed to perform to the highest measures of achievement on alternate assessments (Browder et al., 2008).

Problem Statement

Literacy is a necessary component to enhance the quality of life of individuals with disabilities (Moni, Jobling, Morgan, & Lloyd, 2011); however, 85% of students with severe disabilities are not fluent readers (Thurlow et al., 2014). Research is needed to address the gap in literacy for students with severe disabilities to increase their quality of life and independence. According to Brault (2012), in 2010, approximately 38.3 million individuals living in the United States were reported as having a severe disability. Also, 28.6% of the severely disabled population aged 15 to 64 were living in poverty, compared to 17.9% and 14.3% for those with nonsevere disabilities and nondisabled individuals, respectively (Brault, 2012). Furthermore, 10.8% of this group had experienced chronic poverty consistently for 2 years, compared to 4.9% and 3.8% noted for those with nonsevere disabilities and nondisabled individuals, respectively (Brault,

2012). The author posited that this condition was likely the result of poor employment outcomes in this segment of U.S. society.

Brault (2012) further noted that, of the approximately 38.3 million people who were reported as having a severe disability in 2010, approximately 20.3 million were aged 21 to 64, and could thus be considered workforce appropriate. However, only 27.5% of these individuals were employed, compared to 71.2% and 79.1%, respectively, of adults with non-severe disabilities and those without disabilities in the same age group (Brault, 2012). The author further noted that only 9.0% of individuals with severe disabilities who were receiving Social Security or Medicare were employed. Prolonged periods of unemployment were also more common in this population. Also, the median monthly earning reported for severely disabled individuals was $1,577, compared to $2,402 noted for employed individuals with nonsevere disabilities (Brault, 2012). These statistics demonstrated that adults with severe disabilities would be likely to have poor employment record, low income, and diminished quality of life.

Ntiri (2012) found that literacy can serve as an instrument for the reproduction of social inequality and leads to better access to opportunities over individuals who remain illiterate. Spooner and Browder (2015) stated it is a fundamental goal for every child to have the opportunity to learn to read regardless of IQ or disability label. However, only 15% of students with severe disabilities are fluent readers (Thurlow et al., 2014). Additionally, McNaughton, Jacobson, and Kripalani (2014) found low literacy has negative effects on one's health. Literacy is independently associated with uncontrolled blood pressure (McNaughton et al., 2014). In furtherance of increasing the likelihood that

students with severe disabilities would find and maintain gainful employment in adulthood, and achieve a healthier and improved quality of life, it is necessary to provide them with every possible opportunity to succeed to their fullest potential while in school.

Moni et al. (2011) posited that literacy has the potential to enhance the quality of life of individuals with disabilities considerably, as they benefit both academically and emotionally. Literacy assists them in the development of problem-solving skills, choice making, independence, and communication, all of which enable greater participation in their community. According to Brault (2012), the most current U.S. Census Bureau household economic data yielded by the Survey of Income and Program Participation revealed that people with severe disabilities had a higher inclination to be unemployed, had lower income, and lived in poverty when compared to individuals with nonsevere disabilities or the nondisabled population.

Empirical evidence indicated that high levels of teacher efficacy (a teacher's belief in his or her capacity to teach) have a great potential to help students with severe disabilities reach their highest potential. In their early work, Tschannen-Moran and Woolfolk Hoy (2001) noted that teachers' sense of efficacy proved to be powerfully related to many educational student outcomes including achievement. More recently, Cantrell, Almasi, Carter, and Rintamaa (2013), Guo, Piasta, Justice, and Kaderavek (2010), and Guo, Dynia, Pelatti, and Justice (2014) reported similar relationships between teachers' sense of efficacy and student achievement. Based on the strength and longevity of the research that has demonstrated a positive relationship between teachers' sense of efficacy and student achievement, this variable cannot be overlooked as a potential means

of improving the academic achievement of students with severe disabilities at the study site. For this reason, an exploration of the relationship between teacher efficacy and student achievement was warranted at the study site in New York City.

Research to Practice Gap

The push to improve the nation's schools requires finding ways to eliminate the strategy implementation gap and to replicate those methods in schools and districts across the country. As stated by Ruppar, Gaffney, and Dymond (2015), due to the requirement for standards-based instruction, further attention has been dedicated to conceptualizing methodologies and strategies to literacy for students with severe disabilities. Thus, the factors that influence teachers' change in instruction must be clear for improving teacher practices and increasing all students' academic outcomes.

Understanding the impact of certain variables on teachers' motivations about effective teaching strategies in the classroom may help more teachers change their instructional practices. Moreover, students with severe disabilities often require more intensive instruction by teachers with particular knowledge and skills to best educate students with severe disabilities (Kurth, Lyon, & Shogren, 2015) to enable students to connect new learning to previous knowledge, acquire new thoughts and skills, and make predictions regarding future learning. Teachers may be influenced by both personal beliefs and workplace contexts. The beliefs of a teacher's efficacy influence his or her criteria for making decisions, which can change depending on the context or the event. Special education teachers' beliefs about their teaching skills and their expectations

concerning student achievement have been identified as a potential influence to their decisions (Ruppar et al., 2015).

Authors of educational studies have continued to point to best practices for special education teachers to increase the effectiveness of their instruction with students with disabilities. The problem lies in the knowledge-to-practice gap (Ruppar et al., 2015). This gap exists between the best research-based special education teaching practices that teachers know and specific teacher behaviors in the classroom; closing this gap may result in positive student outcomes. Teachers' behaviors may be affected directly by perceptions about their teaching skills and their students' abilities and behavior (Ruppar et al., 2015). Thus, determining if teacher efficacy impacts students with severe disabilities' reading achievement helps to close the research-to-practice gap that is resulting in low literacy rates for students with severe disabilities.

Purpose of the Study

The purpose of this study was to explore the relationship between perceived sense of efficacy of teachers who teach students with severe disabilities in Grades 3 through 8 and reading achievement of that student population. I chose reading achievement as the outcome measure in this study because, according to the findings reported in the pertinent literature, literacy is a fundamental skill associated with gaining knowledge (Keefe & Copeland, 2011). It was beneficial to know the current level of self-efficacy at the study site. Thus, gaining an in-depth understanding of the way teacher efficacy affects student outcomes at the study site may help school administrators develop strategies for improving student outcomes by enhancing teacher self-efficacy.

Specifically, the study findings have the potential to promote changes within the school structure, thus benefitting the student population. The results yielded by this study demonstrated that teacher efficacy was not directly related to student achievement in reading; however, further data analysis of the open-ended question highlighted the difficulties in educating students with severe disabilities. The results would be beneficial to administrators, especially at this site, where the teachers teach students with severe disabilities. Students with severe disabilities require explicit and highly specialized instruction to enhance the instruction or materials needed to best educate them; additionally, the teachers require specialized support in teaching them. Consequently, students with severe disabilities would also benefit, as their potential to improve academic outcomes may increase. Moreover, improving outcomes for students with severe disabilities has important implications for social change, as discussed in the Significance of the Study section.

Nature of the Study

This study was conducted using a cross-sectional survey design to examine the relationship between teachers' sense of efficacy and their students' academic achievement in reading, focusing on students with severe disabilities in Grades 3 to 8. The impact of overall years of teaching experience, as well as years of teaching experience and years of teaching experience with the target population, on that relationship was also be explored.

Research Question

The following research question was developed to guide this study:

How does overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) relate to student academic achievement in reading in Grades 3 through 8 for students with severe disabilities?

$H_0$1: Overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) is not a strong predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities.

H_a1: Overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) is a strong predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities.

The Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001) served as the data collection instrument in this study. I used the gathered data to answer the research question. Items about participant demographics were added to the TSES, as it helped ascertain the level of teaching experience and thus answer the research question while controlling for years teaching and years teaching the target population. Archival data about the 2014-2015 student reading scores on the New York State Alternate Assessment (NYSAA) were used as a source of information and were accessed from the study site. The gathered data helped answer the research question. Regression analysis was conducted to address the research question.

To provide additional support for this inquiry, I presented the following open-ended questions to the target special education teachers at the study site: (a)What do you feel is most challenging in teaching students with severe disabilities? (b)What do you feel is most challenging in teaching reading to students with severe disabilities? These two open-ended questions were posed to provide additional meaningful data to address a gap in practice for teachers of students with severe disabilities and those students' achievements in addition to the closed-ended items collected via the survey.

Theoretical Framework

As a theoretical model framing this study, I used Tschannen-Moran, Woolfolk Hoy, and Hoy's (1998) theory of teacher efficacy. Tschannen-Moran et al.'s theory of teacher efficacy utilized Bandura's (1977) theory of self-efficacy and social cognitive theory. Tschannen-Moran et al. theorized that teacher's perceived sense of efficacy stems from the combination of his or her determination to apply the available resources and strategies to bring about a particular result and a belief in his or her capacity to teach at the present moment. The consequences of any accomplishment serve as evidence of outcome performances, which, in a cyclical fashion, become new sources of efficacy information. Most notably, outcome performances serve as new mastery experiences that will likely be interpreted as evidence of personal teaching competence. The authors further indicated that, over time, the repetition of positive teaching experiences helps teachers develop a stable sense of efficacy in their capacity to teach.

The TSES was created by Tschannen-Moran and Woolfolk Hoy (2001) to measure a teacher's perceptions of efficacy. As stated by Tschannen-Moran and

Woolfolk Hoy, teacher efficacy refers to a "teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 233). A further analysis of the theoretical framework will be conducted in Chapter 2.

Operational Definitions

Assessment: In the educational setting, an assessment typically is understood to be either a formative or summative measurement that is conducted to determine the extent of learning that has occurred (Wiliam, 2011). Assessment of students with the most significant cognitive disabilities includes participation in an alternate assessment, which is based on achievement standards aligned with their characteristics and learning potential (Lazarus, Edwards, Thurlow, & Hodgson, 2014). In this study, I considered student performance based on scores from an alternative assessment for students with severe disabilities.

Efficacy: Self-efficacy is an individual's belief about his or her ability to accomplish a task (Bandura, 1997). When developing scales of perceived self-efficacy, Bandura (2006) indicated that it is important to tailor these to the area of research interest. The focus of this study was teacher efficacy and its effects on student performance. Thus, teacher sense of efficacy is aligned with the definition given by Tschannen-Moran and Woolfolk Hoy (2001); that is, it refers to a teacher's perspective or belief that he or she is proficient in teaching. In particular, the authors identified three aspects of teacher sense of efficacy, namely efficacy in student engagement, efficacy in

instructional strategies, and efficacy in classroom management. Hence, these three aspects of teacher sense of efficacy are considered for this study.

Severe disabilities: According to National Dissemination Center for Children with Disabilities (2004), individuals with severe disabilities have been traditionally categorized as severely or profoundly mentally retarded. This population typically has

> limited cognitive abilities combined with behavioral and/or physical limitations and who require highly specialized education, social, psychological and medical services in order to maximize their full potential for useful and meaningful participation in society and for self-fulfillment. Students with severe disabilities may experience severe speech, language, and/or perceptual-cognitive impairments, and evidence challenging behaviors that interfere with learning and socialization opportunities. These students may also have extremely fragile physiological conditions and may require personal care, physical/verbal supports and/or prompts and assistive technology devices. (New York State Education Department [NYSED], 2015a, Section t.2.iv)

Scope and Delimitations

This scope of this study was limited to teacher efficacy in teaching reading, years of teaching experience, years of teaching experience with the target population, and students' NYSAA reading scores. Although researchers have found gender to affect teacher efficacy (Klassen & Chiu, 2010), I did not choose it as a variable in this study because the majority of teachers at the study site were women. Teacher age was not considered in this study either, as extant literature provided ample evidence indicating

that age is not a factor in determining teacher efficacy (e.g., Hicks, 2012; Shazadi, Khatoon, Aziz, & Hassan, 2011).

An exploration of teacher efficacy in teaching reading was a logical choice for an independent variable in this study. Literacy is essential for individuals to make educational gains (Keefe & Cooperland, 2011) and for them to become more independent and functional citizens (Tuckman & Harper, 2012). For this same reason, and to be able to correlate teacher efficacy with appropriately related student outcomes, students' reading scores on the NYSAA were chosen as the dependent variable in this study. Scores on other NYSAA subject area tests were not considered for this study because only teacher efficacy in teaching reading was explored as an independent variable.

Several interrelated conditions contributed to the decision to include years of teaching experience as an independent variable in this study. First, research was readily available on the relationship between teacher efficacy and a variety of outcome variables, whereas there was an evident paucity of studies on the predictive factors related to teacher efficacy (Pas, Bradshaw, & Hershfeldt, 2012). Second, empirical evidence has shown that years of teaching experience can have an impact on teacher efficacy, although the relationship between the two may not always be linear (e.g., Klassen & Chiu, 2010). Third, it is possible that, if findings yielded by data analyses failed to demonstrate a relationship between years of teaching experience and teacher efficacy, this outcome arose because the data were collected during the spring when levels of teacher efficacy tended to be low, as was the case in the work conducted by Pas et al. (2012). Thus, it could have been possible that the impact of teaching experience on teacher efficacy is

underestimated. These conditions combined warranted the inclusion of years of teaching experience as a variable in this study.

In preparation for this study, I conducted a thorough examination of the literature to explore the relationship between years of teaching students with severe disabilities and teacher efficacy, which did not yield any relevant studies. However, based on the evidence indicating a relationship between years of teaching experience in general and teacher efficacy, the decision to include years of teaching experience with students with severe disabilities as an independent variable in this study appeared to be a next logical step.

This study was delimited to teachers at the study site who taught reading for Grades 3 through 8 and who taught at the study site during the 2014-2015 academic school year. Only teachers who taught reading were invited to take part in this study because the research focused on teacher efficacy as it pertains to teaching reading. Only teachers of Grades 3 through 8 were considered as potential study participants because students in these grades received a similarly formatted multiple choice NYSAA while the secondary level NYSAA was an essay format assessment.

Only teachers who taught at the study site during the 2014-2015 academic school year were considered for this study, as this ensured that the most accurate data on teachers' sense of efficacy were collected. Expecting teachers to recall accurately their perceptions about their sense of efficacy during the 12 months before participating in this study was reasonable. However, extending this period further would likely increase the margin of error in the accuracy of their recall.

Assumptions

One important assumption was made in this study, which was that teachers would respond honestly to the instrument items. However, it was acknowledged that one condition in particular may have contributed to teachers' lack of honesty when responding to the instrument items. Because I was a teacher at the study site when I conducted this study, I was well known to all teachers, and this relationship may have affected the way the participants responded to instrument items. One's colleagues are likely inclined to respond in a way they feel will generate the most useful or positive data and help a project succeed. Also, teachers may have been concerned about the confidentiality of their responses and may thus have been reluctant to be open when responding to the survey. Hence, to mitigate the potential for these factors to affect the accuracy of the data gathered, teacher responses were matched with reading scores for the particular class code they taught in the 2014-2015 school year. Each teacher's class code was generated by the school and was used for tracking school data for the class. The code was only provided to the class teacher; thus, I was unable to match a teacher's name with their class code as their class code was unbeknownst to me. This did not potentially prevent teachers from taking part in the study.

Limitations

All research procedures, methods, and strategies have potential limitations (Creswell, 2012b). Thus, this study was also subject to several limitations. The first limitation was that the data collection instrument employed in this research was developed to collect data on teacher efficacy in the context of general education, rather

than when teaching reading to students with disabilities. Although Tschannen-Moran, one of the authors of the instrument employed in this study, collaborated with Johnson (as cited by Tschannen-Moran & Johnson, 2011) to design a teacher efficacy scale specific to teaching literacy, this instrument was not suitable for the present study, despite being shown to be a valid measure of teacher efficacy for teaching literacy. However, it was a relatively new instrument (4 years old) and, to date, few studies have been conducted in which the instrument has been validated.

The next two limitations stem from the fact that the data were self-reported and based on retrospective events. These conditions are limitations because self-reported data may be biased (Rosenman, Tennekoon, & Hill, 2011), whereas retrospective data may be subject to response bias (Creswell, 2012a) and the fallibility of human memory (Edleson, Sharot, Dolan, & Dudai, 2011). However, self-reported and retrospective data are widely utilized in social science research and were thus accepted as a valid form of data collection (Brener, Billy, & Grady, 2003).

Another limitation was only 37 teachers were able to participate in this study. The majority of teachers, 33, were needed to participate for the regression to detect a medium effect size. The final response rate was 89%, as 33 out of 37 teachers submitted completed surveys. The final limitation was that the results of this study were not generalizable to other populations. Data were collected from only one location, an alternate assessment school for students with severe disabilities, and only from teachers who taught Grades 3 through 8. Also, as the study participants were selected via convenience sampling, the teachers were not randomly selected.

Significance of the Study

The need to conduct research aiming to identify factors that can result in the improvement of academic performance of students with severe disabilities was supported by the findings reported in the extant literature. Rather than concentrating solely on enhancing functional skills of students with severe disabilities, as has been suggested in the past (e.g., Ayres, Lowrey, Douglas, & Sievers, 2011), researchers and educators have increasingly been focusing on the promotion of academic content (e.g., Courtade, Spooner, Browder, & Jimenez, 2012; Spooner & Browder, 2014). According to Courtade et al. (2012), "For the first time, educators are talking about helping students with severe disabilities become career or college ready . . . . Even if students do not attend college upon graduation, academic learning can enrich their overall adult lives" (p. 6). The authors further noted that the mastery of content material identified in curriculum standards, whether general or alternate, provides students with severe disabilities insight into the world beyond basic events of everyday life.

The available empirical evidence also supports the expectation that the students with severe disabilities at the study site can improve their performance. According to the College and Career Readiness and Success Center (2013), students with disabilities, in general, do not achieve to their fullest potential after leaving high school. This adverse outcome was likely the result of low expectations for this population, rather than limitations inherently posed by any particular disability. The perspective that higher expectations can lead to improved outcomes has been widely promoted in research on academic performance and also applies to students with severe disabilities, with regard to

both academic (e.g., Courtade et al., 2012; Spooner & Browder, 2014) and employment outcomes (Carter et al., 2010).

Finally, the positive link between teacher efficacy and expectations imposed on their students was also supported by many studies reported in the available literature. According to Shindler (2009), researchers have consistently found that teachers with high levels of efficacy in instructional techniques and strategies have great confidence in their students' capability to be successful. The author further assented that it is also likely that high levels of confidence in students' capacity to succeed positively impact on student achievement through mediating factors, such as teacher persistence, attitude, and effort.

This study was important because its findings can be used to prompt administrators at the research site to take action to improve levels of teacher efficacy. When administration supports the development of teacher efficacy through professional development, teacher efficacy is likely to increase (Lauer, Christopher, Firpo-Triplett, & Buchting, 2014). Because extant literature has shown that teacher efficacy is related to student outcomes (Chambers et al., 2013; Guo et al., 2014; Guo et al., 2010; Tschannen-Moran & Wookfolk Hoy, 2001), in part because teacher efficacy impacts expectations of student achievement (Shidler, 2009), improving levels of teacher efficacy could improve student outcomes in the focus school, in part by increasing expectations for students with severe disabilities. In particular, student achievement in reading could be enhanced, thus increasing the potential to gain skills in other subjects as well.

Improvement of reading skills for students with severe disabilities has important implications for social change. If students' skills in reading are improved at the

elementary and middle school levels, those students would be better prepared for reading requirements in subsequent stages in their education (Royster, Gross, & Hochbein, 2015). Moreover, if students perform better, it is likely that they will remain in school and graduate with their alternate high school diploma resulting in higher employment and a higher quality of life (Brault, 2012).

In addition to improved academic outcomes for students, enhanced reading skills at the elementary and middle school levels could translate to improved personal and social outcomes as well. Literacy is a fundamental skill associated with opportunities to (a) ensure one's safety; (b) improve one's health, participation in social situations, and overall well-being; and (c) enhance one's capacity to communicate, gain knowledge, and attain employment (Keefe & Copeland, 2011). Literacy also provides a means for these individuals to become more independent and functional citizens (Tuckman & Harper, 2012).

As demonstrated above, a variety of interconnected factors give this study relevance and value. By improving levels of teacher efficacy at the study site, it is possible that students are able to reach their full academic potential. More specifically, it is hoped that their achievement in reading may be improved, resulting in increasing overall quality of life for students with severe disabilities who attend the study site. Understanding the relationship between teacher efficacy and student achievement in reading at the focus school was the first step toward this greater goal.

Summary

Since 1965, special education legislation has been enacted to ensure that students with disabilities are provided opportunities to meet performance goals and make gains towards state-level standards. In some cases, the special education legislation includes the option that the achievement of students with disabilities is determined using alternate assessment modes. Despite such legislation, students with severe disabilities often fail to perform to their highest potential. At the study site, the relationship between teacher efficacy and the student assessment scores for students with severe disabilities in Grades 3 through 8, as measured on the NYSAA, was explored.

Failure of these students to achieve the highest levels in reading is cause for concern because literacy has been linked to numerous academic, personal, and social outcomes. Empirical evidence indicated that inadequate levels of literacy could result in a lower overall quality of life for students with severe disabilities. It is possible that inadequate levels of teacher efficacy are contributing to this less-than-optimal student performance. Hence, by increasing levels of teacher efficacy at the study site, student achievement in reading could potentially improve to Level 4, which would indicate that they met the alternate grade level achievement standards with distinction. For this reason, the relationship between teacher efficacy and student performance in reading was the focal point of this study. The results yielded by this study did not show a relationship between teacher efficacy and student performance in reading; however, they can be used to prompt change at the study site.

Chapter 2: Literature Review

Introduction

Numerous studies have provided compelling evidence to indicate students with severe disabilities are not achieving to their full potential in reading (Armor et al., 1976; Allinder, 1994; Block & Mangieri, 2003; Gibson & Dembo, 1984; Goodard & Goodard, 2001, Goddard, Hoy, & Woolfolk; 2000; Guo et al., 2010; Rodgers & Pinnell, 2002; Ross, 1992, Ross & Bruce, 2007, Tschannen-Moran & Johnson, 2011; Tschannen-Moran et al., 1998; Woolfolk & Hoy, 1990). These authors concluded that teacher efficacy correlates with student achievement. Therefore, the purpose of this study was to determine the strength of the relationship between self-efficacy and reading achievement for students with severe disabilities as determined by their NYSAA scores. More specifically, the study explored the relationship between teacher perceptions of self-efficacy in teaching reading to students with disabilities attending third to eighth grade. Before commencing the study, extant studies focusing on teacher self-efficacy in working with students with severe disabilities were reviewed. Searching multiple databases, namely EBSCOHost, ProQuest Dissertation and Theses database, ERIC, federal sites, and JSTOR, identified the pertinent sources. The search terms used included *self-efficacy, educational standards, teacher self-efficacy, and teacher efficacy and reading achievement, students with severe disabilities and literacy,* and *alternate assessment.*

In addition to the findings yielded by the aforementioned search, multiple theories of self-efficacy and teachers' self-efficacy were examined, in particular Bandura's (1986) social cognitive theory and its link to teacher self-efficacy. Determining a teacher's self-

efficacy involves self-assessment of a teachers' ability to influence student achievement (Mills, Pajares, & Herron, 2007). Hence, the review investigated the TSES and its strong relationship with teachers' incentive and enthusiasm, as well as student outcomes (Tschannen-Moran et al., 1998). More recently, Alkharusi, Aldhafri, Alnabhani, and Alkalbani (2014) reported findings that supported the link between teachers' perceptions of high self-efficacy and higher academic achievement of their students.

