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Self-Efficacy of General and Special Education Teachers Regarding Inclusion

By
Karen P. Sims

An Applied Dissertation Submitted to the
Abraham S. Fischler College of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Nova Southeastern University
2018

Approval Page

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Statement of Original Work

I declare the following:

I have read the Code of Student Conduct and Academic Responsibility as described in the *Student Handbook* of Nova Southeastern University. This applied dissertation represents my original work, except where I have acknowledged the ideas, words, or material of other authors.

Where another author's ideas have been presented in this applied dissertation, I have acknowledged the author's ideas by citing them in the required style.

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Karen P. Sims
Name

February 10, 2018
Date

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Abstract

Self-Efficacy of General and Special Education Teachers Regarding Inclusion. Karen P. Sims, 2018: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler College of Education. Keywords: disabilities, inclusion, intervention, self-efficacy, special education

This sequential mixed methods study was designed to compare the perceptions, attitudes, and self-efficacy of elementary and middle school general and special education teachers and administrators regarding inclusion. The study identified specific areas of needed support and training to improve these factors. The study took place at a kindergarten through 8 research site in the southeastern portion of the United States. The problem addressed was that school administrators are uncertain about the perceptions of general and special education teachers' self-efficacy regarding effective instructional inclusion of students with special needs in the general education classroom.

Using quantitative survey inquiry and qualitative interview protocols, the study examined the perceptions of general, special education teachers, and administrators to compare responses to the research questions. Research questions inquired into the perceptions of inclusion effectiveness and what training could be provided to assist with the challenges of inclusion within the general classroom.

The results of the study revealed that special education teachers scored slightly higher than general education teachers in self-efficacy within inclusive settings. Teachers with preservice or graduate training for inclusion also scored higher for self-efficacy. Administrators scored the self-efficacy practices of teachers higher than teacher perceptions of their abilities. All groups believed that teaching inclusion within the general education classroom can be improved through ongoing professional development training.

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Chapter 1: Introduction

This chapter introduces the sequential mixed methods study, the problem researched, the background and justification for the study, and information concerning the research site. The audience the study was designed to benefit is described, while definitions are provided for terms relevant to this study. The chapter concludes with an explanation for this research study.

Statement of the Problem

The problem this sequential mixed methods study was designed to address was that school administrators were uncertain about the perceptions of general and special education teachers' self-efficacy regarding effective instructional inclusion of students with special needs within the general education classroom. Because of the problem not being addressed previously, specific areas of needed support and training were uncertain. This problem was also noted in a review of the literature demonstrating that few studies exist regarding teachers' perceptions and attitudes about inclusion (Flores, 2012; Logan & Wimer, 2013; Monsen, Ewing, & Kwoka, 2014).

Regardless of the limited information, school administrators were required to provide the necessary support to ensure that inclusive practices effectively meet the academic, behavioral, emotional, and social needs of students with disabilities as well as nondisabled peers (Dayton, 2012). This responsibility of school administrators was critical in the elementary and middle school research site. Based on personal interaction with general education teachers, none have acquired formal training to assist in effectively meeting the various needs of students with disabilities.

Phenomenon of interest. Historically, instruction for students in general education and special education was provided in two separate classroom settings (Kluth,

2013). A series of consecutive federal laws, however, established the legal requirement to provide instruction for students with disabilities in the least restrictive environment.

These laws include (a) the Elementary and Secondary Education Act (U.S. Congress, 1965), (b) Section 504 of the Rehabilitation Act of 1973 (Library of Congress, 1973), (c) the Education for All Handicapped Children Act of 1975 (U.S. Department of Education, Special Education and Rehabilitative Services, 2010), (d) the Regular Education Initiative of 1986 (Whitworth, 1994), (e) the No Child Left Behind Act of 2001 (Library of Congress, 2002), and (f) the Individuals with Disabilities Education Act of 2004 (IDEA Partnership, 2006; U.S. Congress, 2004).

When identifying the least restrictive environment for students with disabilities, the first consideration was the general classroom setting. Efforts to retain special education students in the general classroom setting, however, can be both strenuous and time consuming (Kluth, 2013; Mitchell, 2014; Monsen et al., 2014). If placement in the general education classroom was unsuccessful over time, which was sometimes several months in duration, students were transferred to self-contained classrooms (Kluth, 2013; Mitchell, 2014; Shady, Luther, & Richman, 2013).

Since the passage of the collective educational laws, such as No Child Left Behind Act of 2001 (Library of Congress, 2002), the percentage of students with disabilities who have been integrated into the general education classroom, which is the least restrictive environment, has steadily increased (Ko & Boswell, 2013; Lucas & Frazier, 2014; Vaughn & Bos, 2011). Consequently, general education teachers are under pressure to ensure that all students within the classrooms, regardless of disabilities, achieve the same mandated academic standards (Ko & Boswell, 2013; Vaughn & Bos, 2011). The trend of students with multiple disabilities being taught within general

education classrooms is expected to continue (Lucas & Frazier, 2014).

For general education teachers to meet this requirement, each must rely on the assistance of special education teachers (Kluth, 2013). While providing inclusive practices, special education teachers are often overwhelmed by administrative demands and the increase of students with unique learning and behavioral needs (Lucas & Frazier, 2014; Monsen et al., 2014; Shady et al., 2013). Likewise, due to this increase, special education teachers may find providing sufficient support to general education teachers in a timely manner challenging (Shady et al., 2013).

Researchers have conveyed that the success of an inclusion program is influenced directly by the quality of related teacher training for general education teachers salutary to the development of effective perceptions and attitudes toward inclusion (Flores, 2012; Siwatu, Frazier, Osaghae, & Starker, 2011). Lucas and Frazier, (2014), as well as Siwatu, Frazier, Osaghae, and Starker (2011), further maintained that inclusion, other than very limited training, is rarely a focus of preservice education, which creates the need for training as a primary topic of professional development after teachers are employed in teaching positions. The two primary factors determining the effectiveness of inclusion are teachers' perceptions and attitudes toward inclusion, as well as general education teachers' beliefs about teaching students with special needs (Ajuwon, Sarraj, Griffin-Shirley, Lechtenberger, & Zhou, 2015; Lucas & Frazier, 2014; Shady et al., 2013). Because federal law requires that inclusion be used as the primary placement model for students with special needs, perceptions and attitudes of general and special education teachers regarding the effectiveness of inclusive practices are important variables in continual school improvement (Flores, 2012).

Background and Justification

Because schools are a busy place, teachers usually find it difficult to complete even basic daily duties (Monsen et al., 2014). Inclusion is overwhelming to many teachers who view the addition of students with disabilities as an increase in work load (Flores, 2012; Monsen et al., 2014; Polirstok, 2015). For example, teachers regard the academic, behavioral, and emotional needs of students with disabilities, as compared with those of general education students, to be more challenging (McHatton & Parker, 2013).

Teachers also maintain that students with special needs may not measurably benefit socially from an inclusive classroom (Rose et al., 2015) and thus question the value of having students with behavioral or emotional disorders who are potentially disruptive (Wiggins, 2012). Researchers have suggested that general education teachers do not feel equipped for the additional responsibility of inclusion within the classroom. Exposure, however, to students with special needs often increases the confidence level of teachers (Ajuwon et al., 2015; Lucas & Frasier, 2014; Shady et al., 2013). Moreover, teachers' attitudes become more positive with increased knowledge and experiences gleaned through having students with special needs in the classroom (Ajuwon et al., 2015; Lucas & Frazier, 2014; Shady et al., 2013).

A review of the literature indicated that numerous researchers have concentrated on teachers' perceptions and attitudes regarding inclusion rather than the effectiveness of inclusive classrooms (Ajuwon et al., 2015; Flores, 2012; Ko & Boswell, 2013; Logan & Wimer, 2013). The logical reason for such emphasis is that teachers' perceptions and attitudes are integral for inclusion to be effective. Inclusion is also paramount in ensuring that students with disabilities have access to the same quality of education as grade-level peers without disabilities.

To that end, teachers' perceptions and attitudes regarding inclusion must be explored and understood (Ajuwon et al., 2015; Flores, 2012; Lucas & Frazier, 2014; Wiggins, 2012). Inclusion can be improved through ongoing research to ensure success for both general education and special education students, as well as for general education teachers (Ajuwon et al., 2015; Lucas & Frazier, 2014). Underscoring the need for this study was that teachers within the elementary and middle school research site have often expressed the desire to develop the skills to ensure that inclusion is a mutually beneficial experience.

According to Lund and Seekins (2014), inclusion can result in positive outcomes for special education students and nondisabled peers as well. In an inclusive classroom, for example, students could become more knowledgeable about others' similarities and differences while learning to socialize within the same classroom (Lund & Seekins, 2014; Shogren et al., 2015). Ajuwon et al. (2015) and Polirstok (2015) similarly held that inclusion is effective in assisting special education students with developing social skills and improving learning. Researchers further believed that benefits will increase the self-esteem of students with disabilities and motivate these students to greater academic success (Ajuwon et al., 2015). Teachers' perceptions and attitudes involving inclusion are critical, as the numerous benefits that might be derived from inclusion are only possible when teachers hold positive perceptions and attitudes toward related practices (Ajuwon et al., 2015; Flores, 2012; Ko & Boswell, 2013; Logan & Wimer, 2013; Lucas & Frazier, 2014).