According to Swackhamer, Koellner, Basile, and Kimbrough (2009), extant research has shown a correlation between high levels of efficacy among educators and student academic achievement. Moreover, numerous studies have demonstrated that teachers with high levels of teacher efficacy have traits related to greater resilience as well as ability to adapt approaches and strategies in learning and enhance student autonomy (De Neve, Devos, & Tuytens, 2015).

While the body of research on the effects of teacher efficacy and student achievement in general is extensive, there is an evident paucity of studies that examined the relationship between teacher perceptions of self-efficacy with reading achievement among students with severe disabilities. This is an evident gap in practice and extant knowledge, confirming the need for the present study. Consequently, the literature review commences with the discussion of central theories and issues that support the main research question. This is followed by the review of literature sources focused on the relationship between teacher perceptions of self-efficacy and student academic achievement in reading for students with severe disabilities.

Theoretical Foundation

Tschannen-Moran et al.'s (1998) theory of teacher efficacy was adopted as the theoretical framework for this study. This theory is founded on social cognitive theory (Bandura, 1977, 1986, 1997), a universal framework for comprehending human motivation, learning, and behavior. Social cognitive theory is predicated on two critical premises: (a) people can and do make decisions about their behavior based on environmental and psychological cues (Bandura, 1977); and (b) mediating factors influence the degree to which those cues impact human behavior (Bandura, 1982). Self-efficacy is the most important mediating factor and is central to the social cognitive theory because it indicates a person's belief in his or her ability to accomplish various tasks (Bandura, 1993). In other words, according to Bandura (1982), people's beliefs determine and affect their behavior. The author further posited that the greater a person's belief in his or her capability to accomplish a task, the greater the likelihood that the person will attempt to accomplish the task and the greater likelihood that the person will accomplish the task.

In his earlier work, Bandura (1977) observed that, within the social cognitive model, efficacy expectations are distinguished from outcome expectations. More specifically, the author pointed out that, while efficacy (self-efficacy) expectations refer to the expectations that a person has about his or her ability to perform a task through certain behaviors, outcome expectations refer to the expectation that, in general, those behaviors will bring about the accomplishment of a certain task. In other words, irrespective of the strength of a person's belief that a behavior will bring about the

accomplishment of a certain task (outcome expectancy), if that person does not believe that he or she can accomplish a certain task (self-efficacy), that person will not be motivated to act and, therefore, will not likely take necessary action to accomplish a task.

Bandura (1977) further noted that self-efficacy is shaped in four fundamental ways, that is, through mastery experiences, vicarious experiences, social persuasion, and physiological and emotional states. Mastery experiences (performance accomplishments) refer to the interpretations individuals make of their past performances. When a performance outcome is interpreted as positive, a person's self-efficacy in his or her capacity to accomplish that outcome again is increased, whereby that person is likely to attempt to accomplish that or other similar tasks again. Vicarious experiences, according to Bandura (1977), refer to experiences acquired by seeing the successes and mistakes of others. Avoiding the mistakes of others and interpreting the success of others into potential success for the observer may improve a person's self-efficacy regarding an observed task. Finally, according to this model, social and verbal persuasion refers to the persuasive meanings individuals get from others whom they trust. When a person is reassured of his/her ability to accomplish a task, that person's self-efficacy may increase (Bandura, 1993). On the other hand, a person's self-efficacy is less likely to increase when social and verbal persuasion occurs in isolation, and benefits when these are accompanied by the tools needed to accomplish the task in question, or when the person being persuaded already possesses those tools (Bandura, 1977). Physiological and emotional conditions refer to individuals' somatic and emotional reactions about their performance (Bandura, 1977). According to Bandura (1977), stress, fatigue, or anxiety,

for example, may affect the person's interpretation of his or her capacity to accomplish a task, resulting in a diminished self-efficacy.

In his subsequent work, Bandura (1993) revealed that cognitive, motivational, affective, and selective processes serve as additional mediating factors that influence the degree to which environmental and psychological cues affect human behavior by mediating the relationship between self-efficacy and task behavior. These processes help determine how people think about accomplishing tasks, the manner in which they are motivated to accomplish tasks, how they feel about accomplishing certain tasks, and the way people choose to behave to accomplish particular tasks (Bandura, 1993).

Similar to Bandura (1993), Tschannen-Moran et al. (1998) theorized that teacher efficacy is influenced by mastery experiences, vicarious experiences, social persuasion, and physiological arousal. However, Tschannen-Moran et al. recognized that teachers' levels of efficacy are context specific. In other words, teachers' perceptions of their capacity to teach vary depending on the analysis and interpretation (cognitive processing) of those four influencing factors (Tschannen-Moran et al., 1998). More specifically, the authors posited that analysis of the teaching task and its contents, and evaluation of personal teaching competency, serve as mediators between the information based on sources of efficacy and perceived sense of teacher efficacy.

When assessing their aptitude for performing their role, teachers may consider many aspects related to the teaching task and its contents. According to Tschannen-Moran et al. (1998), considerations about the teaching task comprise factors such as a students' capabilities, skills and motivation, fitting and relevant instructional strategies,

administrative concerns, the accessibility, convenience, and quality of instructional materials, access to technology, and the educational environment. On the other hand, considerations about the context of the task include the principal's capacity for leadership, the school climate, and the supportiveness of a teacher's peers. While not strictly congruent, the results yielded by analyses of the teaching task and content are similar in nature to Bandura's (1977) construct of outcome expectancy and Gibson and Dembo's (1984) construct general teacher efficacy. Bandura proposed that outcome expectation is a person's belief that engaging in particular behavior will result in a particular outcome, whereas Gibson and Dembo posited that general teacher efficacy is a teacher's belief that engaging in a particular teaching behavior will result in a particular learning outcome. In other words, when teachers analyze the teaching task and content, they determine the potential for available means to be applied to bring about a particular result.

Tschannen-Moran et al. (1998) noted that personal teaching competence refers to a teacher's opinion of his or her current state of functioning. Their definition of personal teaching competence is, however, distinct from self-efficacy as proposed by Bandura (1977) and personal teaching efficacy proposed by Gibson and Dembo (1984). The distinction arises because these constructs refer to future rather than current conditions. More specifically, Bandura proposed that efficacy expectation (self-efficacy) is a person's belief in his or her capacity to accomplish a task, whereas Gibson and Dembo viewed personal teacher efficacy as a teacher's belief in his or her own capacity to accomplish a teaching-related task. However, in both cases, as Tschannen-Moran et al.

pointed out, the state of efficacy refers to a future condition. In contrast, in the model proposed by Tschannen-Moran et al., personal teaching competence, refers to the belief a teacher has in his or her capacity to teach at the present moment.

They further posted that a teacher's perceived sense of efficacy stems from the combination of his or her determination to apply the available resources and strategies to bring about a particular result and a belief in his or her capacity to teach at the present moment. The consequences of any accomplishment serve as evidence of outcome performances, which, in a cyclical fashion, become new sources of efficacy information (Tschannen-Moran et al., 1998). Most notably, outcome performances serve as new mastery experiences that will likely be interpreted as evidence of personal teaching competence. Tschannen-Moran et al. (1998) further indicated that, over time, the repetition of positive teaching experiences helps teachers develop a stable sense of efficacy in their capacity to teach. The cyclical model of teacher efficacy proposed by Tschannen-Moran et al. is presented in Figure 1.

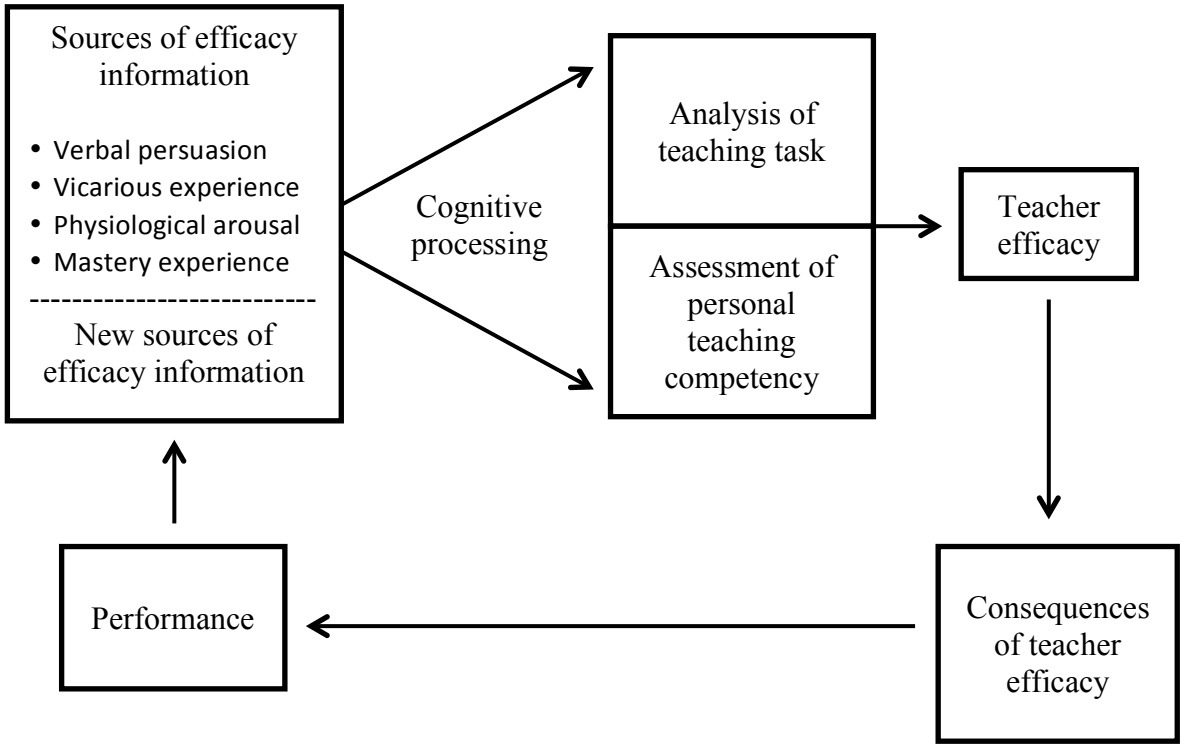


Figure 1. Teacher sense of efficacy model. Adapted from "Teacher efficacy: Its meaning and measure," by M. Tschannen-Moran, A. Woolfolk Hoy, and W. K. Hoy, 1998, *Review of Educational Research, 62*(2), p. 228.

Students with Severe Disabilities and Literacy

An individual's literacy competency is strongly linked to one's ability to develop competence in other areas and thus increases one's overall quality of life (De Schotten, Cohen, Amemiya, Braga, & Dehaene, 2014). As discussed by Allor et al. (2010), national standards state that every child has the right to scientifically based reading instruction. Thus, it is unacceptable for a student to graduate while lacking the ability to read (NCLB, 2002). As proposed in policy and mandates, meaningful literacy education must be delivered and encouraged for all students, including students with severe disabilities (Agran, 2011).

Spooner and Browder (2014) highlighted the importance of teaching literacy strategies to students with severe disabilities. Academic learning and adult functioning heavily rely on comprehension in reading; thus, literacy is one of the most critical capacities for forthcoming developments in educating students with severe disabilities. Numerous studies conducted in the field of literacy for students with severe disabilities demonstrated that this subject is gaining importance in both research and practice (Allor et al., 2010; Douglas, Ayres, Langone, & Bell, 2011; Hudson, Browder, & Wakeman, 2013; Spooner & Browder, 2014). Thus, students with severe disabilities have a high rate of illiteracy (Spooner & Browder, 2014). Saunders, Spooner, Browder, Wakeman, and Lee (2013) stated that literacy is essential for students with severe disabilities; it impacts almost every aspect of their lives. Investing into improving literacy skills among students with disabilities increases their capacity to learn other subject and thus enhances not only their education opportunities but also the overall quality of life (Courtade et al., 2012; Saunders et al., 2013).

According to Allor et al. (2010), educators should not serve solely as teachers, but also approach literacy instruction from a broader perspective, whereby they should explicitly explain content, demonstrate skills, provide a systematic review of skills, and reinforce those skills for mastery. Teachers of students with severe disabilities, in particular, have the responsibility to utilize new research strategies to better instruct their students on how to read. Hudson et al. (2013) provided multiple approaches teachers can use to develop materials and instruction to promote student interaction with literacy. These approaches require teachers to adapt texts and be flexible in the options for

students to exhibit their comprehension of the text, which necessitates a high level of flexibility and determination. Students with severe disabilities are demonstrating that they can access and learn educational information never presumed achievable only a few decades ago; however, teachers need to raise the bar for expectations and outcomes while using effective methods for students to achieve higher goals (Spooner & Browder, 2015).

As teachers are required to align academic content for students with severe disabilities with academic standards, Saunders et al. (2013) provided a six-step approach that can be used by teachers in developing lessons for students with severe disabilities, in order to ensure that these are aligned to the Common Core State Standards (CCSS). These steps are: (a) Select a text, (b) Target the CCSS, (c) Adapt the text, (d) Develop the lesson template, (e) Incorporate evidence- and research-based practices, and (f) Include a writing component. Students with severe disabilities require extensive repetitive individualized instruction and support as well as extensively customized materials and individualized approaches of accessing information in many different modes to acquire, sustain, generalize, show and transfer skills throughout the various surroundings they may encounter (Klinert et al., 2015). As discussed by Saunders et al. (2013), the goal of the alignment is to enhance the long-term quality of life for students with severe disabilities and their families by providing greater access to the general curriculum.

In the education of individuals with severe and multiple disabilities with complex communication needs (CCN), traditional means of education do not adequately address the numerous characteristics this heterogeneous group of students possesses. Students' with severe disabilities have a deficit in verbal communication skills, which is

consistently indicative of poor post-school outcomes (Towles-Reeves, Kleinert, & Muhomba, 2009). Inconsistent and vastly different or unusual means of communication may pose problems for the adults providing various supports in everyday life (Bunning, Smith, Kennedy, & Greenham, 2013).

Teachers of students with severe disabilities require specialized knowledge as stated by the Council of Exceptional Children (CEC, 2009). The CEC presents 165 knowledge or skill statements that demonstrate the proficiencies educators need to effectively teach students with severe disabilities. Thus, a multi-faceted approach rooted in teacher preparedness should be used to increase awareness and support adoption of new evidence-based practices in literacy instruction for individuals with severe needs (Light & McNaughton, 2012) to increase implementation fidelity and confidence in teachers (Brown, Stephenson, & Carter, 2014).

Camahan, Williamson, Hollingshead, and Israel (2012) noted that developing communication and literacy skills are an integrated process critical to success at home and school. Browder, Ahlgrim-Delzell Flowers, and Baker (2012) found that teachers must be aware and proficient in teaching a multicomponent approach for teaching literacy for students with severe disabilities. According to Browder, Lee, and Mims (2011), challenges in applying reading instruction for students with severe and multiple disabilities include making the activity meaningful and interpreting student responses, as well as incorporating assistive technology and alternative means of communication for the students. Further, Browder et al. (2011) discussed the need for planning, task analysis, and professional development to adequately teach literacy skills to students with severe

disabilities. Teachers of students with severe disabilities are faced with the daunting task of creating accessible materials that align with each learner's unique strengths and needs that incorporates both holistic and explicit instruction, as well as daily reading, word study, and writing (Camahan et al., 2012). Many also struggle to incorporate research-based practices as a means to reach their students (Ruppar, Roberts, & Olson, 2014).

According to the study findings reported by Bunning, Smith, Kennedy, and Greenham (2013), teachers that are successful in fostering meaningful communication opportunities in literacy use a range of communicative devices to develop communication for students with CCN. They also demonstrate a flexible use of different modalities, which serves to scaffold student contributions. The authors further noted that these teachers demonstrate knowledge of the individual student's repertoire and possess the ability to ascribe meaning to observed behaviors, which further contributes to enriched student outcomes. In an earlier study, Douglas et al. (2011) found that the use of technology might assist special educators of students with severe disabilities in teaching literacy skills. In sum, teachers of students with severe disabilities must utilize a variety of teaching strategies, for which they must possess a wide range of skills, along with the capability to learn new techniques and strategies that would allow them to better reach their students.

Teaching students with severe disabilities require educators to have a refined skill set for teaching literacy. As noted by Carnahan et al. (2012), developing communication and literacy skills is an integrated process critical to success at home and school. Teacher perspectives also have an important role in the literacy education of students with severe

disabilities. According to Agran (2011) preconceptions that students with severe disabilities cannot benefit from literacy instruction are the main reason for the low expectations and consequently low literacy rates among these students. A lack of teacher efficacy does effect the practice of teaching reading (Ruppar et al., 2015). This gap in effective practice might be addressed through investigating the relationship between teacher efficacy and literacy rates for students with severe disabilities in the study site.

Also, when teachers struggle with preparing and providing literacy instruction for students with severe disabilities, this has a further adverse effect on their students' literacy (Ruppar et al., 2014). Conversely, Tschannen-Moran and McMaster (2009) have shown that teachers with the highest self-efficacy are inclined to consider innovative practices as both important and possible. Therefore, given the value of teacher self-efficacy in students' academic attainment, further research into the factors that may influence this important trait is warranted (Kelm & McIntosh, 2012). In particular, there is a need to study teacher self-efficacy as it relates to literacy among students with severe disabilities, as the goal is to increase their reading skills and consequently allow them to become more independent and functional members of society.

Alternate Assessments for Students with Severe Disabilities

Before the enactment of the NCLB Act, students with severe cognitive disabilities were frequently excused from taking state assessments (Laitusis, Maneckshana, & Monfils, 2014). The 2004 reauthorization of IDEA, aligned with NCLB, required an inclusion of all students, including students with the most severe disabilities, in state and federal educational accountability systems (Streagle & Scott, 2015). As a part of this

positive initiative, state standards were proposed for all students to prepare them for functioning as adults in the community and to increase their readiness for college (Courtade et al., 2012). Due to accountability for and necessity of adequate instruction, many states developed and adopted alternate achievement standards against which teachers can assess students with severe disabilities. These alternate standards must be linked to the CCSS for all students who are exempt from standardized state tests, due to significant cognitive disabilities (Thurlow et al., 2014), and represent the state's judgment of the highest expectations possible for these students (Saunders et al., 2013).

Students with severe disabilities do not perform academically at levels equal to their general education peers (NYSED, 2015a). Thus, they may be assessed against alternate achievement standards. The scores of the NYSAA is the dependent variable in this study. Participation in alternate assessment is permitted by the United States Department of Education (2008) for,

> Only students with the most significant cognitive disabilities may be assessed based on alternate achievement standards. The regulation does not create a new category of disability. Rather, the Department intended the term "students with the most significant cognitive disabilities" to include that small number of students who are (1) within one or more of the existing categories of disability under the IDEA (e.g., autism, multiple disabilities, traumatic brain injury, etc.); and (2) whose cognitive impairments may prevent them from attaining grade-level achievement standards, even with the very best instruction. (p. 23)

Alternate achievement standards may include a smaller and more concentrated

range of content such as including a smaller number of objectives of each content standard. Also, alternate achievement standards may exhibit different outcomes in reading, mathematics, and science than traditional grade-level achievement assessments.

Most of the students considered severely disabled and qualified to participate in Alternative Achievement Standards Assessment have intellectual disabilities, multiple disabilities, or autism (Thurlow, Albus, Lazarus, & Vang, 2014). For students with severe disabilities, alternate academic achievement standards (AA-AAAS), presently include to approximately 1% of the total student population (U.S. Department of Education National Technical Advisory Council, 2008, p. 2). As proposed by the United States Education Department (2007), each state's alternate achievement standards are mandated to meet four specific conditions. In regards to content, the assessment must be aligned with the state's academic content standards. In regards to the scoring, it must demonstrate at least three levels of achievement (i.e., basic, proficient, and advanced), contain descriptions of competencies related with each level of achievement, and contain cut scores that differentiate among achievement levels. However, each state has different criteria for students being assessed by AA-AAAS (Cho &Kingston, 2013).

Although states have flexibility in constructing the most suitable format for alternate assessments, most are based on the grade level that corresponds to the student's chronological age. As discussed by Tindal et al. (2003), it is imperative that every comprehensive assessment, including alternate assessments, reflects the traditional standards of measurement. Nonetheless, states retain the flexibility to establish the depth and breadth of the coverage of the Alternate Achievement Standards and the performance

levels used to measure student achievement (Karvonen, Wakeman, Flowers, & Moody, 2013).

Three widely used assessment approaches are used across the United States (United States Department of Education National Technical Advisory Council, 2008). As discussed by Towles-Reeves et al. (2009), these three approaches include: (a) a portfolio approach, a calculated, deliberate and methodical compilation of student work which is evaluated and assessed against fixed scoring criteria; (b) a checklist approach, which compels teachers to identify if a student can accomplish particular skills, tasks, or activities, evaluations are based on the number of skills the student can successfully complete; and (c) a performance assessment approach, one-to-one assessment format to directly measure a skill, such as the student responding to comprehension questions in a preselected, grade-level text.

The majority of states currently use a portfolio or body of evidence approach to evaluating the adequate yearly progress of students with severe disabilities (Laitusis et al., 2014), although some use one of the alternate approaches or have established a hybrid of methods combining two of the three strategies.

In the last two decades, states have been increasing the academic expectations of their alternate assessments (Thompson, Thurlow, Johnstone, & Altman, 2005; Towles-Reeves, Garrett, Burdette, & Burdge, 2006). As discussed by Taylor and Pastor (2013), alternate assessments undergo the same level of scrutiny regarding technical quality as assessments for the general education population. Thus, alternate assessments are a

meaningful representation of a student's with severe disabilities achievement towards the content standards.

TSES

In this study, teachers' efficacy beliefs about their capacity to teach students with severe disabilities were measured using Tschannen-Moran and Woolfolk Hoy's (2001) TSES. Recent researchers (Guo, Piasta, S. B., Justice, L. M., & Kaderavek, 2010; Tschannen-Moran & Johnson, 2011) have used the TSES to examine the influence of context, theorized to be an amalgamation of a teacher's individual influences and characteristics of the classroom environment, on a teacher's self-efficacy beliefs and found significant relationships.

As stated by Duffin, French, and Patrick (2012), the TSES developed by Tschannen-Moran and Woolfolk Hoy (2001) is the most current and assuring measure of teacher efficacy that aligns with Bandura's (1997) theory and reviewers' recommendations. Researchers (Chan, Lau, Nie, Lim, & Hogan, 2008; Chong, Klassen, Huan, Wong, & Kates, 2010; Collie, Shapka & Perry 2012; Moe, Pazzaglia, & Ronconi, 2010; Moulding, Stewart, & Dunmeyer, 2014, Nie, Tan, Liau, Lau, Chua, 2012; Jamil, Downer, & Pianta, 2012; Wolters & Daugherfy, 2007) have repetitively established that teacher efficacy has a strong relation to teacher behaviors, work stress, job satisfaction, student outcomes and it accounted for individual differences in teaching effectiveness.