Deficiencies in the evidence. The quality of instruction is central to improving the academic achievement of all students and is of paramount importance within inclusive classrooms (Lucas & Frazier, 2014; Pitre, 2014; Shady et al., 2013). Teachers'

perceptions and attitudes, however, strongly affect the quality of instruction and the achievement of all students within inclusive classrooms (Vaughn & Bos, 2011). Both Logan and Wimer (2013), and Monsen et al. (2014), conveyed that the underlying factors affecting the perceptions and attitudes of general education teachers, when required to provide inclusive classrooms, are an understudied area. A dearth of studies also exists involving the barriers that challenge general and special education teachers during collaboration in the provision of effective inclusive classrooms (Kluth, 2013; Logan & Wimer, 2013; Monsen et al., 2014; Polirstok, 2015). Vaughn, Bos, and Schumm (2013) further maintained that the perceptions and attitudes of teachers within each school are unique; this belief further establishes the need to conduct this study within the elementary and middle school study site.

Audience. Special education students and nondisabled peers, as well as school leaders, are expected to benefit from findings derived from this study. The study site was an urban, Title I elementary and middle school in the southeastern area of the United States; grade levels include kindergarten through Grade 8. At the time of this study, 42 teachers provide instruction within general education classrooms. Four additional teachers are responsible for the educational services provided to special education students and are, thus, placed in resource rooms or self-contained classrooms. The researcher was one of the four special education teachers.

The student population includes 570 students, 55 of whom have been diagnosed with learning, behavioral, or emotional disabilities. Student ethnicities are as follows: (a) African Americans (99%), (b) Caucasians (0.7%), and (c) Hispanics (0.3%). Student exceptionalities include (a) autism; (b) emotional, intellectual, and learning disabilities; and (c) other health impairments. The administrative staff members include one principal

and one assistant principal, both are African Americans.

Definition of Terms

Collaboration. As used in this study, collaboration involves general and special education teachers willingly cooperating and working jointly to share goals, solve problems, and design approaches to improve classroom management and student achievement (Strieker, Gillis, & Zong, 2013).

Diverse learners. One factor that may be used to independently identify students that may have learning disabilities, described as mildly learning disabled, under the legislation of Individuals with Disabilities Education Act of 2004 (IDEA Partnership, 2006; U.S. Congress, 2004).

General education classroom. A classroom where students considered typically developed receive state standard instructional education is known as a general education classroom (Lucas & Frazier, 2014).

Inclusion. Vaughn et al. (2013) defined inclusion as the practice of including students with disabilities in general education classrooms to the extent possible. According to Monsen et al. (2014), that definition can be expanded to include a paradigm shift necessary in policy, practices, values, and attitudes of administrators, teachers, and even students.

Individual education plan. This document is required for each student with disabilities enrolled in special education. The plan identifies the academic, behavioral, and social standards to be achieved by each student, as well as the qualifying classroom setting to achieve the least restrictive environment (Soukakou, Winton, West, Sideris, & Rucker, 2014).

Least restrictive environment. Mandated through a series of federal laws, this

educational setting requires the placement of special education students in general education classrooms whenever possible (Dayton, 2012).

Modelling. A strategy used to instruct students by which a teacher demonstrates a new concept. This is especially important in an inclusive teaching environment (Shady et al., 2013).

Resource room. This federally mandated educational setting is designed to supplement instruction provided in general education classrooms for students with disabilities (Dayton, 2012).

Self-contained classroom. Required through federal law, this most restrictive classroom placement is reserved for special education students unable to succeed in an inclusive classroom (Dayton, 2012).

Self-efficacy. As used in this study, self-efficacy pertains to the perceptions and attitudes of general education teachers involving the ability to provide an effective inclusive classroom environment. This application is based on Bandura's (1986, 1997, 2006) definition pertaining to personal beliefs concerning the ability to perform tasks at identified levels.

Title I school. A Title I facility, which receives supplemental federal funds for providing academic and behavioral interventions, with at least 50% of the students qualifying for free or reduced-price meals (Dayton, 2012).

Purpose of the Study

The purpose of this study was to compare the perceived self-efficacy of elementary and middle school general and special education teachers, as well as administrators, to identify specific areas of needed support and training. This collective purpose was achieved by collecting and analyzing responses to surveys and interview

protocols. Results of the study were useful in (a) identifying goals and objectives for teacher training, (b) supporting leadership efforts of school administrators, and (c) increasing the current literature base involving inclusion. Of primary importance was that findings had practical implications involving the self-efficacy of teachers in instructional practices for students with disabilities who qualified for special education services and were placed in general education classrooms for much of the school day.

Chapter 2: Literature Review

At the onset of this chapter, the theoretical perspective of this study is presented. Following the theoretical perspective is a brief overview of the literature involving (a) primary factors affecting the implementation of inclusive education, (b) findings of applied research studies regarding preservice teachers, (c) findings of applied research studies regarding licensed teachers, and (d) strategies and training for teachers. Following a summary, the research questions that guided this study were included at the conclusion of this chapter.