The TSES has also been widely used in recent empirical studies (Chan, et al., 2008; Chong, et al., 2010; Ciani, Summers, & Easter, 2008; Klassen & Chiu, 2010; Klassen, Usher, & Bong, 2010; Moe, et al., 2010; Tschannen-Moran & Hoy, 2007;

Wolters & Daugherty, 2007) to investigate teacher efficacy and demonstrated significant relations with teacher commitment, job satisfaction, and classroom goal structures.

Outside of the United States, the TSES has also been validated across cultural contexts. Nie, Lau, and Liau (2012) examined the factorial, predictive, convergent and discriminant validity, as well as the internal consistency reliability of the TSES in Singapore and found that the revised sub-scales showed good internal consistency reliability and convergent validity. Similarly, Ruan et al. (2015) found that the TSES is validated for the East Asian context. Klassen and his colleagues tested TSES in five countries, and the results showed invariance in the factor structure across culturally different groups (Klassen et al., 2009).

Levels of Efficacy Among Special Education Teachers

Previous research regarding special education and teacher self-efficacy includes studies conducted by Lee, Patterson, and Vega (2011), Boulton (2014), Chung, Chung, Edgar-Smith, Palmer, Delambo, and Huang (2015), Kelm and McIntosh (2012), Meijer and Poster (1988), Ryan, Kuusinen, Bedoya-Skoog (2015), and Savolainen et al. (2012), among others. These studies are particularly relevant for the present research as their authors investigated the perspectives of teachers based on various teacher self-efficacy scales.

Lee et al. (2011) utilized a survey instrument based on participants' perceptions on teacher efficacy, the observed level of knowledge and skills, their perceived level of support from several sources, and their perceptions on various topics in special education comprised of six multiple-choice, four open-ended, and 61 Likert-scale items. The

authors found that intern special education teachers with a high level of teaching efficacy still indicated that they foresee a lack of control and a lack of resources in their special education careers.

Boulton (2014) found that self-efficacy/perceived effectiveness beliefs improved though in-service training for intervention for special education teachers through a denoted by pre-test, post-test, and follow-up survey. Similarly, Chung et al. (2015) examined in-service general and special education teachers' perceptions toward students with and without autism in the United States and found that teachers perceive students with autism as more different from typical students and teachers are more likely to dislike and avoid students with autism. A standard regression analysis was used to demonstrate that being female, teaching at the elementary level, and holding special education certification are predictors of positive teacher attitudes toward students with autism.

Low teacher efficacy has shown to have negative effects on student achievement. Barbarin and Aikens (2015) found teachers of low socioeconomically advantaged children demonstrating low reading scores were more likely to have low efficacy while teachers while higher reading scores were associated with teachers higher efficacy and expectations for students' learning. Similarly, Spector and Cavanaugh (2015) found teachers' demonstrate relatively low self-efficacy for teaching reading to students with autism and provision of less than the recommended instructional time for K-3 reading, which may be a reason behind lower reading achievement for students with autism.

Ryan et al. (2015) examined the nature of teachers' self-efficacy by investigating differences between primary and secondary school teachers' self-efficacy and the

implications for observed classroom quality. The exploratory factor analysis indicated that teachers' self-efficacy for managing peer relations is a clear dimension from teachers' self-efficacy for classroom management, instruction, and student engagement. Teachers felt less efficacious in managing peer relations compared to classroom management and instruction. Additionally, middle school special education teachers reported lower self-efficacy for classroom management and managing peer relations compared to elementary school teachers. For primary and secondary special education teachers, their self-efficacy for classroom management and for managing peer relations was associated with some aspects of observed classroom quality.

In South Africa and Finland, Savolainen et al. (2012) utilized a comparative study of in-service teachers' opinions and efficacy in employing inclusive practices using the Sentiments Attitudes and Concerns about Inclusive Education (SACIE) and Teacher Efficacy for Inclusive Practices (TEIP) scales. The results indicate that the teachers' perceived self-efficacy regarding integrating students with disabilities into the mainstream classroom varies by classroom.

Although teacher efficacy has been proven to impact teacher classroom performance (Kelm & McIntosh, 2012; Lee et al., 2011; Savolainen et al., 2012), very few studies conducted to date have investigated this link in the context of special education for students with severe disabilities. One study (Ruppar, Dymond, & Gaffney, 2011) focused on teachers' perspectives on literacy instruction for students with severe disabilities that utilize augmentative and alternative communication. The researchers found that teachers would rather teach life-skills-linked literacy instruction rather than

standards-based instruction in special education classrooms. Also, participants consider student characteristics and aspects of the general education curriculum when making literacy decisions. Additionally, participants stated the setting had a substantial effect on teachers' rankings of selected literacy skills to teach. However, there is a marked paucity of research investigating teacher efficacy and its impact on the academic achievement of special education students with severe disabilities.

Factors that Contribute to Teacher Efficacy

As asserted by Bandura (1997), self-efficacy originates from four sources: mastery experience, vicarious experience, verbal or social persuasion, and physiological state. According to Tschannen-Moran et al. (1998), teacher efficacy is also established through these means. Teacher self-efficacy is defined as beliefs that are interrelated to the teacher's effort devoted to teaching, his or her established teaching goals, their diligence during difficulties, and their resilience in the face of obstacles (Tschannen-Moran et al., 1998). Ruppar et al. (2015) explained, "beliefs about students, teaching, and their learning; their expectations; and their contexts" (p. 220) influence teacher self-efficacy. Teachers' efficacy regarding their ability to promote learning can depend on past experiences as well as the school culture.

Through authentic teaching experiences, the self-perception of teaching ability is significantly shaped by mastery experiences and the physiological arousal related to those experiences (Tschannen-Moran et al., 1998). As discussed by Protheror (2008) a teacher may observe another educator employing a particularly effective practice and, therefore,

feel more confident that, through its use, she could be more successful in reaching her students, ultimately increasing his or her teaching efficacy.

Verbal persuasion is an important factor because it provides information about the nature of teaching, offers encouragement and strategies for surmounting situational issues, and facilitates the provision of detailed feedback about teacher's performance. Feedback and encouragement that emphasizes effective teaching comportments while providing constructive and detailed recommendations for ways to improve also have increased teacher efficacy (Protheror, 2008). Finally, teachers determine how the sources of information are assessed and how they will affect the analysis of the teaching task. They also utilize the information provided in the assessment of personal teaching competence, whereby cognitive processing results in the interaction of task analysis and competence to influence one's teacher efficacy (Tschannen-Moran et al., 1998).

Hoy (2000) suggests that mastery experiences during student teaching and the first year are some of the most significant influences on teacher efficacy. Knoblauch and Chase (2015) found that student teaching also substantially increases a teachers' sense of efficacy. Also, a teacher's familiarity with the type of learning environment and students, urban or suburban, played a role in their efficacy (Knoblach & Chase, 2014).

The school setting, specifically the ways in which teachers new to the profession are socialized may have a significant impact on a teacher's sense of efficacy (Hoy, 2000). Encouraging and supportive communities where teachers are encouraged to ask for help can be an important way to ensure that such a teacher does not experience a series of

failures that in turn affect mastery experiences, the prime determinant of a sense of efficacy (Protheroe, 2008).

Characteristics of Teachers with High Levels of Efficacy

Teachers possessing higher levels of efficacy are more inclined to master and employ new and inventive strategies for teaching, implement management strategies that afford student autonomy, establish realistic and achievable goals, persevere despite student failure, willingly give additional needed support to lower-achieving students, and design coherent instruction that cultivates the students' perceptions of their academic skills (Tschannen-Moran et al., 1998; Tschannen-Moran, Woolfolk Hoy, & Labone, 2004). Rubie-Davies, Flint, and McDonald (2012) found that differences in teacher instructional practices and differing classroom climates are an outcome of teacher philosophies, characteristics, and school contextual variables.

Knesting-Lund, O'Rourke, and Gabriele's (2015) results suggest that highly efficacious teachers are more supportive, encouraging for at-risk students to succeed, are more able to recognize possible causes of student dropout and are more supportive of dropout prevention than teachers with low efficacy. Cantrell et al. (2013) found teacher efficacy was positively associated to students' reading comprehension and overall reading achievement. Guo et al. (2010) found that children's gains in print awareness are significantly and positively predicted by teachers' self-efficacy and classroom environment. Also, the results demonstrated a noteworthy relationship among teachers' self-efficacy, classroom quality, and vocabulary gains. Students of teachers with higher

levels of self-efficacy and higher levels of classroom quality were linked with higher vocabulary gains.

Friedel, Cortina, Turner, and Midgley (2010) found that a teacher's with a higher sense of efficacy impacts a students' own efficacy. Moreover, empirical evidence suggests that teachers who are more efficacious may be more prone to take greater intellectual and interpersonal risks in the classroom and are less bothered by student conflict (Woolfolk Hoy, Hoy, & Davis, 2009).

Impact of Teacher Efficacy on Student Performance

A literature search revealed very few previous studies directly related to teacher efficacy and special education reading achievement for students with severe disabilities. However, Allinder (1994) found significant positive correlations between efficacy for special education service provider teachers that delivered direct instruction or behavioral interventions to students with mild disabilities, in addition to indirect special education service provider teachers that devoted at least half of their time with general educators through consulting, collaborating, or team teaching.

Exclusive to students with severe disabilities, Ruppar et al. (2015) examined how special education teachers' beliefs and contexts influence their literacy decisions for middle school students with severe disabilities. The teachers' self-efficacy was influenced by both their beliefs about the importance of literacy in the lives of their students and their expectations based on their personal and professional experiences with individuals with disabilities. Also, teachers took more responsibility for teaching literacy, giving it a greater priority within their overall curriculum when they saw the potential for

literacy to enhance students' independence and quality of life. Further, contextual influences were observed to enhance self-efficacy, and teachers' self-efficacy provided the key link between beliefs and contexts in influencing literacy decisions (Ruppar et al., 2015). In an earlier study, Ashton and Webb (1986, as cited by Hoy & Spero, 2005) found that a higher sense of self-efficacy enabled teachers to be more helpful and understanding of students who make errors, while Gibson and Dembo (1984) also observed that these teachers also show greater determination with a struggling student. While limited, this evidence clearly indicates that it is important for educators to have high self-efficacy when working with challenging populations.

Student Performance in General

Gibson and Dembo (1984) demonstrated that teachers' assessment of their capability to generate positive student change affects their students' educational attainment. Tschannen-Moran et al. (1998) and Goddarh, Hoy, and Woolfolk (2000) also demonstrated a relationship between the self-efficacy of teachers and student achievement. Teachers' sense of efficacy is strongly correlated to their motivation and behavior in the classroom and is thus significant to student outcomes (Tschannen-Moran et al., 1998). Several researchers have recognized relationships between teacher efficacy and general student achievement (Allinder, 1994; Gibson & Dembo, 1984; Ross, 1992, Ross & Bruce, 2007; Woolfolk & Hoy, 1990).

Empirical evidence indicates that the impact of teacher efficacy on student achievement is due to several factors. For example, Ross and Bruce (2007) found that highly efficacious teachers contribute to enhanced student achievement through enhanced

student motivation to complete a chosen assignment due to student autonomy; setting higher academic standards and expectations for students, thus modifying students' perceptions of their academic abilities; and being more persistent, which results in higher outcomes for students who did not understand the lesson or information presented the first time.

Gibson and Dembo (1984) acknowledged that teacher efficacy can impact particular patterns of behavior, which are identified as influential to achievement gains. More recently, Goddard and Goodard (2001) found an indirect relationship concerning teacher efficacy and student achievement; teacher efficacy influences many teacher behaviors that, consequently promoting student achievement. Caprara, Barbaranelli, Steca, and Malone (2006) reported that teacher behaviors that encourage student achievement and teachers' perceptions of their competency to teach students are significantly and positively associated. Similarly, Anderson and Anderson (1988) found that a teacher's efficacy was significantly correlated to achievement as measured by a standardized measure, the Canadian Achievement Tests, whereas Ross (1992) noted that student achievement was higher in classrooms of teachers with high efficacy.

Student Performance in Subjects other than Reading

In the study conducted by Moore and Esselman (1992), students with teachers that possessed a greater sense of general teacher efficacy achieved higher results than other students in mathematics on the Iowa Test of Basic Skills. Mojavezi and Poodineh-Tamiz (2012) focused their research on high school students, reporting that teacher efficacy resulted in a positive effect on the students' motivation and achievement.

Eberle's (2011) research was conducted to establish if a relationship is present between teachers' sense of self-efficacy and students' overall achievement on the North Carolina Reading and Math End-Of-Grade tests. The author found no statistically significant correlation in the mean scores of the North Carolina End-of-Grade reading tests, but observed weak positive correlation in the mean math test scores, for teachers who were rated highly efficacious. While these findings are inconclusive and not directly related to the present study, it is evident that teacher efficacy can influence student outcomes.

Student Performance in Reading

Even though reading instruction is an enduring priority within education, an additional emphasis was recently placed on the need to encourage students' success in learning to read (Browder et al., 2012). Gibson and Dembo (2011) noted that the higher the teachers' self-efficacy, the more advanced their students' reading achievement will be. Further, Tschannen-Moran and Johnson (2011) found that teachers with low expectations of success in literacy instruction for particular students would probably dedicate less effort to lesson preparation and approach to instruction. The authors further observed that such teachers would likely more readily abandon the reading lesson as the students struggled, even if they knew the teaching strategies that can help these students if they were employed.

Armor et al. (1976) used reading scores obtained from the 1974 and 1975 California Test of Basic Skills administrations. The authors discovered a relationship between the efficacy of teachers in a special reading program and the reading

improvement of their students. They found the higher the teachers' self-efficacy, the more advanced their students' reading achievement (Armor et al., 1976).

Block and Mangieri (2003) and Rodgers and Pinnell (2002) posited that efficient and successful literacy instruction entails complex and immediate teaching decisions made by the teacher to meet the diverse needs of their students. On the other hand, Haverback and Parault (2008) found that teachers with enhanced self-efficacy promote student motivation in reading. More specifically, they argued that teachers with high self-efficacy are less controlling in their feelings about interactions with students, thus promoting student autonomy in their classrooms. According to their findings, when giving reading assignments to students, teachers possessing high self-efficacy would decide on a genre, but permit the students choice in their reading, whereas those lacking self-efficacy are inclined to assign a specific book, minimizing student choice. The authors posited that, when the students are given a choice, they are more susceptible to select a book wherein they are interested, thus, fostering their motivation to read and improve their literacy.

Guo et al. (2010) examined the relationship between classroom quality, preschool teachers' self-efficacy, and student's language and literacy achievements. Their study showed that print awareness gains for students are positively and significantly predicted by teachers' self-efficacy and classroom quality. Furthermore, higher levels of classroom quality were related with greater vocabulary achievement for students of highly efficacious teachers.

In their work, Tschannen-Moran and Johnson (2011) discussed how teachers that displayed characteristics of high self-efficacy show resilience when trying to teach a particular strategy with struggling readers. However, they also noted that the relationship between reading achievement and teacher self-efficacy is not sufficiently explored. This study investigates that relationship.

Mediators of the Impact of Teacher Efficacy on Student Performance

Mediators of the impact of teacher efficacy on student performance are also referred to as outcome performances (Tschannen-Moran et al., 1998). Teacher efficacy has been shown to affect a teacher's decision-making abilities and teacher behavior, classroom activities, as well as student achievement. The relationships between teacher efficacy and decision-making, and teacher behavior and classroom activities, are discussed below.

Decision Making/Teacher Behavior

The findings yielded by the study conducted by Goddard et al. (2000) corroborated Bandura's (1977) theory that teachers' self-efficacy perceptions are correlated to the effort they devote in their teaching practices, their set goals, persistence during difficulties, and their resilience in the face of obstacles. The authors thus posited that teachers' strength of efficacy beliefs impacts their choices about their plans and actions.

Ross (1998) asserted that educators with higher levels of efficacy have a greater determination to learn and utilize new teaching approaches and methodologies, employ class-management practices which improve student independence, deliver additional help

to low-achieving students, foster students' awareness of their academic skills, establish achievable goals, and persevere despite student failure. More recently, Shoulders and Krei (2015) revealed that efficacious teachers are inclined to devote more time planning, designing, and organizing their lessons.

Holzberger, Phillip, and Kunter (2013) established positive relationships between teachers' self-efficacy beliefs and their instructional quality in the classroom, as indicated by the three dimensions of cognitive activation, classroom management, and individual learning support. Based on their study findings, Ross and Bruce (2007) stated that highly efficacious teachers consider student failure as a motivation to increase one's effort, instead of presuming that the reasons behind failure are outside the teacher's influence and cannot be mitigated by teaching.

The research compiled by Goddard et al. (2004) demonstrated that educators with high perceptions of self-efficacy are inclined to be more organized (Allinder, 1994), student-centered (Enochs, Scharmann, & Riggs, 1995), and more receptive to changes and new ideas (Tschannen-Moran & Barr, 2004). Further, Barkley (2006) found teachers with low efficacy beliefs find it difficult to adjust their teaching strategies to the individual needs of their students.

Classroom Activities

Cerit (2010) determined that teachers' beliefs regarding their self-efficacy positively influence their classroom activities. Similarly, Ashton and Webb (1986) found highly efficacious teachers employed an array of approaches that decreased any negative influence, encouraged beliefs of achievement, and described the classroom environment

as inviting with a positive relationship with academic work. Highly efficacious teachers are more prone to have a successful classroom and learning environment (Tschannen-Moran & Woolfolk Hoy, 2007). Further, many researchers have discovered that teachers with high self-efficacy use activity-based (Enochs et al., 1995) and student-centered learning (Czerniak & Schriver, 1994).

Negative Research Results

Although many researchers have noted that teacher efficacy is associated with instructional strategies, classroom activities, and student achievement, no correlation was reported in other studies. For example, Brown et al. (2008) established that, while teacher efficacy beliefs have been exhibited to impact classroom practices, a weak correlation between teacher efficacy and children's letter identification scores, as well as among teacher efficacy and mathematics enumeration was demonstrated in their research.

Phillips (2015) found that one's teaching efficacy, general teaching efficacy, and total teaching efficacy showed no significant impact on 5th-grade mathematics achievement; rather, teacher experience, teacher education, and class size impacted student achievement. Klassen, Tze, Betts, and Gordon (2011) conducted a meta-analysis of research on teacher self- and collective efficacy published from 1998 to 2009 and found a lack of focus on the causes of teacher efficacy, measurement, and conceptual problems, and a lack of evidence for a relationship between teacher efficacy and student outcomes.

Ways to Improve Teacher Efficacy

Researchers have investigated potential ways to improve teacher efficacy (Martinussen, Ferrari, Aitken, & Willows 2015, Ortaçtepe & Akyel 2015, Tao 2015, Christophersen, Elstad, Turmo, & Solhaug 2015, Lakshmananet al. 2011, Martinussen, Ferrari, Aitken, & Willows 2015, Shaha, Glassett, & Copas 2015, Battersby & Verdi, 2015, Lakshmananet al., 2011, & Weibenrieder et al. 2015). Martinussen, Ferrari, Aitken, and Willows (2015) found that teachers made significant gains in efficacy assessed professional development to support instructional strategies. Similarly, in investigating the efficacy of ESL teachers, Ortaçtepe, and Akyel's (2015) research indicated that after the in-service education program, the teachers not only improved their practice and became more efficacious. Researchers such as Tao (2015), Christophersen, Elstad, Turmo, and Solhaug (2015), Lakshmananet al. (2011), Martinussen, Ferrari, Aitken, and Willows (2015) and Shaha, Glassett, and Copas (2015) have also found that professional development communities significantly increased teacher efficacy over time.

Battersby and Verdi (2015) found that utilizing professional learning communities (PLC) and selected models that emphasized increasing and sustaining teacher collaboration in all disciplines improve teacher efficacy and support student learning. Lakshmananet al. (2011) found a positive relationship between teacher efficacy and inquiry-based learning communities. Additionally, Weibenrieder et al. (2015) found that collaboration in PLC increased teacher's efficacy.

Savolainen, Engelbrecht, Nel, and Malinen, (2012) found that pre-service education and support increase a teacher's efficacy to work in a particular setting.

Loreman, Sharma and Forlin (2013) positive correlations between the type of teacher preparation program, differences in the knowledge concerning inclusion law and policy, prior interactions with people with disabilities, confidence levels in teaching students with disabilities, and, prior teaching experience and training in working with students with disabilities with teaching self-efficacy for inclusion. Similarly, Ahsan, Sharma, and Deppeler (2012) found that other variables, such as the duration of training, gender, prior interactions with individuals with disabilities, local legislative knowledge, and level of education demonstrated a significant relationship with teachers' efficacy, attitudes, and concerns.

Summary

In the current standards-based education system, all students are required to meet certain standards based on the academic expectations for their grade (Aron & Loprest, 2012). NCLB (2002) and IDEA (2004) require accountability measures to be put into place for all states and school districts, allowing student success to be assessed through standardized testing. Therefore, in line with Bandura's social cognitive theory, if these targets are to be met, teachers must believe in their capabilities as educators to improve educational outcomes and meet annual requirements for adequate yearly progress (Evans, 2009). This call is answered in the present study that examined the relationship between teacher self-efficacy and reading scores of students with severe disabilities.

Teacher efficacy pertains to the level to which teachers believe that they can successfully teach every student in their classes (Tschannen-Moran & Johnson, 2011). In the limited body of research on this topic, teachers' efficacy about their capability to

encourage students and motivate their learning has been shown to influence the characteristics of the class they create and thus student achievement (Allinder, 1994; Ashton & Webb, 1986; Gibson & Dembo, 1984; Meijer & Foster, 1988; Woolfolk & Hoy, 1990). Given the current state of the education system and national importance of standards, determining teacher efficacy is a valuable when aiming to improve student academic achievement (Shidler, 2009). Therefore, since research on the relationship between teacher self-efficacy and achievement of students with severe disabilities is presently limited (Hines & Kritsonis, 2010), this study addressed this gap in the extant knowledge about that relationship.

Chapter 3: Research Method

The purpose of this study was to explore the relationship between perceived sense of efficacy of teachers who teach students with severe disabilities in Grades 3 through 8 and reading achievement of that student population. As posited by Tschannen-Moran and Woolfolk (2001) in their theory on teacher efficacy, low levels of self-efficacy may impede a teacher's capability to learn the strategies necessary to appropriately implement approaches and methodologies in the classroom. Because students with severe disabilities require specific and explicit teaching models to promote literary success, developing teachers to have high levels of self-efficacy is essential for them to reach their maximum potential. For this reason, through a nonexperimental, cross-sectional correlation study, I (a) examined the attitudes and perspectives toward teaching of teachers who teach students with disabilities, and (b) determined the strength of the relationship between teacher self-efficacy and student reading achievement on the NYSAA assessment. This chapter commences by describing the research methodology, followed by the discussion of the study design and approach, setting and sample, data collection procedures, and instrumentation. The subsequent sections are dedicated to data analysis procedures, threats to quality research, the role of the researcher, and the protection of participants' rights.

Research Design and Approach

This study was a nonexperimental quantitative study using a cross-sectional design. Quantitative research is often believed to be more objective than qualitative research, as it aims to yield general conclusions supported by numerical data, rather than

descriptions of phenomena being investigated (DePoy & Gitlin, 2015). For this reason, according to Creswell (2013), quantitative study results could be potentially generalized to the broader population from which research participants were drawn. Researchers conduct a quantitative design to use experiments and surveys as strategies of inquiry and utilize predetermined instruments to collect data that will yield statistical data (Creswell, 2013). Creswell further observed that qualitative research is employed to fully investigate a specific topic, frequently by examining participants' experiences. Usually, during the analysis of qualitative data, researchers emphasize revealing shared patterns, themes, or categories. Creswell stated that qualitative research in itself does not permit researchers to quantify the data from participants' responses.

Hartas (2015) stated that quantitative research is suitable for researchers using unambiguous measurements to investigate specific variables and causality relationships. As the present study involved investigating relationships between teachers' efficacy employing a predetermined instrument that generated statistical data, as well as focusing on study-specific variables and predictive relationships between those variables, a quantitative research design was appropriate for meeting these objectives. However, in this study, three qualitative questions were used to investigate teacher perceptions more closely aligned to the specific population studied.

A correlational design is used when researchers strive to show relationships between variables. Correlation studies facilitate exploring the relationships between variables (Bleske-Rechek, Morrison, & Heidtke, 2015) and determining the strength of correlation among the relationships (Rovai, Baker, & Ponton, 2013). As the focus of this

research was the relationship between teacher efficacy and student performance, a correlational study design was the appropriate choice. A researcher uses a cross-sectional design in particular when he or she collects data once so that the results pertain to the conditions at a specific point in time. This design also facilitates numeric descriptions of trends of a population to be given, based on a study of a sample drawn from that population (Creswell, 2013; Fink, 2012). In line with this approach, in this study, data were collected at one time point, as the goal was to obtain teacher perspectives on their self-efficacy and relate those to their students' reading achievement.

Regression analysis was used to analyze the data. Regression analysis is a statistical tool for the investigation of relationships between variables. I assembled data on the underlying variables of interest and employed regression to estimate the quantitative effect of the causal variables upon the variable that they influence. At the outset of any regression study, one formulates some hypothesis about the relationship between the variables of interest; here, teacher efficacy as well as years teaching experience and years teaching this target population, and student reading achievement.

Data on teacher efficacy were collected using a survey. This approach to data collection is used when researchers plan to obtain information from a group of people to quantify trends in a sample population (Creswell, 2013). Surveys allow researchers to gain insight into the knowledge people have of a specific subject (Dana & Yendol-Hoppey, 2009). As this study focused on teacher perspectives of their abilities in teaching students with severe disabilities, this data collection method was appropriate.

As the study site using the NYSAA results previously generated data on student performance in reading, these archival records were utilized in the present study for the dependent variable. Archival data are used when preexisting data can supply research study with the source of information. As the teachers were required to respond to surveys about the 2014-2015 academic year, using the 2014-2015 NYSAA assessment data was appropriate in this study.

Several authors supported the use of standardized test scores as a representative measure of student performance. For example, Duffy, Giordano, Farrell, Paneque, and Crump (2008) noted that standardized testing is an appropriate measure of student success. For example, standardized achievement assessments reveal multiple components of student competence related to intelligence (Duckworth, Quinn, & Tsukayma, 2012). The NYSAA scores are the standardized assessment employed in New York City for students with severe disabilities (Barrett, 2010). Due to standardized testing being recognized as an appropriate source of information, the NYSAA scores were employed in this study.

Setting and Sample

The setting for this study was a prekindergarten to 12th-grade alternate placement public school serving students with severe disabilities residing in a New York State urban area. According to the available records, of the 426 students the school served during the 2014-2015 academic year, all 426 students were diagnosed with disabilities, of which 134 took the NYSAA. These 134 students participated in the NYSAA due to their grade level and federal mandates. Regarding their demographic background, 59% of the entire

student population was White, 24% were Hispanic, 11% were Black, 4% were Asian, and none declared as Native American, as based on the school website. Also, the school employed 55 teachers, all of whom were special education certified in New York State. Of these, 37 teachers educated students with severe disabilities in Grades 3 through 8 during the 2014-2015 school year and were invited to take part in the study. They completed the TSES instrument, and their data were subsequently correlated with archival student reading scores from the NYSAA.

Using convenience sampling, all of the 37 study participants were selected. A single stage design was adopted, due to the availability of access to the required population of teachers of students with severe disabilities and capability to select the preferred sample (Creswell, 2013). When participants were readily available to take part in the survey as needed, a convenience sample was the most appropriate selection method (Fink, 2012). In this study, the student scores from each teacher's class were linked to the corresponding participant through the class code. Convenience sampling was extended to all the available classroom teachers within the school that met the grade level criteria, with no additional stratification.

A convenience sample was chosen because all students in Grades 3 through 8 participate in the NYSAA. Thus, as these teachers are responsible for educating third to eighth grade students with severe disabilities who participated in the NYSAA assessment at the school site where the study was conducted, they were ideal candidates for this investigation. The prekindergarten to second grade and ninth to 12th grade teachers were not included in the study because prekindergarten to second grade students did not

participate in the NYSAA. Additionally, the ninth to 12th grade students did not participate in the reading component of the NYSAA. Thus, all archival data for students in Grades 3 through 8 were used for the sample.

I used an a priori sample size calculator to conduct a power analysis to determine sample size for the regression analysis for the research question. The results of the analysis for the regression to detect a medium effect size ($f^2 = .25$) with power = .80 and $\alpha = .05$ with the singular predictor that I needed 33 participants; 134 student scores and 37 teacher responses were utilized for this study.

Instrumentation

The two variables for this study were levels of teacher efficacy and students' NYSAA reading scores. Data on teacher efficacy were generated using the TSES. Items about participant demographics were added to the TSES while the data about student reading scores on the NYSAA were accessed from the study site. An explanation of both instruments is provided below.

TSES Survey

The data were collected via the TSES (Tschannen-Moran & Woolfolk, 2001) comprised of 24 questions, along with a short demographic survey and two exploratory qualitative questions. In the TSES, teaching is theorized as a multifaceted endeavor that characterizes teacher efficacy (Duffin et al., 2012). Particularly, teacher efficacy as measured by the TSES long (24-item) is represented in three individual, but associated underlying elements liked within three areas of teaching: Efficacy for Classroom

Management, Efficacy to Promote Student Engagement, and Efficacy in Using Instructional Strategies (Duffin et al., 2012).

All questions aim to elicit teacher beliefs, and require responses on a 9-point Likert-like scale, anchored at 1 = *meaning nothing* and 9 = *meaning a great deal* (Duckworth et al., 2012). The TSES is an intact instrument developed and tested by multiple other authors that has been previously employed by other researchers at this college. Tschannen-Moran and Woolfolk Hoy (2011) conducted a factor analysis of the data and determined that the 18-item scale can be respected an effective measure of efficacy (as it achieved reliability of .95); Cronbach's alpha for the subscales, Efficacy for Classroom Management, Efficacy to Promote Student Engagement, and Efficacy in Using Instructional Strategies, ranged from .90 to .93.

Permission was granted by Dr. Woolfolk Hoy to use the TSES. The TSES long form was established to investigate teacher perception of self-efficacy.

In their study, Tschannen-Moran and Woolfolk Hoy (2001) found three moderately correlated themes with consistency:

1. Efficacy to Promote Student Engagement: Found in Items 1, 2, 4, 6, 9, 12, 14, 22
2. Efficacy in Using Instructional Strategies: Found in Items 7, 10, 11, 17, 18, 20, 23, 24
3. Efficacy for Classroom Management: Found in Items 3, 5, 8, 13, 15, 16, 19, 2

These three constructs, efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management, are investigated as independent

variables in this study. The constructs are examined separately as well as in total as general teacher efficacy.

Demographic Questionnaire

Extant research indicated that years of teaching, teaching experience within special education, and teacher age affect student achievement (Hattie & Yates, 2013). Thus, collecting this information in the present study was appropriate because my aim was to explore how teacher efficacy and demographic information (years of experience and years of teaching this population) relate to student academic achievement.

Additional Questions

To explore the relationship between teacher efficacy and reading achievement for students with severe disabilities more in depth, I presented the following open-ended questions to the target special education teachers at the study site: (a) What do you feel is most challenging in teaching students with severe disabilities? (b)What do you feel is most challenging in teaching reading to students with severe disabilities? The results of this inquiry demonstrated insight to needs of teachers of students with severe disabilities that could provide these teachers with effective strategies they could use with students with severe disabilities.

NYSAA

The NYSAA is a datafolio assessment through which students with severe cognitive disabilities exhibit their achievement of learning standards through alternate performance level indicators (NYSED, 2014b). The NYSAA is aligned with the New York State Common Core Learning Standards and is given annually to students in Grades

3 through 8 over the course of 3 days, as well as once at the secondary level when the student is aged 17 to 18 (NYSED, 2014b). As stated by the New York City Department of Education (2013), the goal of NYSAA is to ensure that students with severe disabilities can accomplish the tasks outlined in the Common Core Learning Standards appropriately and independently. As determined through the NYSED (2014a), to be eligible to take the NYSAA, students with a severe cognitive disability must possess certain characteristics such as substantial deficits in communication and language as well as considerable deficits in adaptive behavior. Also, the student must require a highly specialized educational program that teachers the acquisition, application, and transfer of skills across their natural environments and must require supplementary educational support systems, such as assistive technology, personal care services, health/medical services, or behavioral intervention, as determined by the New York State Committee on Special Education (NYSED, 2014a).

Students are assessed according to their chronological age, which is aligned to predetermined grade levels (The State Education Department, 2014). Scores for each subject range from 1 to 4 and are characterized in terms of proficiency, whereby Level 4 corresponds to “meets the alternate grade level achievement standards with distinction”; Level 3 denotes “meets the alternate grade level achievement standards”; Level 2 indicates “partially meets the alternate grade level achievement standards”; and Level 1 corresponds to “does not meet the alternate grade level achievement standards” (The State Education Department, 2014, p. 1). Level 3 and Level 4 are considered proficient (The State Education Department, 2014).

According to NYSED (2014a), reading scores are calculated based on three components—the number of English Language Arts extensions on which the student was assessed, the level of complexity of the tasks administered to the student, and the level of accuracy that the student displayed on the tasks that he or she completed. English Language Arts extensions refer to the student-learning objective for a particular subject. Due to the wide range of abilities and levels of knowledge, skill, and understanding of the students whose achievement is measured by the NYSAA, each extension is assessed on teacher-chosen tasks that are considered to have low, middle, or high complexity (NYSED, 2014a). Scores for the level of accuracy component range from 0% to 100% and are calculated based on the percentage of questions that elicited correct answers (NYSED, 2014a).

As explained on the Office of State Assessment website the NYSAA utilizes a datafolio-style assessment for students with severe disabilities. This assessment is designed to determine a student's ability in achieving the New York State P-12 Common Core Learning Standards in reading and mathematics (NYSED, 2015a,). All alternatively, assessed students meet the criteria for alternate assessment as determined by the Committee on Special Education based on specific criteria highlighted above.

Validity and Reliability

Validity refers to the accuracy and trustworthiness of instruments and data utilized in a research study, as well as the findings yielded (Bernard & Bernard, 2011). Instrument reliability pertains to the consistency it demonstrates in measuring what it is

intended to measure (Creswell, 2013). Establishing the validity and reliability is essential to ensuring accurate and meaningful research.

TSES validity and reliability. The TSES is a both a valid and reliable measure that has been widely utilized in numerous research studies. Tschannen-Moran and Wookfolk Hoy (2001) subjected the items to factor analysis; the scale reliability scores is reported as.91 for Efficacy in Instructional Strategies, .90 for Efficacy in Classroom Management, and .87 for Efficacy in Student Engagement. Moreover, the authors tested the long (24 items) version of the TSES using factor analyses. The results revealed a range of loadings from .49 to .76 for items. Finally, the authors reported a Cronbach's alpha coefficient of .94.

The construct validity for the TSES was established by comparing it to three established scales. According to Tschannen-Moran and Woolfolk Hoy (2001), positive correlations were found for both personal teacher efficacy and general teacher efficacy irrespective of the instrument length. Thus, the authors concluded that the instrument exhibits reasonable validity and reliability, and it could be a valuable tool for researchers studying teacher self-efficacy, encompassing of both personal teaching efficacy and general teacher efficacy.

In their study, Nie, Lau, and Liau (2012) found that teacher efficacy beliefs were strongly correlated with relative teaching strategies, suggesting that TSES has a good predictive validity. The correlations among the efficacy beliefs, as well as those among the strategies, were higher than the correlations between the efficacy beliefs and strategies, thus indicating good convergent validity. De Paul (2012) determined the

reliability of TSES by calculating Cronbach's alpha and Split Half method at a reliability value of 0.90 ($N = 82$). More recently, Ghasemboland (2013) reported Cronbach's alpha coefficient of 0.95 for Student Engagement, 0.96 for Instructional Strategies, and 0.95 for Classroom Management, confirming that the Teacher Self-efficacy Questionnaire has high reliability. Bilali (2015) confirmed that the general reliability of TSES is high, due to Cronbach's alpha of .90 obtained in his study. In sum, the work of Tschannen-Moran and Hoy (2001), Nie et al. (2012), De Paul (2012), Ghasemboland (2015), and Bilali (2015) affirms that the TSES is a reliable instrument and is thus suitable for use in the present study.

Bell and Aldridge (2014) also recommended utilizing a survey as a data collection instrument, as it is consistent, reliable, and appropriate approach to data gathering. In this study, the questionnaire facilitated obtaining additional information, such as teacher age, overall years of teaching experience, and teaching experience with this population of students, which was essential for meeting the research objectives.

NYSAA validity. As discussed by Tindal et al. (2003) all comprehensive assessments, including alternative assessments, should reflect the traditional standards of measurement. States have the flexibility to determine the depth and breadth of the coverage of the content standards for AA-AAS and the performance levels used to measure student achievement (Karvonen et al., 2013). Three widely used assessment approaches across the United States include a portfolio, a checklist, and a performance assessment. Although most state education departments have selected to use one of the

three alternate assessment approaches, some states have developed hybrid approaches combining two of the three recommended methods.

New York State utilizes a portfolio approach to alternatively assess students with severe disabilities. Due to the varying nature of the alternate state assessment in each state, focusing on the validity of the NYSAA in this research was appropriate. In New York State, the content validity, consequential validity, and procedural validity are highlighted by the NYSED (2012). To ensure that an objective view of the assessment validity was measured, an outside reviewer, Measured Progress (http://www.measuredprogress.org) assessed the construct and validity of the NYSAA.

As required for all valid educational and psychological testing in the United States, a crucial component of establishing test validity is ensuring that a close, substantive relationship exists between a test's content and the underlying construct it is intended to measure, which is defined as content validity (Levy & Goldstein, 2014). The development and design of the content for the NYSAA, with special emphasis on the relationship of the test content to the New York State learning standards; a detailed description of the scoring process for the NYSAA, again emphasizing that the procedures used ensure strong adherence to the New York State learning standards; and the standard-setting process, in which expert judgment is used to set the scores on the test that correspond to different levels of classification of student achievement relative to the New York State learning standards are all adhered to in order to ensure that the content-related aspects of the standard-setting maintained a strong substantive alignment with the New York State learning standards and a strong content validity (NYSED, 2012).

To ensure consequential validity, as discussed by the NYSED (2012), beginning in July 2006, the NYSED, in collaboration with Measured Progress, redesigned the NYSAA, whereby the focus and purpose of the assessment was to guarantee that students with severe disabilities are being provided access to the general education curriculum. Consequential validity refers to the social consequences of using a certain test for a specific purpose (Slomp, Corrigan, & Sugimoto, 2014).

To satisfy these objectives, the NYSED brought together all pertinent stakeholders, including general education content specialists and special education teachers, to develop the alternate assessment and continue to refine the assessment to demonstrate consequential validity (New York City Department of Education, 2013). They worked to ensure that the assessment provides multiple measurement occasions, shows that student results are improving, and demonstrates that revisions to the NYSAA are considered based on stakeholder feedback (NYSED, 2012).

To ensure procedural validity, sets of documents and training programs were developed and distributed statewide to ensure consistency of the information given to teachers across New York State. New York State has a set of Alternate Assessment Training Network Specialists and Score Site Coordinators, who present a turnkey training provided to them by the NYSED and Measured Progress (NYSED, 2012). Nevertheless, it is essential to take notice that, due to the relative infancy of alternate assessments in New York State, the process required constant monitoring, and is likely to evolve based on the valuable input from informed stakeholders (NYSED, 2012).

Data Collection

In alignment with Walden University and the Institutional Review Board's requirements, permission was granted from the school principal to conduct research prior to collecting data for this doctoral study, displayed in Appendix B. Although the school scores are public knowledge, to receive specific class data, I needed to ask the school to provide this information. The school name was removed and another identifier, *City School*, was used. Further, I did not gather any data pending permission from the Walden University Institutional Review Board. After all required permissions are granted, I collected data for this study using a survey hosted online through Survey Monkey. The survey was comprised of four demographic questions, TSES instrument (Tschannen-Moran &Woolfolk Hoy, 2001), and the two open ended questions. I was granted permission from the authors (see Appendix A) to use the TSES in my study.

As a member of the city's education department of school in which the study was conducted, I have access to the e-mail addresses of all the teachers at the study site. I am not a supervisor in any way, or hold any administration position, so teachers do not have to feel coerced to participate. Permission to gain access to these participants was granted through the school principal. Thus, I distributed invitations to all 37 teachers to participate in the study via e-mail and I sent automated bi-weekly follow-up reminders to those 37 teachers in the same fashion. Although I invited participants to participate through Survey Monkey, I was not able to see the participants' responses until the end of the participation window. Thus, the participants responses remained anonymous except for their class code that was not be known to the researcher.

The e-mail invitation comprised of (a) a concise description of the study topic, (b) the justification for and significance of teacher participation, and (c) the website link to or paper attachment of the survey. Furthermore, the informed consent delineated (a) the study's purpose, (b) my role as the researcher, and (c) voluntary nature of teacher participation. Moreover, it explicitly stated that (d) all data gathered would be kept anonymous, and (e) due to the nature of the surveys and coding of the class and student information, there would be minimal risk for partaking in this study. Also, I (1) distinguished the eligibility criteria (a special education teacher of students with severe disabilities in Grades 3 through 8 that participated in the NYSAA in the 2014-2015 school year), and (2) expressed that there will be absolutely no compensation for participating in the study (3) and stated that the survey may require about 10 to 15 minutes to finish. Lastly, I indicated (a) that the letter of consent is solely for informational purposes and (b) that I am assuming that participants who clicked on the survey link and navigated to and completed the survey or filled out the survey by hand have decided to participate in the study, consistent with the previously described conditions.

Data Analysis

The student data is archival information and can be retrieved from the school NYSAA records. The study participants completed the TSES survey and the demographic questionnaire and the data yielded was combined into one spreadsheet that identifies the variables. As previously noted, only the 37 teachers that worked with students in 3rd through 8th grade during the school year of 2014-2015 were invited to

take part in the study and those that agree to participate were surveyed using the TSES (long form) (Tschannen-Moran & Woolfolk Hoy, 2001). In addition, NYSAA scores of the 134 students in grades 3rd through 8th were analyzed in the areas of reading. The student scores from each teacher's class were linked to the corresponding participant through the class code declared by the teacher. To determine if teacher efficacy predicted student academic reading achievement, the gathered data was subjected to inferential statistics. A linear regression analysis, suitable for investigating relationships between the variables was used to answer the Research Question. The teacher's class code was matched to the class reading scores to investigate the relationship.

Scores from NYSAA in the areas of reading achievement were entered into the SPSS software to determine if a correlation exists between teacher self-efficacy beliefs and student reading scores. The study aimed to ascertain the relationship between teacher perceptions of self-efficacy and demographics and academic achievement for students with severe disabilities. Thus, the variables of interest were teacher perceptions of self-efficacy and demographic information.

Nonexperimental correlation studies aim to explore the relationships between variables where no independent variables are manipulated (Bleske-Rechek et al., 2015). Nonexperimental correlation designs are most appropriate for studies that examine correlations (Rovai et al., 2013). A nonexperimental correlation design was employed using the TSES (long form) (Tschannen-Moran & Woolfolk Hoy, 2001) to establish if there is a correlation between a teacher's view of capability and the effectiveness of his or her efforts, as demonstrated through student reading performance in a New York City

school district alternate assessment for students with severe disabilities. As students did not directly participate in the study, and only their NYSAA scores was utilized, a convenience, single-stage sample of students was selected with no stratification. In this study, the researcher selected participants that were students in Grades 3 through 8 in the 2014-2015 school year that participated in the NYSAA at the study site, from the archived data, within their predetermined classrooms. Once all data was gathered, it was subjected to analyses available through the SPSS, focusing on the variables (1) academic achievement in reading, and (2) teachers' efficacy as measured by the TSES survey.

In this study, the relationship between the variables was assumed to be linear, and outlying data was distinguished via residual analysis, and outlying data was distinguished via residual analysis. An additional check of the spreadsheet for errors was conducted in order to eliminate any typographical errors. Misinformation can distort the data and must be acknowledged before reporting on the analysis results. Students' NYSAA reading scores were entered into the SPSS software. Regression analysis was implemented to analyze the data. This part of the investigation aimed to answer the research question, how does overall teacher efficacy (Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management) relate to student academic achievement in reading in Grades 3 through 8 for students with severe disabilities?

The variables of interest for this study were teacher perceptions of self-efficacy, demographic variables, or a combination of demographic variables and perceptions of self-efficacy. The items pertaining to teacher perceptions of self-efficacy was rated using

a 9-point Likert-type scale. This data was provided using the TSES, where different ranges were corresponded to each score. The demographic information that was solicited from the participants includes total teaching years of experience and total teaching years of experience working with this population.

The data yielded by the survey provided quantitative results that enabled the researcher to utilize inferential correlational analysis to establish if there are relationships between the study's variables (Bandura, 2001). Regression analysis uses correlations to calculate the value of one variable from another variable (Fink, 2012). Further, linear or multiple-regression correlations determine relationships amongst the variables. This research is quantitative, correlational, and cross-sectional due to the type of data collection instrument, analysis employed, and study objectives (Creswell, 2013).

A qualitative data analysis was conducted to examine the teacher's perspectives based on the open-ended questions. Teachers' perception data was collected to determine what special education teachers of students with severe disabilities perceive as challenges in educating students with severe disabilities. Study participants responded to this questions: (a)What do you feel is most challenging in teaching students with severe disabilities? (b)What do you feel is most challenging in teaching reading to students with severe disabilities?

Considerations for Ethical Research

Every TSES survey score, and all the archived student NYSAA scores, remained confidential throughout the study. The NYSAA scores were archived at the end each year, and student confidentiality was ensured because the school codes each student with

a number and class code, but only the class code was given to the researcher. Prior to taking part in the survey, the teacher participants were given an informed consent form in an email. The informed consent form email includes the description of the study, potential risks and benefits to the participants, the confidentiality agreement, the participants' right to withdraw from the study, and the consent of the participants.

The process strictly adhered to the IRB recommendations for any research that involved the participation of people and an example of the risk statement for the participants and the school administration was provided in the original email sent to the participants. Anonymity of the students whose records were used in the study is ensured due to the use of archival data (Mauthner & Perry, 2013). The student names are removed by the school to maintain the privacy of the participants (Harriss & Atkinson, 2013). The teachers' names were also be coded prior to the data analysis.

As a "Common Rule," the United States regulations require all participants to sign a letter of consent before participating in any research (Wendler, Martinez, Fairclough, Sunderland, & Emanuel, 2014). However, this does not apply to the students in this study, as only their scores were utilized, and these were coded. In addition, the scores were matched to the teacher's assigned class that is coded by the school. Only the teacher of that class and the school administration are aware of that code. The code was not be published in the study. The school previously removed all confidential information, including student coded names on the class score sheet. Moreover, the researcher did not have access to any of the students' names.

The teachers were linked with their class by the class code they taught in the 2014-2015 school year. Thus, the teacher identified their class code from the 2014-2015 school year in the survey and the data was corresponded by class code. All documents pertaining to the study were kept in a locked filing cabinet or a password-protected computer in the researcher's home until the project study is accepted, published, and the doctorate awarded. Shredding will subsequently destroy the data.

While conducting this research, the researcher minimized the potential of teachers being identified in the study. No risks were associated with participation in the study because all study information is confidential and anonymous, using the anonymous feature of the survey software, with only the coded class figure as the identifier, was kept in a secluded location, on a password protected computer or in a locked cabinet that is accessible only to the researcher only. All data will be destroyed after final dissertation approval is granted.

As a requirement of the Walden University IRB, prior to collecting data the study was approved the committee and Walden University's IRB. As a requirement of the New York City Department of Education, prior to collecting data the study was approved the committee and New York City Department of Education's IRB. Additionally, the written permission was obtained from the school administration that employs the survey participants. The school administration was provided an informational package for approval, comprising of Letter of Informed Consent, invitation to participate, survey instruments, and permission to conduct the survey at the study site and obtain information from the NYSAA as noted and included in the appendix. The teachers that are of interest

for this study and meet the inclusion criteria were sent an email that includes an invitation to participate, letter of informed consent, and a link which compromised of a short demographic questionnaire, the survey, and the two open ended questions. The teachers' emails were available through the school email database.

The email included the participation letter that invited the teachers to partake in the study and outlined the study purpose, highlighted the voluntary nature of participation, and guaranteed anonymity to the participants, explaining that the researcher will have the sole access to the data they provide. The email also outlined the risks entailed in the participation in the research, as well as the methods the teachers can use for completion and return of the survey. Finally, the contact information of the committee chair and Walden's Director of Research was supplied to the participants, should they have any inquiries or concerns.

The findings this study is generalizable to New York State urban schoolteachers that work with students with severe disabilities in the district. The findings benefit the administration and teachers in this population, as they can possibly use them in improving reading achievement for students with severe disabilities. The results yielded by this study could encourage principals to provide educators with the supports necessary to facilitate the literacy of students with severe disabilities by encouraging school leaders in or outside of this district with lower than average scores to have an interest in your findings. It is also hoped that this study will prompt this and other districts to support teachers through training aimed at increasing their self-efficacy. The study also has important implications for social change, as greater awareness and knowledge of the

relationship between teacher self-efficacy and academic achievement in reading among students with severe disabilities may prompt initiatives to increase their literacy skills and thus improve their independence and overall quality of life.

Summary

This chapter delineated the nature and design of the study, and provided evidence confirming that these are appropriate for determining the relationship between teacher perception of self-efficacy and academic achievement in reading for students with severe disabilities. The data was collected through TSES (Tschannen-Moran & Woolfolk Hoy, 2001), which measures the three aspects of teacher self-efficacy—student engagement, instructional strategies, and classroom management through a Likert-type survey. The teachers also completed a questionnaire seeking demographic information pertinent to this study, namely years of teaching experience and years teaching within the severe disabilities population as well as two qualitative questions relating to the research.

The school administration provided the student academic achievement data, which is based on the standardized assessment, the NYSAA. A convenience sample was employed, as this allows information from teachers that meet the study inclusion criteria (teachers of students with severe disabilities in 3rd to 8th grade that participated in the 2014-2015 NYSAA) to be matched with the information from the NYSAA about the academic achievement of the students in their classroom. A linear regression was utilized to determine the relationship between a dependent variable and one or more explanatory variables

Ensuring the anonymity of the participants and safeguarding all data guarantees the protection of human rights. Additionally, the role of the researcher was clearly presented in regards to the validity of the findings and the design, reliability, and validity of the process were addressed. The TSES survey instrument and NYSAA data were presented, as it was explained that the data yielded was subjected to inferential analyses aimed at answering the research question. Additionally, the protection of human participants was discussed, along with the manner in which the information was disseminated upon study completion.

Chapter 4: Reflections and Conclusions

Introduction

The purpose of this nonexperimental quantitative study using a cross-sectional design was to explore the relationship between perceived sense of efficacy of teachers who taught students with severe disabilities in Grades 3 through 8 and reading achievement of that student population. Multiple linear regression analysis was conducted to address this research objective.

Research Question

The following research question was developed to guide this study:

How does overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) relate to student academic achievement in reading in Grades 3 through 8 for students with severe disabilities?

$H_0$1: Overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) is not a strong predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities.

H_a1: Overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) is a strong predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities.

The purpose of this chapter is to provide explanation of the results of the analysis using descriptive statistics analysis and multiple linear regression to address the purpose of the study. IBM SPSS Statistics Version 22 was utilized to conduct the data analysis. I present the summary of the results of the analysis to address the objective of the study.

Data Collection

The time frames for recruitment and data collection were as follows. The teachers were provided 4 weeks to complete the survey, and an automated reminder e-mail was sent to all participants at the beginning of Weeks 3 and 4 of the data collection process. The final response rate was 89% as 33 out of 37 teachers submitted completed surveys.

The setting for this study was a prekindergarten to 12th grade alternate placement public school serving students with severe disabilities residing in a New York State urban area. According to available records, of the 426 students the school served during the 2014-2015 academic year, all 426 students were diagnosed with disabilities. A total of 134 of these students, due to their grade level and federal mandates, completed the NYSAA. In terms of student demographics, 59% of the entire student population was White (n = 80), 24% were Hispanic (n = 33), 11% were Black (n = 15), 4% were Asian (n = 6), and none declared as Native American (n = 0), as based on the school website.

At the time of the study, the school employed 55 teachers, all of whom were special education certified in New York State. Of these, 37 teachers educated students with severe disabilities in Grades 3 through 8 during the 2014-2015 school year and were invited to take part in the study. They completed the TSES instrument, and their data were subsequently correlated with archival student reading scores from the NYSAA. The

prekindergarten to second grade and ninth to 12th grade teachers were not included in the study because prekindergarten to second grade students did not participate in the NYSAA. Additionally, the ninth to 12th grade students did not participate in the reading component of the NYSAA. Thus, all archival data for students in Grades 3 through 8 were used for the sample.

For the years of overall teaching experience, the mean number of years was 18.85 years (SD = 11.02). The highest years of overall teaching experience among the sample was 38 years while the lowest was 3 years. For the years of teaching students with severe disabilities, the mean number of years was 17.97 years (SD = 11.06). The highest year of teaching students with severe disabilities among the sample was 38 years while the lowest was 2 years. For the age of the samples, the mean age was 46.48 years old (SD = 12.03). The oldest among the 33 samples was 68 years old while the youngest was 27 years old (see Table 1).

Table 1

Summaries of Demographic Information of the Sample of Respondents (n = 33)

	N	Minimum	Maximum	Mean	Std. Deviation
Years of overall teaching experience	33	3	38	18.85	11.02
Years teaching students with severe disabilities	33	2	38	17.97	11.06
Age	33	27	68	46.48	12.03

Results

Descriptive Statistics Analysis

Table 2 summarizes the descriptive statistics summaries of scores of the independent variables of efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management and the dependent variable of student academic reading achievement as measured by the class reading scores. Mean scores were obtained on the items measuring each of the efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management to represent it as the scale scores.

Table 2

Descriptive Statistics of Study Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Efficacy in Student Engagement	33	2.88	8.75	6.10	1.36
Efficacy in Instructional Strategies	33	3	9	6.44	1.40
Efficacy in Classroom Management	33	3	9	6.40	1.38
Student Academic Reading Achievement	33	3	4	3.57	0.48

Based from the descriptive statistics, it can be observed that the efficacy in instructional strategies ($M = 6.66$; $SD = 1.40$) had the highest mean score indicating that the respondents had the greatest efficacy in instructional strategies. Efficacy in student engagement ($M = 6.10$; $SD = 1.36$) had the lowest mean score indicating that the respondents had the lowest efficacy in student engagement. All of the mean scores of the

independent variables of efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management were in the 6 to 7 range of scores. Those figures were in the higher end of the 1 to 9 ranges of possible scores for self-efficacy. This indicated that the respondents had high levels of self-efficacy in each of the three cited areas. The mean student academic reading achievement was 3.57 (SD = 0.48).

Results of Multiple Linear Regression Analysis

A multiple linear regression analysis was conducted to determine if teacher efficacy predicted student academic reading achievement. Specifically, a multiple linear regression analysis was conducted to determine the significance of the individual effects of the independent variables of efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management on the dependent variable of student academic reading achievement. A level of significance of 0.05 was used in the regression analysis. The results are presented in Table 3.

Table 3

Regression Results of Predictors of Student Academic Reading Achievement

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.64	0.17		21.32	0.00
	Years of overall teaching experience	0.01	0.04	0.29	0.36	0.72
	Years teaching students with severe disabilities	-0.02	0.04	-0.40	-0.48	0.63
2	(Constant)	3.56	0.61		5.83	0.00
	Years of overall teaching experience	0.02	0.04	0.35	0.37	0.72
	Years teaching students with severe disabilities	-0.02	0.04	-0.44	-0.44	0.66
	Efficacy in Student Engagement	-0.02	0.17	-0.06	-0.13	0.90
	Efficacy in Instructional Strategies	0.08	0.23	0.25	0.37	0.72
	Efficacy in Classroom Management	-0.05	0.23	-0.15	-0.23	0.82

Model 1
Note. F (2, 30) = 0.25, p = 0.78, R Square (R^2) = 0.02, N = 32
a. Dependent Variable: Student Academic Reading Achievement. b. Predictors: (Constant), Years teaching students with severe disabilities, Years of overall teaching experience.
Model 2
Note. F (5, 27) = 0.12, p = 0.99, R Square (R^2) = 0.02, N = 32.
a. Dependent Variable: Student Academic Reading Achievement. b. Predictors: (Constant), Years teaching students with severe disabilities, Years of overall teaching experience, Efficacy in Instructional Strategies, Efficacy in Student Engagement, Efficacy in Classroom Management.

A hierarchical regression model was conducted to control the effects of the control variables of years of overall teaching experience and years teaching students with severe disabilities. First, the effects of the control variables were investigated. The regression

results in Block 1 showed that both years of overall teaching experience (t (32) = 0.36, p = 0.72) and years teaching students with severe disabilities (t (32) = -0.48, p = 0.63) did not have any significant effect on the dependent variable of student academic reading achievement. These were because the p-values were greater than the level of significance value of 0.05.

Second, the effects of the independent variables of efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management on the dependent variable of student academic reading achievement were investigated while controlling the effects of the control variables of years of overall teaching experience and years teaching students with severe disabilities in Block 2 of the regression model. The model fit of the regression model (F(5, 27) = 0.12, p = 0.99) was insignificant indicating the regression model did not have an acceptable or did not have a good model fit. The r square value of the regression model was 0.02 indicating that only 2% of the variances of the combined effects of the independent variable were captured in the model. The combined effects of the independent variables of efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management a very low effect size on the dependent variable of student academic reading achievement. The regression analysis of the individual showed that all three of the independent variables of efficacy in student engagement (t (32) = -0.13, p = 0.90), efficacy in instructional strategies (t (32) = 0.37, p = 0.72), and efficacy in classroom management (t (32) = -0.23, p = 0.82) did not have significant effects on the dependent variable of student academic reading

achievement. All *p*-values were greater than the level of significance value of 0.05. With this result, the null hypothesis was not rejected.

Results of the Open-Ended Questions

Responses from the two open-ended questions were analyzed and then placed into categories according to theme. Participant responses with two-part answers identifying more than one area of difficulty were categorized according to the different themes the answers related to. Because both questions involved responses that were two part, percentages were determined according to total responses, rather than total participants.

The first question, which asked respondents to identify what they felt was the most difficult aspect of teaching students with severe disabilities, had a total of 33 participants and 34 unique responses (Table 4). Of these responses, 21% revealed that adaption (i.e., differentiation) of the materials to fit the child's individual needs was a primary issue. Of the responses, 21% also indicated difficulty with finding the time to properly instruct students according to their needs in order to comply with common core and grade level standards. Twelve percent of comments remarked about having difficulty keeping the children focused on the task at hand, while another 12% of participants commented on issues related to parental involvement as a major difficulty. Nine percent of respondents identified the amount of paperwork they were required to complete as the most difficult aspect of teaching children with special needs. Another 9% of responses identified delegating tasks to support staff as the most difficult area. There were also 9% of respondents who cited behavioral issues as their greatest area of difficulty. The final category involved comments related to incorporating life skills into the lessons, with only

6% of participants identifying this as their greatest area difficulty. There was one unique response related to collaborative coaching and learning, and another unique response related to the respondent's personal situation.

Table 4

Themes and Responses to the Open-Ended Question

What is the Most Challenging Aspect of Teaching Children with Severe Disabilities? (Unique Responses: n=34)

Thematic Category	Percentage (n=34)	Selected Individual Responses
Differentiation	21	-Adapting materials -It is difficult to differentiate lessons to ensure all students are learning and to have effective assessments to show student growth and learning.
Lack of Time	21	-The time it takes to make progress -Finding the time to really work with each student individually and analyze his or her data.
Keeping Students Focused	12	-Having them focus and minimize physical distractions
Parental Involvement	12	-Getting parents on board -Working with parents
Paperwork	9	-Personally, I would have to say that maintaining paperwork (Student Annual Needs Determination Inventory (SANDI)/ Formative Assessment System for Teachers (FAST)/ New York State Alternate Assessment (NYSAA) /Level 1 Vocational, etc.) is the most difficult aspect of my work day.
Task Delegation	9	-Delegating responsibilities to the other adults in the room and having other teachers buy into the idea that all the students can achieve
Behavioral Issues	9	-Managing classroom behaviors so they do not interfere with other student's learning. - It is most difficult to maintain the required high level of patience and consistent routines when dealing with the continual behavioral and emotional changes in my students.

(table continues)

Thematic Category	Percentage (n=34)	Selected Individual Responses
Life Skills Incorporation	6	-Teaching life skills in the curriculum -District expectations. Lack of focus on Life Skills
Other	6	-The toll it takes on my physically as an older teacher - Common Core Learning Standards

The second open-ended research question, which inquired about the primary difficulty encountered when teaching reading to students with severe disabilities, had a total of 33 participants and 36 unique responses (Table 5). Analysis of these responses revealed that 22% had difficulty with student comprehension of the material. There were 14% of responses that identified student problems with retention as the greatest difficult. When remarks related to available texts are considered, 11% of responses indicated that finding age level texts as the most difficult aspect of teaching children with severe disabilities, while 8% identified finding engaging texts as the most difficult aspect. Four different categories where each one also had 8% of remarks included themes related to closing the gap between age and ability, keeping the children focused, having students apply reading in more functional ways, and differentiation. Then, 6% of responses indicated that finding appropriate strategies for the individual students was rather difficult. There were also three individual responses, which included “assessments at the end of a lesion”, “students with behavioral issues disrupting the entire class/lesson, then having to start over”, and “student confidence”.

Table 5

Themes and Responses to the Open-Ended Question

What is the Most Difficult aspect of Teaching Reading to Students with Severe Disabilities?
(Unique Responses: *n*=36)

Thematic Category	Percentage (n=36)	Selected Individual Responses
Comprehension	22	-My students' comprehension level is not cognitive to their chronological age, but we are told to make is age appropriate??? -I find it extremely difficult to have students demonstrate understanding of comprehension without giving them too many supports or prompts.
Retention	14	-Having students carry over what they've learned from one day to the next -It is difficult to see the students make progress and then seem to forget or not have the ability to remember the next day.
Finding Age Level Texts	11	-Finding age level texts -Finding appropriate aged text on their level
Finding Engaging Texts	8	-Finding material that interests my students is most difficult -Finding reading materials that are engaging
Closing the Gap between Age and Ability	8	-Teaching grade level content when they are developmentally several years behind their grade level -Minimizing the gap between grade level standards and student's current skills

(table continues)

Thematic Category	Percentage (n=36)	Selected Individual Responses
Keeping Students Focused	8	-Keeping students focused
Functional Reading Application	8	-My students are at an age level where functional reading is of the utmost importance. Survival signs such as the Men's room or STOP signs take the forefront of reading. As teaching phonics would be too time consuming for the pre-vocational program. -Incorporating the skills that they will need to live while balancing the curriculum
Differentiation	8	-Adapting materials -Scaffolding and differentiation
Individualized Strategies	6	-Making sure you use every strategy. Determine what works best on an individual basis -Finding appropriate strategy for each child
Other	8	-Assessment at the end of a lesson -Student confidence - Student with behavioral issues disrupting the entire class/lesson. Having to start over.

Another element to the qualitative analysis involved assessing participant responses to determine if teachers' self-efficacy, years of experience teaching students with severe disabilities, and their age had any relationship with their open-ended responses (Table 6). Since the Likert scaled questionnaire measured three areas of self-efficacy (Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management) on a scale of one through nine, individual results from the self-efficacy areas were categorized into the ranges of high (7-9), medium (4-6), and low (1-3). Analyses of the teachers' open-ended responses in relation to the self-efficacy areas, years of experience teaching students with severe disabilities, and their ages, revealed that there was no direct relationship among any of those variables.

Table 6

Relationship Between the Teacher's Open-Ended Responses and the Areas of Self-Efficacy, Years of Experience Teaching Students with Severe Disabilities, and Age

Age	Years of overall teaching experience	Years teaching students with severe disabilities	Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management	What do you feel is most difficult in teaching students with severe disabilities	What do you feel is most difficult in teaching reading to students with severe disabilities
Open-Ended Response	Open-Ended Response	Open-Ended Response				Open-Ended Response	Open-Ended Response
27	6	2	8	8	8	differentiation	teaching comprehension strategies
27	5	5	7	8	8	Common Core Learning Standards	retention
27	6	2	7	7	7	delegating responsibilities to the other adults in the room and having other teachers buy into the idea that all the students can achieve	having students demonstrate comprehension of a text

(table continues)

Age	Years of overall teaching experience	Years teaching students with severe disabilities	Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management	What do you feel is most difficult in teaching students with severe disabilities	What do you feel is most difficult in teaching reading to students with severe disabilities
30	6	6	7	8	7	Every student has a different learning style. All 15students with disabilities learn at different rates and have different abilities. It is difficult to differentiate lessons to ensure all students are learning and to have effective assessments to show student growth and learning.	It is difficult to see the students make progress and then seem to forget or not have the ability to remember the next day. It takes a lot of practice to have them master sight words and reading strategies to decode words. I find it extremely difficult to have students demonstrate an understanding of comprehension without giving them too many supports or prompts.
30	7	4	7	7	7	having them focus and minimize physical distractions	minimizing the gap between grade level standards and student's current skills

(table continues)

Age	Years of overall teaching experience	Years teaching students with severe disabilities	Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management	What do you feel is most difficult in teaching students with severe disabilities	What do you feel is most difficult in teaching reading to students with severe disabilities
31	10	8	7	7	7	getting parents on board	having students generalize reading to other environments
31	9	6	7	9	8	Personally, I would have to say that maintaining paperwork data, behavior plans, multiple assessments: (Student Annual Needs Determination Inventory (SANDI)/ Formative Assessment System for Teachers (FAST)/ New York State Alternate Assessment (NYSAA) /Level 1 Vocational, etc..) is the most difficult aspect of my work day.	My students are at an age level where functional reading is of the utmost importance. Survival signs such as the Men's Room, an EXIT, or STOP sign take the forefront of reading. As teaching phonics would be too time consuming for the pre-vocational program.
32	3	10	7	8	8	Finding the time to really work with each student individually and analyze his or her data.	Comprehension

(table continues)

Age	Years of overall teaching experience	Years teaching students with severe disabilities	Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management	What do you feel is most difficult in teaching students with severe disabilities	What do you feel is most difficult in teaching reading to students with severe disabilities
34	3	3	6	6	6	District expectations. Lack of focus on Life Skills	Interest levels.
40	15	12	9	9	9	Students with severe disabilities should not have to be required to follow the common core standards.	My students' comprehension level is not cognitive to their chronological age. But we are told to make it age appropriate
40	15	15	7	7	7	The tine it takes to make progress	Students with behavioral issues Disrupt entire class/lesson. Having to start over.
41	15	15	6	6	6	Working w parents	Student confidence
45	21	21	6	5	6	attention	finding appropriate strategy for each child
48	20	18	6.5	7	7	adapting materials and finding age level texts	finding age level texts
49	20	20	6	8	7	Managing classroom behaviors so they do not interfere with other student's learning.	Their ability to recall information and to be consistent in answering questions
50	16	16	4	4	4	amount of paperwork to do	finding appropriate aged text on their level

(table continues)

Age	Years of overall teaching experience	Years teaching students with severe disabilities	Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management	What do you feel is most difficult in teaching students with severe disabilities	What do you feel is most difficult in teaching reading to students with severe disabilities
50	25	25	7	8	6	Knowing how to break down a lesson to its simplest task.	Making sure you use every strategy. Determine what works best on an individual basis.
50	22	22	4	6	5	keeping students focused	keeping students focused
51	27	27	4	4	4	keeping students focused on the lesson	having students carry over what they've learned from one day to the next
51	35	30	9	9	9	Engaging parents.	Increasing comprehension
52	7	7	8	8	8	differentiating instruction	so many strategies to choose from
53	19	19	6	8	8	It is most difficult to maintain the required high level of patience and consistent routines when dealing with the continual behavioral and emotional changes in my students.	Teaching comprehension and finding material that interests my students is most difficult.
53	23	16	7	7	7	parental involvement	scaffolding and differentiation

(table continues)

Age	Years of overall teaching experience	Years teaching students with severe disabilities	Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management	What do you feel is most difficult in teaching students with severe disabilities	What do you feel is most difficult in teaching reading to students with severe disabilities
55	30	30	5	5	5	Adapting materials	Adapting materials
55	30	32	5	5	6	Differentiating Instruction.	Getting students to re-tell some events in a story.
56	23	23	3	3	3	teaching life skills in the curriculum	incorporating skills they will need to live while balancing the curriculum
57	7	7	6	7	7	Implementing a curriculum that is expecting students who best learn concrete concepts to think using abstracts. We are forgetting that our children need to learn their way not how the state is telling them to learn.	Finding/making enough adapted materials on differentiated levels.
57	36	36	4	4	4	managing behaviors	comprehension and focus
58	33	33	5	7	6	Differentiation	Closing the gap from their age to their ability

(table continues)

Age	Years of overall teaching experience	Years teaching students with severe disabilities	Efficacy in Student Engagement	Efficacy in Instructional Strategies	Efficacy in Classroom Management	What do you feel is most difficult in teaching students with severe disabilities	What do you feel is most difficult in teaching reading to students with severe disabilities
60	35	30	6	7	7	The toll it takes physically on me as a teacher	assessment at the end of a lesson
61	38	38	5	7	6	teaching up to the grade level standards	teaching grade level content when they are developmentally several years behind their grade level
65	20	20	5.5	5.5	5.5	amount of paperwork to keep up with	keeping students engaged and focused
68	35	35	5	5	5	Delegating the paraprofessionals	finding reading materials that are engaging on level

Accordingly, when looking at one of the highest percentages (21%) of responses to the first open-ended question related to differentiation, respondents' self- efficacy in all areas ranged from medium to high, while years of experience varied between two and 33 years, and ages ranged from 27-58. The other open-ended category with 21% of responses regarding not having enough time to properly instruct the students, revealed that self-efficacy in all areas ranged from low to high, teacher experience fell between six

to 25 years, and ages ranged from 30 to 61. Additionally, open-ended responses related to the teacher's ability to maintain students' attention (12%), revealed that teacher's self-efficacy in all areas also fell into the medium to high ranges, with experience levels ranging from four to 27 years, and ages varying from 30 to 51.

Further evidence for there being no direct relationship between the teacher's open-ended responses and the areas of self-efficacy, years of experience teaching students with severe disabilities, and age can be found with examples from the second open-ended question. As such, teacher responses related to student comprehension, at 22%, showed self-efficacy ranges from medium (4-6) to high (7-9), with experience varying between 2 and 36 years, and ages ranging from 27 to 57. The second highest percentage of responses (14%) was regarding retention, and open-ended responses revealed that self-efficacy ranges varied from medium to high, while experience teaching ranged from 5 to 32 years, and ages were between 27 and 55. Finally, analyses of the open-ended responses related to finding age level texts (11%) found that self-efficacy ranges were from medium (4-6) to high (7-9), with experience levels ranging from 7 to 18 years, and ages from 48 to 57.

Summary

The purpose of this nonexperimental quantitative study using a cross-sectional design was to explore the relationship between perceived sense of efficacy of teachers who teach students with severe disabilities in Grades 3 through 8 and reading achievement of that student population. The results of the regression analysis showed that all three of the independent variables of Efficacy in Student Engagement, Efficacy in

Instructional Strategies, and Efficacy in Classroom Management did not have significant effects on the dependent variable of Student Academic Reading Achievement. With this result, the null hypothesis that "Overall teacher efficacy (Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management) is not a strong predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities" was not rejected. Chapter 5 includes further discussion of the results presented in this chapter. Each of the five hypotheses will be reviewed and the potential implications for each of the results of the analysis will be presented.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The concluding chapter of this dissertation offers a concise summary of the problem statement and the purpose of the study. This is then followed by an in-depth conversation regarding the results, their implications and limitations, as well as recommendations for future research.

It has been asserted that literacy is essential in order to improve the quality of life for students with severe disabilities (Saunders et al., 2013); however, according to Thurlow et al. (2014), the amount of students with severe disabilities who are not fluent readers is about 85%. Identifying contributing factors to the illiteracy rate of those with severe disabilities is extremely important in order to address this problem. One area of research that has shown to increase the overall success of students with severe disabilities relates to a teacher's self-efficacy or the teacher's belief that he or she is able to successfully teach necessary academic skills to the students. Bandura (1997) identified self-efficacy as an individual's belief about his or her ability to accomplish a task. Accordingly, Tschannen-Moran and Woolfolk Hoy (2001) as well as Cantrell et al. (2013) have asserted that there is a direct relationship between teachers' self-efficacy level and the achievements of their students; more precisely, students with severe disabilities tend to perform better when their teacher has a high level of self-efficacy.

Although the literature has identified an association between the level of teacher efficacy and the performance of students with severe disabilities, Ruppar et al. (2015) contended that there is a knowledge-to-practice gap. Therefore, the purpose of this study

was to examine if levels of self-efficacy (overall and three subscales), years of overall teaching experience, and years of teaching experience with the target population were predictors of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities. In order to adequately address this issue, this nonexperimental quantitative study specifically explored the relationship between the perceived self-efficacy of teachers who instruct third grade through eighth grade students with severe disabilities and the reading achievement of those students.

Summary of the Findings

The research question addressed how the overall teacher efficacy related to student academic achievement in reading for students with severe disabilities in Grades 3 through 8. Overall efficacy included the independent variables of efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management, which were tested to see how they were associated with the dependent variable of student academic reading achievement. There were two hypotheses, which included the following null hypothesis and alternative hypothesis:

> $H_0$1: Overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) is not a strong predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities.
>
> H_a1: Overall teacher efficacy (efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management) is a strong

predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities.

These hypotheses were tested via implementation of the TSES and comparing respondent answers with results from 134 students who took the 2014-2015 NYSAA. Although the TSES is traditionally a Likert scaled survey, with answers ranging from 1 (*meaning nothing*) through 9 (*meaning a great deal*), there was a qualitative element added to the survey in the form of two open-ended questions in order to provide additional support to the research question. Ultimately, the two open-ended questions assisted me as the researcher in gaining a better understanding of the specific challenges faced by the teachers charged with instructing students with severe disabilities.

Hypothesis Test Findings

Results from descriptive analysis of the 33 participants who completed the survey revealed that respondents had rather high levels of self-efficacy on all areas tested, with averages falling into the 6 to 7 range. The hierarchal regression model indicated that the control variables of years teaching and overall teaching experience did not have a significant effect on the dependent variable of student academic reading achievement, which is relevant to the research question because it identifies other factors that may have had an effect on the dependent variable. As such, the average amount of time that participants had been teaching children with severe disabilities was 18 years. Further regression analysis indicated that overall teacher efficacy did not have a significant effect on the dependent variable of student academic reading achievement, therefore resulting in a failure to reject the null hypothesis.

Qualitative Findings

The first open-ended question asked respondents to identify what they felt was the most difficult aspect of teaching students with severe disabilities. Key findings from the qualitative analysis of responses revealed that 42% of comments fit into two different categories, with 21% of responses indicating that adapting the materials to fit individual student needs was a major difficulty, and another 21% of responses referencing an inadequate amount of time to properly instruct students according to their individual needs as the most difficult aspect. Findings also indicated that the second most common difficulty encountered when teaching students with severe disabilities was evenly split among two categories, with 12% of responses identifying difficulty with keeping the children focused, and 12% of responses also identifying difficulty with parental involvement. There were three categories of difficulty that each had 9% of responses. These categories included the amount of paperwork, delegating tasks to support staff, and behavioral issues with the students.

The second open-ended question asked respondents to identify the most difficult element of teaching reading to kids with severe learning disabilities. Findings from responses to this question revealed that the majority of respondents, at 22%, felt that comprehension of the material was the most difficult aspect. The second most cited difficulty, with 14% of responses, related to the students' ability to retain the material they had read. Responses related to available texts fit into two different categories, with 11% of responses identifying that finding age-appropriate material was the most difficult aspect, while 8% of respondents made comments regarding difficulty with finding texts

that would interest the students. Four more categories that each had 8% of responses includes closing the gap between age and ability, keeping the children focused, having students apply reading in more functional ways, and differentiation (i.e., adapting materials).

Further analysis of responses to the two open-ended questions was performed in order to determine if there was a relationship between the teachers' comments and their self-efficacy, years of experience teaching students with severe disabilities, and age. More specifically, individual comments to the open-ended questions were compared with where the teachers ranked in areas of self-efficacy, as well as the length of time they had spent teaching children with severe disabilities, and their ages. Results indicated that overall there was no pattern of relationship between participant responses and the aforementioned variables.

Interpretation of Findings

Overall, the research results indicated that academic achievement in reading for students with severe disabilities was not significantly related to overall teacher efficacy; however, this finding does not necessarily mean that teacher efficacy has no effect on the overall accomplishments of students with severe disabilities. With this in mind, the descriptive statistics for all participants revealed the highest self-efficacy was in the independent variable self-efficacy in instructional strategies. Accordingly, Guo et al. (2014) contended that teachers with high-efficacy showed a significant relationship between teacher self- efficacy and instructional support or the ability to convey information. In contrast, Ruppar et al. (2014) aptly identified that students with severe

disabilities were adversely affected when teachers struggled with preparing and providing literacy instruction to them.

Further descriptive statistics of the independent variable self-efficacy in student engagement revealed that participants had the lowest amount of confidence in this area when compared to the other independent variables; however, with an overall average of 6.1, the results were still indicative of respondents having a good amount of confidence in regards to their ability to engage their students. This finding could actually be beneficial to the student's overall literacy accomplishments. In fact, Guo et al. (2014) contended that teachers' self-efficacy and one domain of classroom quality, namely instructional support, in predicting language and literacy gains of children with language impairments. The participants' responses to the open-ended questions may help to explain why the self-efficacy in student engagement results suggested that participants had the lowest confidence in this area. Accordingly, 8% of respondents indicated that finding engaging texts for their students as the most difficult aspect of teaching reading to students with severe learning disabilities. These difficulties could potentially have a negative impact on the students' literacy accomplishments within the classroom. Swaggerty (2015) discussed the importance of teachers in accepting the challenge to provide all students, especially those with reading difficulties or reluctances, with accessible and engaging reading materials to aid students in developing the enthusiasm and skills necessary to become habitual readers. To clarify, Tscheannen-Moran and Johnson (2011) found that teachers with low expectations of success were more likely to disengage from the reading lessons entirely, especially if the students were struggling.

Despite the minor differences identified in the two aforementioned independent variables, all of the three independent variables had scores that were overall very similar, with averages on the higher end of the Likert scale. These results suggested that the teachers generally felt confident regarding their abilities to instruct and engage their students, as well as manage their classrooms. This finding could be explained by the amount of time in which these teachers have been involved with educating students with severe disabilities; however, results from the hierarchal regression model indicated that teaching experience did not have a significant effect on student academic reading achievement. Further analysis of teachers' responses to the open-ended questions also found no differences in responses between respondents' individual challenges with teaching severely disabled children and their self-efficacy level, age, or teaching experience; yet, these findings could be explained by the small sample size. In contrast to those results, Phillips' (2015) study on fifth graders' mathematic achievement found that teacher experience, teacher education, and class size impacted student achievement. In line with Phillip's conclusions, Tchannen-Moran et al. (1998) asserted in early work in the area, that, over time, the repetition of positive teaching experiences helps teachers develop a stable sense of efficacy in their capacity to teach. Furthermore, many researchers have identified that there is empirical evidence to show that teacher experience has a direct effect on teacher efficacy. In fact, Bandura (1977) argued that mastery experiences, vicarious experiences, social persuasion, and physiological and emotional states all directly impact self-efficacy. Correspondingly, Tschannen-Moran et

al. (1998) noted that the self-perception of teaching ability is significantly shaped by mastery experiences and the physiological arousal related to those experiences.

Although the quantitative analysis resulted in a failure to reject the null hypothesis, the qualitative results revealed specific issues encountered by teachers of students with severe disabilities that were extremely informative. Notably, responses identified difficulty with finding the time to properly instruct students according to their individual needs in order to comply with common core and grade level standards. Saunders et al. (2013) specifically addressed this issue with an approach to teaching Common Core State Standards involving six steps that can be adapted by teachers of students with severe disabilities. Saunders et al. further explained their approach as a way of adapting texts and aligning them with specific state standards in order to enhance the lives of those with severe disabilities by providing more access to the required curriculum. Similarly, Tabakoli and Koosha (2015) highlighted the importance of teachers using explicit teaching of reading strategies to positively and significantly impact the reading ability of students. Nevertheless, one point overlooked by all of these authors is how to accomplish the recommended tasks within the time constraints that teachers are subject to. The amount of time needed to instruct children with severe disabilities and how this factor impacts teachers' ability to adequately communicate the required information to their pupils is one area where the literature consistently has failed to offer any recommendations.

Another area of difficulty that was identified through analysis of responses to the open-ended questions related to student comprehension. Hudson et al. (2013) addressed

this issue by presenting multiple approaches teachers can use to develop material and adapt texts on an individual basis, in order to allow students to exhibit their comprehension. The concept of adapting texts and modifying lesson plans according to student's individual needs is known as differentiation. As a matter of fact, many respondents also found differentiation to be rather difficult as well. Given that many of the participants mentioned differentiation, it is evident that the teachers involved in this study are already implementing several of these approaches. Be that as it may, participants' also identified difficulty with incorporating life skills into the curriculum, with one respondent commenting,

> My students are at an age level where functional reading is of the utmost importance. Survival signs such as the Men's room or STOP signs take the forefront of reading. As teaching phonics would be too time consuming for the pre-vocational program.

Ruppar et al. (2011) also found that teachers would rather teach life-skills linked to literacy instruction rather than standards-based instruction in special education classrooms.

The major difficulties identified by the participants' responses to the open-ended questions may actually be affecting their overall performance when it comes to teaching students with severe disabilities. Agran (2011) argued that the low expectations of teachers who have preconceived notions regarding the inability of students with severe disabilities to benefit from literacy education is the primary contributing factor to their low literacy rates. Bandura (1977) also asserted that cognitive, motivational, affective,

and selective processes serve as meditating factors that influence the degree to which environmental and psychological cues affect human behavior, specifically as it relates to the relationship between self-efficacy and task behavior.

Based upon Bandura's theory of social cognitive theory, the theoretical framework of this study was based upon Tschannen-Moran et al.'s (1998) theory of teacher efficacy, which posits that a teacher's perceived sense of self-efficacy stems from the combination of his or her determination to apply the available resources and strategies to bring about a particular result and a belief in his or her ability to teach. Accordingly, "a valid measure of teacher efficacy must assess both personal competence and analysis of the task in terms of the resources and constraints in particular teacher contexts" (Tschannen-Moran & Hoy, 2001, p. 795). In accordance with this assertion, the 2014-2015 NYSAA reading scores were compared with results from the TSES, thereby, ensuring that the research results complied with the theoretical specifications.

Implication of Findings

Rejection of a hypothesis does not necessarily indicate that the findings do not have further implications. In regards to this study's findings, the fact that so many of the respondents indicated that there was an insufficient amount of time to properly instruct the children according to their individual needs in order to meet the set curriculum standards, offers an opportunity for positive social change at the organizational level. More specifically, this finding could potentially help to inform new policies that will benefit the teacher's overall workload. Findings related to the difficulties with

differentiation could also assist administration in taking an active role towards identifying if there are any areas they can assist with to make adapting materials easier.

As far as theoretical implications are concerned, findings from the TSES used in this study could conceivably add support to the overall theoretical foundation. More precisely, the finding that teacher efficacy did not a have a significant impact the reading achievements of students with severe disabilities adds to the existing literature, which has been primarily focused on traditional students. Additional support for the theoretical foundation may be also be found in the results of the overall efficacy of teachers, seeing as how the participants ranked at the higher end of the Likert scale, but did not seem to influence the reading achievements of their students.

Moreover, the combination of results and the theoretical framework could inform further methodological constructs. Although quantitative research has a higher potential to be generalized to the broader population from which research participants are drawn (Creswell, 2013), the qualitative elements of this study added considerable value to the overall findings. Since a traditional TSES survey is strictly quantitative, the subjective perspectives of participants is relegated to fitting within the constructs of the Likert scale, the results may not tell the full story regarding why teachers feel the way they do. By adding qualitative elements into the survey, which could be accomplished in a similar manner as was used in this survey; the information collected would be more informative. Without the open-ended questions, the traditional survey would not have offered the in depth responses that were acquired with from this survey.

Subsequently, the overall findings from this study indicate that more research is necessary in order to adequately address the existing research gap related to the relationship between teacher efficacy and the reading achievements of students with severe disabilities. The results from this study have offered valuable insight into the existing relationship between teacher efficacy and student reading accomplishments, as well as insight into what areas are causing the most difficulties for teachers. The addition of this study, in combination with other research, may help to inform policy changes related to how teachers can positively influence the overall reading achievement of students with severe disabilities.

Limitations

As with all research, this study inevitably had some potential limitations. To begin with, the TSES survey instrument was initially designed with traditional students in mind, within the context of general education. Also, the instrument was designed in 2011, making it only about five years old, and the studies that have been conducted where the TSES was utilized were investigating the relationship between teacher efficacy and traditional students within a general learning environment. Thus, somewhat complicating confirmation of this research.

The next potential limitation related to the fact that the data were self-reported and based upon retrospective phenomena. This reality opens the door to potential bias on the part of the respondent, especially since the researcher was a member of the staff at the research site. Although self-reported data based upon retrospective events is a widely accepted and valid method of data collection (Brener et al., 2003), there were extra

measures put into place to ensure the reliability of participants' responses. Namely, to ensure the respondents remained anonymous, the researcher sent requests to potential participants via Survey Monkey, and did not have access to the responses until the surveys were completed. The survey respondents were also identified only with a code.

The sample size of this study also offered a potential limitation. Initially there were 37 participants; however, once the surveys had been collected, the sample size was reduced to 33 participants, which was the minimum number required to conduct the regression analysis in order to detect a medium effect. The final limitation relates to external validity and the ability to generalize the results to a larger population. Since, this study utilized a convenience sampling method and was conducted at only one school, the results cannot be generalized to other populations.

Recommendations for Future Research

The overall findings and the limitations of this research, as well as this study's connection with the extant literature, offers interesting opportunities for future research. This assertion is especially relevant given the fact that there is a gap in the extant literature regarding the relationship between teacher efficacy and the reading accomplishments of students with severe disabilities. With that in mind, future studies utilizing the TSES would be extremely advantageous with regards to expansion of the existing literature.

There are also ways in which this research can be expanded, specifically regarding the addition of more qualitative elements. The results of this research left many questions unanswered that may have been answered with a couple more open-ended

questions. For instance, it would have been a great asset to know what the teachers would have recommended in order to improve some of the they identified as major difficulties. The addition of some follow-up questions might serve to inform further understanding of all the factors involved in a teacher's efficacy. Questions of this nature could also help to further inform systematic changes.

Another area where this research could be expanded involves the variables chosen for analysis. Specifically, this research focused on how the independent variables of Overall Years of Teaching Experience and Years Teaching Students with Severe Disabilities impacted the dependent variable Academic Reading Achievement in students with severe disabilities; however, the relationship between the years of experience teaching students with severe disabilities and teaching efficacy was not explored. While the available literature offers studies on how teacher experience levels in general education environments influence teacher efficacy, they fail to offer any insight into how the years of teaching students with severe disabilities impacts teacher efficacy. Therefore, further research investigating the relationship between the independent variable Teaching Experience with Students with Severe Disabilities and the other independent variables of Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management could be especially revealing. Research studies of this nature would also aid in closing the apparent literature gap concerning the contributing factors impacting teacher efficacy when instructing students with severe disabilities.

Since this study was limited by sample size and a single location, expansion of this research to other cities would go a long way towards bridging the literature gap. A

longitudinal study over time would also be beneficial, taking into account specific confounding variables that might arise. It would also be interesting to have more information about the students. After all, the term severe disabilities encompasses a wide range of issues that can affect numerous academic achievements.

Social Change

In regards to this study's impact on social change, the results found that many of the respondents indicated that there was an insufficient amount of time to properly instruct the children according to their individual needs in order to meet the set curriculum standards. This information offers an opportunity for positive social change at the organizational level. Specifically, may support new policies that will benefit the teacher's overall work load. Additionally, the findings concerning the challenges pertaining to differentiation may also aid administration in assisting teachers to make adapting materials easier.

As mentioned, these finding could have positive impact in the field of special education, specifically in the education of students with severe disabilities. The findings may lead to positive social change by helping to inform new policies that will reduce challenges indicated by teachers of students with severe disabilities. These changes could ultimately improve student outcomes in the narrowly researched area in special education for students with severe disabilities.

Conclusion

This quantitative research study implemented the TSES in order to answer the following research question: How does overall teacher efficacy (Efficacy in Student

Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management) relate to student academic achievement in reading in Grades 3 through 8 for students with severe disabilities? In order to offer further support to the research question, there were two open-ended questions proposed. The open-ended questions sought to elicit more detailed explanations from participants with regards to what they felt was the most difficult aspect of teaching children with severe disabilities in general, and also in reading.

Ultimately, results from an SPSS analysis of the Likert scaled questions led to the rejection of the hypothesis, which asserted that the overall teacher efficacy (Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management) would be a strong predictor of student academic achievement in reading in Grades 3 through 8 for students with severe disabilities. Nevertheless, the findings from the survey revealed that teacher efficacy was actually rather high, with an average response score falling on the high end of the 1 to 9 Likert scale. While acknowledging the challenges of providing instruction to students with severe disabilities in the New York City public school, all stakeholders need to appreciate the challenges faced by teachers of students with severe disabilities. As educators, we have the responsibility and privilege of preparing young adults with severe disabilities for meaningful education and future employment, as members of our community.

References

Agran, M. (2011). Promoting literacy instruction for people with severe disabilities: Achieving and realizing a literate identity. *Research and Practice for Persons with Severe Disabilities*, *36*(3-4), 89-91. doi:10.2511/027494811800824561

Ahsan, M. T., Sharma, U., & Deppeler, J. M. (2012). Exploring pre-service teachers' perceived teaching-efficacy, attitudes and concerns about inclusive education in Bangladesh. *International Journal of Whole Schooling*, *8*(2), 1-20. Retrieved from http://files.eric.ed.gov/fulltext/EJ975715.pdf

Allor, J. H., Mathes, P. G., Roberts, J. K., Cheatham, J. P., & Champlin, T. M. (2010). Comprehensive reading instruction for students with intellectual disabilities: Findings from the first three years of a longitudinal study. *Psychology in the Schools*, *47*(5), 445-466. doi:10.1002/pits.20482

Alkharusi, H., Aldhafri, S., Alnabhani, H., & Alkalbani, M. (2014). Modeling the relationship between perceptions of assessment tasks and classroom assessment environment as a function of gender. *The Asia-Pacific Education Researcher*, *23*(1), 93-104. doi:10.1007/s40299-013-0090-0

Allinder, R. M. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, *17*(2), 86-95. doi:10.1177/088840649401700203

Americans with Disabilities Act of 1990, Pub. L. No. 101-336 §104 Stat. 327. Retrieved from the http://www.ada.gov/pubs/adastatute08.pdf

Anderson, G., & Anderson, G. J. (1998). *Fundamentals of educational research*. doi:10.4324/9780203978221

Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., . . . Zellman, G. (1976). *Analysis of the school preferred reading programs in selected Los Angeles minority schools* (Report No. R-2007-LAUSD). Santa Monica, CA: Rand Corporation (ERIC Document # ED130 243).

Aron, L., & Loprest, P. (2012). Disability and the education system. *The Future of Children*, *22*(1), 97-122. doi:10.1353/foc.2012.0007

Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York, NY: Longman Publishing Group.

Ayres, K. M., Lowrey, K. A., Douglas, K. H., & Sievers, C. (2011). I can identify Saturn but I can't brush my teeth: What happens when the curricular focus for students with severe disabilities shifts. *Education and Training in Autism and Developmental Disabilities, 46*(1), 11–21. Retrieved from http://daddcec.org/Publications/ETADDJournal.aspx

Bandura, A. (1977). Self-efficacy*:* Towards a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215. doi:10.1037/0033-295X.84 .2.191

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122-147. doi:10.1037/0003-066X.37.2.122

Bandura, A. (1986). Fearful expectations and avoidant actions as coeffects of perceived self-inefficacy. *American Psychologist*, *41*(12), 1389-1391. doi:10.1037/0003-066X.41.12.1389

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*(2), 117-148. doi:10.1207/s15326985ep2802_3

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York, NY: W.H. Freeman. doi:10.1017/cbo9780511527692.003

Bandura, A. (2001). Social cognitive theory of mass communication. *Media Psychology*, *3*(3), 265-299. doi:10.1207/s1532785xmep0303_03

Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents, 5*(307-337). Retrieved from http://www.uky.edu/~eushe2/Bandura/BanduraGuide2006.pdf

Barbarin, O. A., & Aikens, N. (2015). Overcoming the educational disadvantages of poor children: How much do teacher preparation, workload, and expectations matter. *American Journal Of Orthopsychiatry*, *85*(2), 101-105. doi:10.1037/ort0000060

Barkley, J. M. (2006). Reading education: is self-efficacy important?. *Reading Improvement*, *43*(4), 194-210. Retrieved from https://www.highbeam.com/doc/1G1-158959518.html

Barrett, J. (2010). New York State's Alternate Assessment: Is it really fulfilling its purpose?. *Education and Human Development Master's Theses.* Paper 6.

Battersby, S. L., & Verdi, B. (2015). The culture of professional learning communities and connections to improve teacher efficacy and support student learning. *Arts Education Policy Review*, *116*(1), 22-29. doi:10.1080/10632913.2015.970096

Bell, L. M., & Aldridge, J. M. (2014). Introduction. In *Student Voice, Teacher Action Research and Classroom Improvement*. 1-46. SensePublishers. doi:10.1007/978-

94-6209-776-6_1

Bernard, H. R., & Bernard, H. R. (2012). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA. Sage Publications. doi:10.1007/s11577-001-0128-9

Bilali, O. (2015). Teachers' Sense of Efficacy Scale: The study of validity and reliability. *European Academic Research, 2(*12), 15176-15184. Retrieved from http://euacademic.org/UploadArticle/1441.pdf

Bleske-Rechek, A., Morrison, K. M., & Heidtke, L. D. (2015). Causal inference from descriptions of experimental and non-experimental research: Public understanding of correlation-versus-causation. *The Journal of General Psychology*, *142*(1), 48-70. doi:10.1080/00221309.2014.977216

Block, C. C., & Mangieri, I. N. (2003). Exemplary literacy teachers: Promoting success for all children in grades K-5. *Solving Problems in the Teaching of Literacy*. New York, NY: Guilford Publications Inc.

Boulton, M. J. (2014). Teachers' self-efficacy, perceived effectiveness beliefs, and reported use of cognitive-behavioral approaches to bullying among pupils: Effects of in-service training with the I DECIDE program. *Behavior therapy*, *45*(3), 328-343. doi:10.1016/j.beth.2013.12.004

Brault, M. W. (2012). *Americans With Disabilities: 2010. Household economics studies. Current population reports* (U.S. Census Bureau Report No. P70-131). Retrieved from http://www.census.gov/prod/2012pubs/p70-131.pdf

Brener, N. D., Billy, J. O., & Grady, W. R. (2003). Assessment of factors affecting the

validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health, 33*(6), 436-457. doi:10 .1016/S1054-139X(03)00052-1

Browder, D., Gibbs, S., Ahlgrim-Delzell, L., Courtade, G. R., Mraz, M., & Flowers, C. (2008). Literacy for Students With Severe Developmental Disabilities: What Should We Teach and What Should We Hope to Achieve? Remedial and Special Education, *30*(5), 269–282. doi:10.1177/0741932508315054

Browder, D., Ahlgrim-Delzell, L., Flowers, C., & Baker, J. (2012). An evaluation of a multicomponent early literacy program for students with severe developmental disabilities. *Remedial and Special Education*, *33*(4), 237-246. doi:10.1177/0741932510387305

Browder, D. M., Lee, A., & Mims, P. (2011). Using shared stories and individual response modes to promote comprehension and engagement in literacy for students with multiple, severe disabilities. *Education and Training in Autism and Developmental Disabilities 46*(3), 339-351. Retrieved from http://daddcec.org/Portals/0/CEC/Autism_Disabilities/Research/Publications/Education_Training_Development_Disabilities/2011v46_Journals/ETADD_2011v4n3p339-351_Using%20shared%20stories.pdf

Brown, E., Molfese, V., & Molfese, P. (2008). Preschool student learning in literacy and mathematics: Impact of teacher experience, qualifications, and beliefs on an at-Risk Sample. *Journal of Education for Students Placed at Risk*, *13*(1), 106-126. doi:10.1080/10824660701860474

Brown, P., Stephenson, J., & Carter, M. (2014). Multicomponent training of teachers of students with severe disabilities. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 37*(4), 347-362. doi:10.1177/0888406414546873

Bunning, K., Smith, C., Kennedy, P., & Greenham, C. (2013). Examination of the communication interface between students with severe to profound and multiple intellectual disability and educational staff during structured teaching sessions. *Journal of Intellectual Disability Research*, *57*(1), 39-52. doi:10.1111/j.1365-2788.2011.01513.x

Cantrell, S. C., Almasi, J. F., Carter, J. C., & Rintamaa, M. (2013). Reading intervention in middle and high schools: Implementation fidelity, teacher efficacy, and student achievement. *Reading Psychology, 34*(1), 26-58. doi:10.1080/02702711.2011.577695

Caprara, G., Barbaranelli, C., Steca, P., & Malone, P. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology*, *44*(6), 473-490. doi:10.1016/j.jsp.2006.09.001

Carnahan, C. R., Williamson, P. S., Hollingshead, A., & Israel, M. (2012). Using technology to support balanced literacy for students with significant disabilities. *Teaching Exceptional Children*, *45*(1), 20-29. Retrieved from http://ruralinstitute.umt.edu/SBIEP/wp-content/uploads/2014/01/Carnahanetal2012.pdf

Carter, E. W., Ditchman, N., Sun, Y., Trainor, A. A., Swedeen, B., & Owens, L. (2010). Summer employment and community experiences of transition-age youth with severe disabilities. *Exceptional Children, 76*(2), 194-212. doi:10.1177/0022466909353204

Cerıt, Y. (2010). Teacher efficacy scale: The study of validity and reliability and preservice classroom teachers' self efficacy beliefs. *Journal of Theory & Practice in Education (JTPE), 6*(1), 68-85. Retrieved from http://eku.comu.edu.tr/article/download/1044000099/1044000108

Chan, W. Y., Lau, S., Nie, Y., Lim, S., & Hogan, D. (2008). Organizational and personal predictors of teacher commitment: The mediating role of teacher efficacy and identification with school. *American Educational Research Journal*, *45*(3), 597-630. doi:10.3102/0002831208318259

Cho, H. J., & Kingston, N. (2013). Examining teachers' decisions on test-type assignment for statewide assessments. *The Journal of Special Education*, *49*(1), 16-27. doi:10.1177/0022466913498772

Chong, W. H., Klassen, R. M., Huan, V. S., Wong, I., & Kates, A. D. (2010). The relationships among school types, teacher efficacy beliefs, and academic climate: Perspective from Asian middle schools. *The Journal of Educational Research*, *103*(3), 183-190. doi:10.1080/00220670903382954

Christophersen, K. A., Elstad, E., Turmo, A., & Solhaug, T. (2015). Teacher Education Programmes and Their Contribution to Student Teacher Efficacy in Classroom Management and Pupil Engagement. *Scandinavian Journal of Educational*

Research, *60*(2), 1-15. doi:10.1080/00313831.2015.1024162

Chung, W., Chung, S., Edgar-Smith, S., Palmer, R. B., Delambo, D., & Huang, W. (2015). An examination of in-service teacher attitudes toward students with autism spectrum disorder: Implications for professional practice. *Current Issues in Education*, *18*(2), 1-12. doi:10.1007/s10560-008-0147-8

College and Career Readiness and Success Center. (2013). *Improving college and career readiness for students with disabilities.* Retrieved from http://www.ccrscenter.org/sites/default/files/Improving%20College%20and%20Career%20Readiness%20for%20Students%20with%20Disabilities.pdf

Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social–emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. Journal Of Educational Psychology, *104*(4), 1189-1204. doi:10.1037/a0029356

Convention on the Rights of Persons with Disabilities. (2006). *Some facts about persons with disabilities.* Retrieved from http://www.un.org/disabilities/convention/facts.shtml

Council for Exceptional Children. (2009). *What every special educator must know: Ethics, standards, and guidelines for Special Education*. (6th ed.). Arlington, VA: Author. Retrieved from https://www.cec.sped.org/~/media/Files/Standards/News%20and%20Reports/Redbook%202009.pdf

Courtade, G., Spooner, F., Browder, D., & Jimenez, B. (2012). Seven reasons to promote standards-based instruction for students with severe disabilities: A reply to Ayres,

Lowrey, Douglas, & Sievers (2011). *Education and Training in Autism and Developmental Disabilities*, *47*(1), 3-13. Retrieved from http://libres.uncg.edu/ir/uncg/f/B_Jimenez_Seven_2012.pdf

Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches.* (2nd ed.). *EUA Sage*, *196*. Retrieved from http://cluteinstitute.com/ojs/index.php/JBER/article/viewFile/2532/2578

Creswell, J. W. (2012a). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

Creswell, J. W. (2012b). *Qualitative inquiry and research design: Choosing among five approaches.* Thousand Oaks, CA: SAGE Publications.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: SAGE Publications.

Creswell, J. W. (2014). *A concise introduction to mixed methods research*. Thousand Oaks, CA: SAGE Publications.

Czerniak, C. M., & Schriver, M. L. (1994). An examination of preservice science teachers' beliefs and behaviors as related to self-efficacy. *Journal of Science Teacher Education*, *5*(3), 77-86. doi:10.1007/bf02614577

Dana, N.F, & Yendol-Hoppey, D. (2009). Facilitators guide: *The reflective educator's guide to classroom research: Learning to teach and teaching to learn through practitioner inquiry.* Thousand Oaks, CA: Corwin Press.

DePoy, E., & Gitlin, L. N. (2015). *Introduction to research: Understanding and applying multiple strategies*. Elsevier Health Sciences. (5th ed.). St. Louis, MO: Elsevier

Mosby

De Neve, D., Devos, G., & Tuytens, M. (2015). The importance of job resources and self-efficacy for beginning teachers' professional learning in differentiated instruction. *Teaching and Teacher Education*, *47*, 30-41. doi:10.1016/j.tate.2014.12.003

De Paul, S. V. (2012). Development and Validation of Teacher Self Efficacy Scale. *IOSR Journal of Humanities and Social Science (JHSS) 2*(2). doi:10.9790/0837-0221218

De Schotten, M. T., Cohen, L., Amemiya, E., Braga, L. W., & Dehaene, S. (2014). Learning to read improves the structure of the arcuate fasciculus. *Cerebral Cortex*, *24*(4), 989-995. doi:10.1093/cercor/bhs383

Douglas, K. H., Ayres, K. M., Langone, J., & Bramlett, V. B. (2011). The effectiveness of electronic text and pictorial graphic organizers to improve comprehension related to functional skills. *Journal of Special Education Technology*, *26*(1), 43. doi:1177/016264341102600105

Duckworth, A. L., Quinn, P. D., & Tsukayama, E. (2012). What No Child Left Behind leaves behind: The roles of IQ and self-control in predicting standardized achievement test scores and report card grades. *Journal Of Educational Psychology, 104*(2), 439-451. doi:10.1037/a0026280

Duffin, L. C., French, B. F., & Patrick, H. (2012). The Teachers' Sense of Efficacy Scale: Confirming the factor structure with beginning pre-service teachers. *Teaching and teacher Education*, *28*(6), 827-834. doi:10.1016/j.tate.2012.03.004

Duffy, M., Giordano, V., Farrell, J., Paneque, O., & Crump, G. (2008). No Child Left

Behind: Values and research issues in high-stakes assessments. *Counseling and Values*, *53*(1), 53. doi:10.1002/j.2161-007x.2009.tb00113.x

Eberle, W. M. (2011). Teacher self-efficacy and student achievement as measured by North Carolina reading and math end-of-grade tests. *Electronic Theses and Dissertations*. Paper 1242. Retrieved from http://dc.etsu.edu/cgi/viewcontent.cgi?article=2433&context=etd

Education for All Handicapped Children Act of 1975, Pub. L. No. 94-142. doi:10.1002/9780470373699

Elementary and Secondary Education Act of 1965, Pub L. No. 89-10 § 1001. doi:10.1007/springrreference_69908

Enochs, L. G., Scharmann, L. C., & Riggs, I. M. (1995). The relationship of pupil control to preservice elementary science teacher self–efficacy and outcome expectancy. *Science Education*, *79*(1), 63-75. doi:10.1002/sce.3730790105

Evans, A. (2009). No child left behind and the quest for educational equity: The role of teachers' collective sense of efficacy. *Leadership & Policy in Schools*, *8*(1), 64-91. doi:10.1080/15700760802416081

Fink, A. (2012). *How to conduct surveys: A step-by-step guide*. Thousand Oaks, CA: Sage Publications.

Friedel, J. M., Cortina, K. S., Turner, J. C., & Midgley, C. (2010). Changes in efficacy beliefs in mathematics across the transition to middle school: Examining the effects of perceived teacher and parent goal emphases. *Journal of Educational Psychology*, *102*(1), 102. doi:10.1037/a0017590

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569-582. doi:10.1037/0022-0663.78.4.569

Ghasemboland, F., & Hashim, F. B. (2013). Teachers' self-efficacy beliefs and their English language proficiency: A study of nonnative EFL teachers in selected language centers. *Procedia-Social and Behavioral Sciences*, *103*, 890-899. doi:10.1016/j.sbspro.2013.10.411

Goddard, R. D., & Goddard, Y. L. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. *Teaching and Teacher Education*, *17*(7), 807-818. doi:10.1016/s0742-051x(01)00032-4

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, *37*(2), 479-507. doi:10.2307/1163531

Guo, Y., Dynia, J. M., Pelatti, C. Y., & Justice, L. M. (2014). Self-efficacy of early childhood special education teachers: Links to classroom quality and children's learning for children with language impairment. *Teaching and Teacher Education*, *39*, 12-21. doi:10.1016/j.tate.2013.11.005

Guo, Y., Piasta, S. B., Justice, L. M., & Kaderavek, J. N. (2010). Relations among preschool teachers' self-efficacy, classroom quality, and children's language and literacy gains. *Teaching and Teacher Education*, *26*(4), 1094-1103. doi:10.1016/j.tate.2009.11.005

Hattie, J & Yates, G. (2013). Understanding learning: Lessons for learning, teaching and research. In Hattie, J & Yates, G. (Ed.), *Visible learning and the science of how*

we learn. (24-39). London, England. Routledge. doi:10.4324/9781315885025

Harriss, D. J., & Atkinson, G. (2013). Ethical standards in sport and exercise science research: 2014 update. *Int J Sports Med*, *34*(12), 1025-1028. doi:10.1055/s-0033-1358756

Hartas, D. (2015). *Educational research and inquiry: Qualitative and quantitative approaches*. London, England. Bloomsbury Publishing. doi:10.1080/00071005.2011.611285

Haverback, H., & Parault, S. (2008). Pre-Service reading teacher efficacy and tutoring: A review. *Educational Psychology Review*, *20*(3), 237-255. doi: 10.1007/s10648-008-9077-4

Hicks, S. D. (2012). *Self-efficacy and classroom management: A correlation study regarding the factors that influence classroom management* (Doctoral dissertation, Liberty University). Retrieved from http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1598&context=doctoral

Hines, M., & Kritsonis, W. (2010). The interactive effects of race and teacher self efficacy on the achievement gap in school. *National Forum of Multicultural Issues Journal*, *7*(1), 1-14. Retrieved from http://files.eric.ed.gov/fulltext/EJ940572.pdf

Holzberger, D., Philipp, A., & Kunter, M. (2013). How teachers' self-efficacy is related to instructional quality: A longitudinal analysis. *Journal Of Educational Psychology*, *105*(3), 774-786. doi:10.1037/a0032198

Hoy, A. W. (2000). Changes in teacher efficacy during the early years of teaching. In *annual meeting of the American Educational Research Association, New Orleans, LA*. Retrieved from https://www.researchgate.net/profile/Anita_Hoy/publication/237218148_Changes_in_Teacher_Efficacy_During_the_Early_Years_of_Teaching/links/00463528a2036cfb4a000000.pdf.

Hoy, A. W., & Spero, R. B. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education*, *21*(4), 343-356. doi:10.1016/j.tate.2005.01.007

Hudson, M. E., Browder, D., & Wakeman, S. (2013). Helping students with moderate and severe intellectual disability access grade-level text. *TEACHING Exceptional Children, 45*(3), 14-23. doi:10.1177/004005991304500302

Individuals with Disabilities Education Act of 2004, Pub. L. 108-446 § 104 Stat. 1142 *et seq.* doi:10.1002/9780470372699

Jamil, F. M., Downer, J. T., & Pianta, R. C. (2012). Association of pre-service teachers' performance, personality, and beliefs with teacher self-efficacy at program completion. *Teacher Education Quarterly*, *39*(4), 119-138. Retrieved from http://files.eric.ed.gov/fulltext/EJ1001446.pdf

Karvonen, M., Wakeman, S., Flowers, C., & Moody, S. (2013). The relationship of teachers' instructional decisions and beliefs about alternate assessments to student achievement. *Exceptionality*, *21*(4), 238-252. doi:10.1080/09362835.2012.747184

Keefe, E. B., & Copeland, S. R. (2011). What is literacy? The power of a definition.

Research and Practice for Persons With Severe Disabilities, 36(3-4), 92–99. doi:10.2511/0274981100824507

Kelm, J. L., & McIntosh, K. (2012). Effects of school-wide positive behavior support on teacher self-efficacy. *Psychology in the Schools*, *49*(2), 137-147. doi:10.1002/pits.20624

Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S., Wong, I. Y., & Georgiou, T. (2009). Exploring the validity of a teachers' self-efficacy scale in five countries. *Contemporary Educational Psychology*, *34*(1), 67-76. doi:10.1016/j.cedpsych.2008.08.001

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of educational Psychology, 102*(3), 741. doi:10.1037/a0019237

Kleinert, H., Towles-Reeves, E., Quenemoen, R., Thurlow, M., Fluegge, L., Weseman, L., & Kerbel, A. (2015). Where students with the most significant cognitive disabilities are taught implications for general curriculum access. *Exceptional Children*, *81*(3), 312-328. doi:10.1177/0014402914563697

Knesting-Lund, K., O'Rourke, B., & Gabriele, A. (2015). Teachers' efficacy for supporting at-risk students and their perceived role in dropout prevention. *Journal of Studies in Education*, *5*(2), 187-198. doi:10.5296/jse.v5i2.7523

Knoblauch, D., & Chase, M. A. (2015). Rural, suburban, and urban schools: The impact of school setting on the efficacy beliefs and attributions of student teachers. *Teaching and Teacher Education*, *45*, 104-114. doi:10.1016/j.tate.2014.10.001

Kurth, J. A., Lyon, K. J., & Shogren, K. A. (2015). Supporting students with severe disabilities in inclusive schools a descriptive account from schools implementing inclusive practices. *Research and Practice for Persons with Severe Disabilities*, *40*(4), 261-274. doi:10.1177/1540796915594160

Labone, E. (2004). Teacher efficacy: Maturing the construct through research in alternative paradigms. *Teaching and Teacher Education*, *20*(4), 341-359. doi:10.1016/j.tate.2004.02.013

Laitusis, C. C., Maneckshana, B., Monfils, L., & Ahlgrim-Delzell, L. (2014). Differential item functioning comparisons on a performance-based alternate assessment for students with severe cognitive impairments, autism and orthopedic impairments. *Association of Test Publishers*, *10*(2), 1-33. Retrieved from http://www.jattjournal.com/index.php/atp/article/viewFile/48351/39221

Lauer, P. A., Christopher, D. E., Firpo-Triplett, R., & Buchting, F. (2014). The impact of short-term professional development on participant outcomes: A review of the literature. *Professional development in education*, *40*(2), 207-227. doi:10.1080/19415257.2013.776619

Lazarus, S. S., Edwards, L. M., Thurlow, M. L., & Hodgson, J. R. (2014). *States' flexibility waiver plans for alternate assessments based on alternate achievement standards* (NCEO Report No. 96). doi:10.1177/0741932510362214

Lee, Y., Patterson, P. P., & Vega, L. A. (2011). Perils to self-efficacy perceptions and teacher-preparation quality among special education intern teachers. *Teacher Education Quarterly*, *38(*2), 61-76. doi:10.14333/kjte.2015.31.3.89

Lee, J., & Reeves, R. (2012). Revisiting the impact of NCLB high-stakes school accountability, capacity, and resources: NAEP 1990-2009 reading and math achievement gaps and trends. *Educational Evaluation and Policy Analysis, 23*(2), 209-231. doi:10.3102/0162373711431604

Levy, P., & Goldstein, H. (2014). *Tests in Education: a book of critical reviews*. Academic Press. London, England.

Light, J., & McNaughton, D. (2012). Supporting the communication, language, and literacy development of children with complex communication needs: State of the science and future research priorities. *Assistive Technology*, *24*(1), 34-44. doi:10.1080/10400435.2011.648717

Loreman, T., Sharma, U., & Forlin, C. (2013). Do pre-service teachers feel ready to teach in inclusive classrooms? A four country study of teaching self-efficacy. *Australian Journal of Teacher Education*, *38*(1). doi:10.14221/ajte.2013v38n1.10

Martinussen, R., Ferrari, J., Aitken, M., & Willows, D. (2015). Pre-service teachers' knowledge of phonemic awareness: relationship to perceived knowledge, self-efficacy beliefs, and exposure to a multimedia-enhanced lecture. *Annals of Dyslexia*, *65*(3) 142-158. doi:10.1007/s11881-015-0104-0

Mauthner, N. S., & Parry, O. (2013). Open Access Digital Data Sharing: Principles, Policies and Practices. *Social Epistemology*, *27*(1), 47-67. doi:10.1080/02691728.2012.760663

McNaughton, C. D., Jacobson, T. A., & Kripalani, S. (2014). Low literacy is associated with uncontrolled blood pressure in primary care patients with hypertension and

heart disease. *Patient education and counseling*, *96*(2), 165-170. doi:10.1016/j.pec.2014.05.007

Meijer, C. J. W., & Foster, S. F. (1988). The effect of teacher self-efficacy on referral chance. *The Journal of Special Education*, *22*(3), 378-385. doi:10.1177/002246698802200309

Mills, N., Pajares, F., & Herron, C. (2007). Self-efficacy of college intermediate French students: Relation to achievement and motivation. *Language Learning*, *57*(3), 417-442. doi:10.1111/j.1467-9922.2007.00421.x

Mojavezi, A. & Poodineh Tamiz M. (2012). The impact of teacher self-efficacy on the Students' motivation and achievement. *Theory and Practice in Language Studies 3*(2). doi:10.4304/tpls.2.3.483-491

Moè, A., Pazzaglia, F., & Ronconi, L. (2010). When being able is not enough. The combined value of positive affect and self-efficacy for job satisfaction in teaching. *Teaching and Teacher Education*, *26*(5), 1145-1153. doi:10.1016/j.tate.2010.02.010

Moni, K. B., Jobling, A., Morgan, M., & Lloyd, J. (2011). Promoting literacy for adults with intellectual disabilities in a community-based service organisation. *Australian Journal Of Adult Learning, 51*(3), 456-478. Retrieved from http://files.eric.ed.gov/fulltext/EJ954476.pdf

Moore, W., & Esselman, M. (1992, April). Teacher efficacy, power, school climate and achievement: A desegregating district's experience. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Moulding, L. R., Stewart, P. W., & Dunmeyer, M. L. (2014). Pre-service teachers' sense of efficacy: Relationship to academic ability, student teaching placement characteristics, and mentor support. *Teaching and Teacher Education*, *41*(1), 60-66. doi:10.1016/j.tate.2014.03.007

National Dissemination Center for Children with Disabilities. (2004). *Severe and/or multiple disabilities: NICHCY Fact Sheet 10.* Retrieved from https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/Disabilities/Services%20to%20Children%20with%20Disabilities/Disabilities/disabl_fts_00016_061105.html

New York City Department of Education. (2013). *Alternate assessment (including NYSAA) frequently asked questions.* Retrieved from http://www.ps251teacher.com/uploads/3/7/8/6/37860845/acpolicy_faq_nysaafinal.pdf

New York State Education Department. (2012). *Eligibility and participation criteria – NYSAA.* Retrieved from http://www.p12.nysed.gov/assessment/nysaa/nysaa-eligibility.pdf

New York State Education Department. (2013). *Special education.* Retrieved from http://www.p12.nysed.gov/specialed/spp/2013/ind1.html

New York State Education Department. (2014a). A*dministration manual 2014-2015.* Retrieved from http://www.p12.nysed.gov/assessment/nysaa/2014-15/nysaa-sam15.pdf

New York State Education Department. (2014b). *New York State alternate assessment*

(NYSAA) guidance for students & families. Retrieved from http://schools.nyc.gov/NR/rdonlyres/CDF2FCD1-773B-4438-A3C3-0BB4FBAB51DA/175935/NYSAA_FAQ_Families_Jan2015_FINAL1.pdf

New York State Education Department. (2015a). *Definitions.* Retrieved from http://www.p12.nysed.gov/part100/pages/1001.html

New York State Education Department. (2015b). *Office of State Assessment: New York State Alternate Assessment (NYSAA).* Retrieved http://www.p12.nysed.gov/assessment/nysaa/

Nie, Y., Lau, S., & Liau, A. (2012). The teacher efficacy scale: A reliability and validity study. *The Asia-Pacific Education Researcher, 21*(2), 414-421. Retrieved from https://repository.nie.edu.sg/bitstream/10497/14287/1/TAPER-21-2-414_a.pdf

Ntiri, D. W. (2012). Book review: Why literacy matters: Understanding the effects of literacy education for adults. *Adult Education Quartlerly*, *63*(1), 97-98. doi:10.1177/0741.713612440249

No Child Left Behind Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002). doi:10.1007/springerreference_70038

Ortaçtepe, D., & Akyel, A. S. (2015). The effects of a professional development program on English as a foreign language teachers' efficacy and classroom practice. *TESOL Journal, 6*(4), 680-706. doi:10.1002/tesj.185

Pas, E. T., Bradshaw, C. P., & Hershfeldt, P. A. (2012). Teacher-and school-level predictors of teacher efficacy and burnout: Identifying potential areas for support. *Journal of school Psychology, 50*(1), 129-145. doi:10.1016/j.jsp.2011.07.003

Phillips, D. M. (2015). The relationship between teacher efficacy levels and Virginia standards of learning fifth grade math achievement in one Virginia school division. Retrieved from https://vtechworks.lib.vt.edu/bitstream/handle/10919/51626/Phillips_DM_T_2015.pdf?sequence=1&isAllowed=y.

Protheroe, N. (2008). Teacher efficacy: What is it and does it matter?. *Principal*, *87*(5), 42-45. Retrieved from http://www.naesp.org/resources/1/Pdfs/Teacher_Efficacy_What_is_it_and_Does_it_Matter.pdf

Rehabilitation Act of 1973, 29 U.S.C. § 701 et seq. doi:10.1007/springerreference_180493

Rodgers, E. M., & Pinnell, G. S. (2002). *Learning from teaching in literacy education: New perspectives on professional development*. Portsmouth, NH: Heinemann.

Rosenman R., Tennekoon, V., Hill, L. G. (2011). Measuring bias in self-reported data. *International Journal Of Behavioural & Healthcare Research, 2*(4), 320-332. doi:10.1108/09654281311329222

Ross, J. A. (1992). Teacher efficacy and the effect of coaching on student achievement. *Canadian Journal of Education, 17(*1), 51–65. doi:10.2307/1495395

Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *The Journal of Educational Research*, *101*(1), 50-60. doi:10.3200/joer.101.1.50-60

Rovai, A. P., Baker, J. D., & Ponton, M. K. (2013). *Social science research design and*

statistics: A practitioner's guide to research methods and IBM SPSS. Chesapeake, MA: Watertree Press LLC.

Royster, P., Gross, J., & Hochbein, C. (2015). Timing is everything: Getting students back on track to college readiness in high school. *The High School Journal*, *98*(3), 208-225. doi:10.1353/hsj.2015.0005

Ruan, J., Nie, Y., Hong, J., Monobe, G., Zheng, G., Kambara, H., & You, S. (2015). Cross-cultural validation of Teachers' Sense of Efficacy Scale in three Asian countries test of measurement invariance. *Journal of Psychoeducational Assessment*, *33*(8), 769-779. doi:10.1177/0734282915574021

Rubie-Davies, C. M., Flint, A., & McDonald, L. G. (2012). Teacher beliefs, teacher characteristics, and school contextual factors: what are the relationships?. *The British Journal Of Educational Psychology, 82*(2), 270-288. doi:10.1111/j.2044-8279.2011.02025.x

Ruppar, A. L., Dymond, S. K., & Gaffney, J. S. (2011). Teachers' perspectives on literacy instruction for students with severe disabilities who use augmentative and alternative communication. *Research and Practice for Persons with Severe Disabilities*,*36*(3-4), 100-111. doi:10.2511/027494811800824435

Ruppar A.L., Gaffney, J.S. & Dymond, S.K. (2015). Influences on teachers' decisions about literacy for secondary students with severe disabilities. *Exceptional Children, 81*(2), 209-226. doi:10.1177/0014402914551739

Ruppar, A., Roberts, C., & Olson, A. J. (2014). Faculty perceptions of expertise among teachers of students with severe disabilities. *Teacher Education and Special*

Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, *38*(3), 240-253 doi:10.1177/0888406414552331.

Ryan, A. M., Kuusinen, C. M., & Bedoya-Skoog, A. (2015). Managing peer relations: A dimension of teacher self-efficacy that varies between elementary and middle school teachers and is associated with observed classroom quality. *Contemporary Educational Psychology*, 41, 147-156. doi:10.1016/j.cedpsych.2015.01.002

Sadler, D. R. (2014). The futility of attempting to codify academic achievement standards. *Higher Education*, *67*(3), 273-288. doi:10.1007/s10734-013-9649-1

Saunders, A. F., Spooner, F., Browder, D., Wakeman, S., & Lee, A. (2013). Teaching the common core in English language arts to students with severe disabilities. *Teaching Exceptional Children*, *46*(2), 22-33. doi:10.1177/004005991304600203

Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O. P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: implications for pre-service and in-service teacher education. *European Journal of Special Needs Education*, *27*(1), 51-68. doi:10.1080/08856257.2011.613603

Shaha, S. H., Glassett, K. F., & Copas, A. (2015). The impact of teacher observations with coordinated professional development on student performance: A 27-state program evaluation. *Journal of College Teaching & Learning (TLC)*, *12*(1), 55-64. doi:10.19030/tlc.v12i1.9070

Shazadi, T., Khatoon, S., Aziz, A., & Hassan, H. (2011). Determining factors affecting teachers' self-efficacy at the secondary school level. *Language in India, 11*(10), 385-395. Retrieved from

https://www.researchgate.net/publication/274685843_Determining_Factors_Affecting_Teachers'_Self-Efficacy_at_Secondary_School_Level

Shidler, L. (2009). The impact of time spent coaching for teacher efficacy on student achievement. *Early Childhood Education Journal, 36*(5), 453-460. doi:10.1007/s10643-008-0298-4

Shoulders, T. L., & Krei, M. S. (2015). Rural high school teachers' self-efficacy in student engagement, instructional strategies, and classroom management. *American Secondary Education*, *44*(1), 50. Retrieved from https://www.researchgate.net/publication/274685843_Determining_Factors_Affecting_Teachers'_Self-Efficacy_at_Secondary_School_Level

Slomp, D. H., Corrigan, J. A., & Sugimoto, T. (2014). A framework for using consequential validity evidence in evaluating large-scale writing assessments: a Canadian study. *Research on the Teaching of English 48(*3), 276. Retrieved from https://www.uleth.ca/dspace/bitstream/handle/10133/3660/David_H_Slomp.pdf?sequence=1

Spector, J. E., & Cavanaugh, B. J. (2015). The conditions of beginning reading instruction for students with autism spectrum disorder. *Remedial and Special Education, 36*(6), 337-346. doi:10.1177/0741932515579277

Spooner, F., & Browder, D. M. (2014). Raising the bar significant advances and future needs for promoting learning for students with severe disabilities. *Remedial and Special Education*, *36*(1), 28-32. doi:10.1177/0741932514555022

Streagle, K., & Scott, K. W. (2015). The alternate assessment based on alternate

achievement standards eligibility decision-making process. *The Qualitative Report*, *20*(8), 1290-1312. Retrieved from http://nsuworks.nova.edu/tqr/vol20/iss8/10

Swackhamer, L. E., Koellner, K., Basile, C., & Kimbrough, D. (2009). Increasing the self-efficacy of inservice teachers through content knowledge. *Teacher Education Quarterly*, 63-78. Retrieved from http://files.eric.ed.gov/fulltext/EJ857476.pdf

Swaggerty, E. A. (2015). Selecting Engaging Texts for Upper Elementary Students Who Avoid Reading or Find Reading Difficult. *Children's Literature in the Reading Program: Engaging Young Readers in the 21st Century*, 150. Retrieved from http://s3.amazonaws.com/academia.edu.documents/40684428/SwaggertyChapter10.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1469234331&Signature=S02n4QSx61p3v%2FBLg1Be1vwk12o%3D&response-content-disposition=inline%3B%20filename%3DSelecting_Engaging_Texts_for_Upper_Eleme.pdf

Tao, S. (2015). Using the capability approach to improve the efficacy of teacher training. *39*(1), 92-99. doi:10.1016/j.ijedudev.2014.08.011

Taylor, M. A., & Pastor, D. A. (2013). An application of generalizability theory to evaluate the technical quality of an alternate assessment. *Applied Measurement in Education*, *26*(4), 279-297. doi:10.1080/08957347.2013.824450

The State Education Department (2014). Interpreting scores on the 2013-14 New York state alternate assessment. Retrieved from http://www.p12.nysed.gov/assessment/nysaa/2014-15/agerange15.pdf

Thompson, S. J., Johnstone, C. J., Thurlow, M. L., & Altman, J. R. (2005). 2005 State special education outcomes: Steps forward in a decade of change. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from http://files.eric.ed.gov/fulltext/ED495882.pdf

Thurlow, M. L., Albus, D. A., Lazarus, S. S., & Vang, M. (2014). Graduation policies for students with significant cognitive disabilities who participate in states' AA-AAS (Synthesis Report 97). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved from http://www.cehd.umn.edu/NCEO/onlinepubs/Synthesis97/SynthesisReport97.pdf

Tindal, G., McDonald, M., Tedesco, M., Glasgow, A., Almond, P., Crawford, L., & Hollenbeck, K. (2003). Alternate assessments in reading and math: Development and validation for students with significant disabilities. *Exceptional Children*, *69*(4), 481-494. doi:10.1177/0014402915585492

Towles-Reeves, E., Garrett, B., Burdette, P., & Burdge. M. (2006). Validation of large-scale alternate assessment systems and their influence on instruction: What are the consequences. *Assessment for Effective Intervention, 31*(3). 45-57.

Towles-Reeves, E., Kleinert, H., & Muhomba, M. (2009). Alternate assessment: Have we learned anything new?. *Exceptional Children*, *75*(2), 233-252. Retrieved from http://www.naacpartners.org/publications/2009Towles-ReevesKleinertMuhomba.pdf

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education, 17*(7)*,* 783-805. doi:10.1016/

S0742-051X(01)00036-1

Tschannen-Moran, M., Woolfolk Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, *68*(2), 202-248. doi:10.3102/00346 543068002202

Tschannen-Moran, M., & Johnson, D. (2011). Exploring literacy teachers' self-efficacy beliefs: Potential sources at play. *Teaching and Teacher Education*, *27*(4), 751-761. doi:10.1016/j.tate.2010.12.005

Tschannen-Moran, M., & McMaster, P. (2009). Sources of self-efficacy: Four professional development formats and their relationship to self-efficacy and implementation of a new teaching strategy. *The Elementary School Journal, 110*(2), 228-245. doi:10.1086/605771

Tschannen-Moran, M., & Barr, M. (2004). Fostering student achievement: The relationship between collective teacher efficacy and student achievement. *Leadership and Policy in Schools, 3*, 187-207. doi:10.1080/15700760490503706

Tuckman, B. W., & Harper, B. E. (2012). *Conducting educational research*. (6th ed.). Lanham, MD: Rowan & Littlefield Publishers.

United States Department of Education. (2007). *IDEA regulations: Alignment with the No Child Left Behind (NCLB) Act.* Retrieved from http://idea.ed.gov/object/fileDownload/model/TopicalBrief/field/PdfFile/primary_key/3

United States Department of Education. (2008). *Alternate achievement standards for students with the most significant cognitive disabilities: Non-Regulatory guidance.* Retrieved from https://www2.ed.gov/policy/elsec/guid/altguidance.doc

United States Department of Education National Technical Advisory Council (2008). *Validity evidence for alternate assessments based on modified achievement standards.* Retrieved from https://www2.ed.gov/about/bdscomm/list/aas.doc.

Wendler, D., Martinez, R. A., Fairclough, D., Sunderland, T., & Emanuel, E. (2014). Views of potential subjects toward proposed regulations for clinical research with adults unable to consent. *American Journal of Psychiatry*. *159*(4), 585-591. doi:10.1176/appi.ajp.159.4.585

Wiliam, D. (2011). What is assessment for learning? *Studies in Educational Evaluation, 37*(1), 3-14. doi:10.1016/j.stueduc.2011.03.001

Wolters, C. A., & Daugherty, S. G. (2007). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology*, *99*(1), 181. doi:10.1037/0022-0663.99.1.181

Woolfolk Hoy, A., Hoy, W. K., & Davis, H. A. (2009). Teachers' self-efficacy beliefs. In K. Wetzel & A. Wigfield (Eds.). *Handbook of motivation at school* (pp. 627-653). Mahwah, NY: Lawrence Erlbaum.

Woolfolk, A. E., & Hoy, W. K., (1990). Prospective teachers' sense of efficacy and beliefs about control, Journal of Educational Psychology, *82*(1)*,* 81-91. doi:10.1037/0022-0663.82.1.81

Zambo, R., & Zambo, D. (2008). The impact of professional development in mathematics on teachers' individual and collective efficacy: The stigma of underperforming. *Teacher Education Quarterly*, *35*(1), 159-168. Retrieved from

http://files.eric.ed.gov/fulltext/EJ810663.pdf

Appendix A: Letter of Consent

Melissa Beck 1/24/15

to anitahoy

Dear Dr. Woolfolk-Hoy,

I am writing you to request permission to use the Teacher's Sense of Efficacy Scale in my study on the relationship of the efficacy of teachers who educate students with severe disabilities and the reading achievement on that population.

I look forward to hearing from you soon. If you have any questions, please contact me at XXX-XXX-XXXX.

Thank you,

Melissa Beck
Walden University Doctoral Candidate

Anita Woolfolk Hoy 12/6/15

to me

You are welcome to use the TSES in Your research.

Anita

ANITA WOOLFOLK HOY, PHD
PROFESSOR EMERITA
THE OHIO STATE UNIVERSITY
XXXXX

Appendix B: Letter of Cooperation From a Research Partner

Letter of Cooperation from a Research Partner

Florence Gorsky
PS 037R
15 Fairfield Street
Staten Island, NY 10308

02/11/2016

Dear Melissa Beck,

Based on my review of your research proposal, I give permission for you to conduct the study entitled The Relationship Between Teacher Efficacy and Reading Achievement for Students with Severe Disabilities within the school site, PS 037R. As part of this study, I authorize you to administer the Teacher Self Efficacy Scale to teachers in grades 3-8 who took the NYSAA assessment in 2014-2015 by Department of Education email database, and the anonymous NYSAA reading assessment scores coded by class for students in grades 3-8. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: Providing consent for teacher's to be participants in the survey as well as providing the NYSAA reading assessment. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

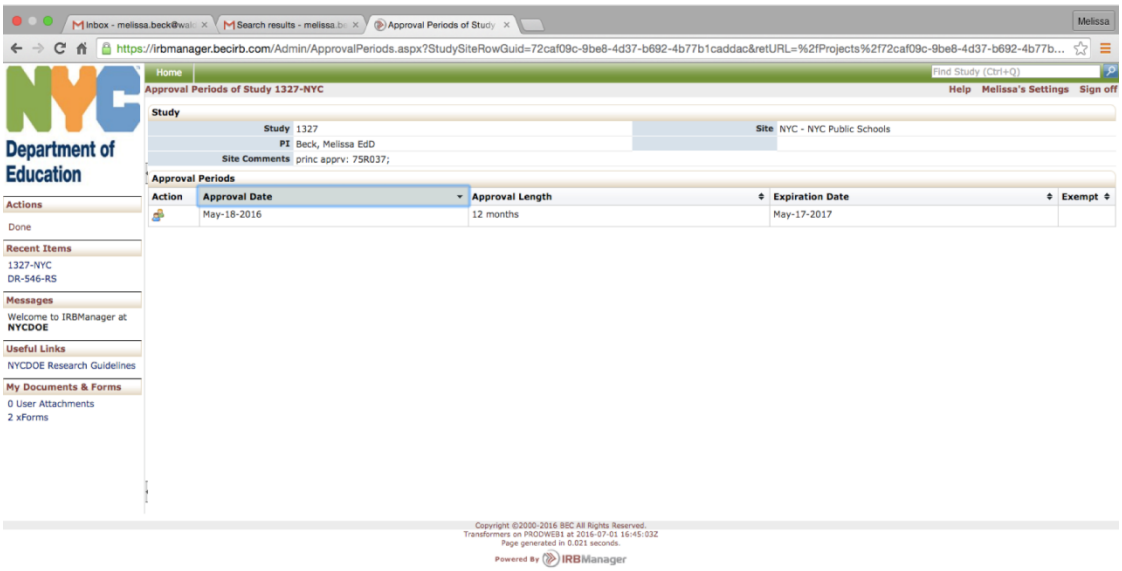
I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Florence Gorsky

Florence Gorsky
Principal PS 037R

Appendix C: Confirmation of Cooperation From NYCDOE IRB



Appendix D: Teacher Demographic Information

Teacher Demographic Information **Directions: For each section, please select one answer for each question.**

1. Years of overall teaching experience _____

2. Years teaching students with severe disabilities _____

3. Age _____

Class code for the 2014-2015 school year _____

Appendix E: Teacher Self Efficacy Scale

Teacher Beliefs - TSES

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

	None at all		Very Little		Some Degree		Quite A Bit		A Great Deal
1. How much can you do to get through to the most difficult students?	1	2	3	4	5	6	7	8	9
2. How much can you do to help your students think critically?	1	2	3	4	5	6	7	8	9
3. How much can you do to control disruptive behavior in the classroom?	1	2	3	4	5	6	7	8	9
4. How much can you do to motivate students who show low interest in school work?	1	2	3	4	5	6	7	8	9
5. To what extent can you make your expectations clear about student behavior?	1	2	3	4	5	6	7	8	9
6. How much can you do to get students to believe they can do well in school work?	1	2	3	4	5	6	7	8	9
7. How well can you respond to difficult questions from your students?	1	2	3	4	5	6	7	8	9
8. How well can you establish routines to keep activities running smoothly?	1	2	3	4	5	6	7	8	9
9. How much can you do to help your students value learning?	1	2	3	4	5	6	7	8	9
10. How much can you gauge student comprehension of what you have taught?	1	2	3	4	5	6	7	8	9
11. To what extent can you craft good questions for your students?	1	2	3	4	5	6	7	8	9
12. How much can you do to foster student creativity?	1	2	3	4	5	6	7	8	9
13. How much can you do to get children to follow classroom rules?	1	2	3	4	5	6	7	8	9
14. How much can you do to improve the understanding of a student who is failing?	1	2	3	4	5	6	7	8	9
15. How much can you do to calm a student who is disruptive or noisy?	1	2	3	4	5	6	7	8	9
16. How well can you establish a classroom management system with each group of students?	1	2	3	4	5	6	7	8	9
17. How much can you do to adjust your lessons to the proper level for individual students?	1	2	3	4	5	6	7	8	9
18. How much can you use a variety of assessment strategies?	1	2	3	4	5	6	7	8	9
19. How well can you keep a few problem students form ruining an entire lesson?	1	2	3	4	5	6	7	8	9
20. To what extent can you provide an alternative explanation or example when students are confused?	1	2	3	4	5	6	7	8	9
21. How well can you respond to defiant students?	1	2	3	4	5	6	7	8	9
22. How much can you assist families in helping their children do well in school?	1	2	3	4	5	6	7	8	9
23. How well can you implement alternative strategies in your classroom?	1	2	3	4	5	6	7	8	9
24. How well can you provide appropriate challenges for very capable students?	1	2	3	4	5	6	7	8	9

Appendix F: Additional Questions

Note: Grades 3-8 teachers will complete this form along with the TSES.

Directions: Please answer the following questions regarding your experiences teaching students with severe disabilities.

1.) What do you feel is most challenging in teaching students with severe disabilities?

_____
_____
_____
_____
_____
_____
_____
_____

2.) What do you feel is most challenging in teaching reading to students with severe disabilities?

_____
_____
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_____
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_____