Theoretical Perspective

Social cognition (Bandura, 1986, 1997, 2006) was used as the theoretical perspective of this study for its emphasis on the influence of perceptions and attitudes on performance. More specific to this study are the tenets of social cognition as applied to the performance of general education teachers involving inclusion (Crowson & Brandes, 2014; Hartmann, 2012). Bandura (1986, 1997, 2006) initially developed the theory in the early 1960s. A basis of social cognition is the belief that environmental influences, many of which affect self-efficacy, are central to developing the skills, perceptions, and attitudes that directly affect performance.

Bandura (1986, 1997, 2006) underscored the role of self-efficacy by emphasizing that individuals with high levels of self-efficacy approach new tasks with the confidence of achieving mastery. Self-efficacy emphasizes the pivotal relationship between learning and performance (Bandura, 1986, 1997, 2006; Basen-Engquist et al., 2013; Dewar et al., 2013). Zundans-Fraser and Lancaster (2012) applied social cognition to teaching performance by underscoring the role of self-efficacy in the development of effective instructional practices. Crowson and Brandes (2014), as well as Hartmann (2012),

applied tenets of social cognition to instructional improvements involving students with disabilities. McHatton and Parker (2013) additionally maintained that teacher self-efficacy affects perceptions and attitudes toward the inclusion of students with disabilities. Self-efficacy is also influential in teachers' willingness to establish and maintain inclusive practices on behalf of culturally and ethnically diverse students who also may have been diagnosed with various disabilities (Siwatu et al., 2011).

Through continued learning, involving professional collaboration, teachers experience opportunities for increasing self-efficacy and improving instructional practices (Vaughn & Bos, 2011; Zundans-Fraser & Lancaster, 2012). Central to continuous school improvement is ongoing professional development, a related approach to increasing self-efficacy (Kluth, 2013; Zundans-Fraser & Lancaster, 2012). Although self-efficacy is influential in the improvement of practices, an emphasis on improving self-efficacy is seldom noted in the professional literature (Siwatu et al., 2011). One way to improve teachers' self-efficacy involving inclusive practices is to prepare teachers for the related challenges. This focus is, however, seldom found in preservice education (Siwatu et al., 2011). Recognizing the pivotal role of self-efficacy on performance, social cognition only served as the theoretical framework but also influenced data collection instruments. Self-efficacy was one primary factor that affected the enactment of inclusive education.

Primary Factors Affecting the Implementation of Inclusive Education

Educational practices for students with disabilities have changed notably with the passage of related federal laws (Vaughn & Bos, 2011). Previously, a significant number of students with disabilities did not receive education in public schools (Logan & Wimer, 2013). Those educated within the general classroom setting were often limited in

educational experiences and accomplishments, as disabilities were undocumented and thus unaddressed (Logan & Wimer, 2013). According to Vaughn and Bos (2011), inclusive education enables all students with or without disabilities to learn collectively in public schools. This is only the case, however, when suitable networks of support exist and when teachers have the self-efficacy and skills to initiate and maintain those networks. Teachers who are part of inclusive education can be taught these skills through adequate training.

In an applied research study implemented by Flores (2012), findings indicated that a significant factor for successful inclusion of students with disabilities within general education classrooms is the adequate training of general education teachers (Flores, 2012). Findings further indicated that the quality of related training is a key factor influencing the self-efficacy of general education teachers toward inclusive practices (Flores, 2012). As also noted in the literature, positive perceptions and attitudes of general and special education teachers involving inclusion are paramount in the development of high self-efficacy and in the success of inclusion (McHatton & Parker, 2013; Vaughn & Bos, 2011; Zundans-Fraser & Lancaster, 2012).

Perceptions and attitudes of general education teachers. The fundamental opinion regarding students with disabilities is that the best environment for education is within the inclusive setting (Cameron & Cook, 2013). Teachers within inclusive classrooms must decide what aspects within the curriculum are appropriate for students with disabilities. Determining when and how to provide the instruction is also important to student success (Ajuwon et al., 2015; Cameron & Cook, 2013). Teachers must determine in what manner to promote learning and how to accomplish the specific goals and needs of individual students (Ajuwon et al., 2015; Logan & Wimer, 2013). Many

general education teachers lack the self-efficacy to accomplish these tasks. Improved perceptions and attitudes are achieved when teachers are provided the necessary skills through professional development (Ajuwon et al., 2015; Cameron & Cook, 2013; Logan & Wimer, 2013).

Logan and Wimer (2013) conducted a qualitative study to determine attitudes teachers have regarding inclusion. Participants included 203 teachers who taught at various grade levels. Teachers were prompted by researchers to complete a survey. The first section of the survey consisted of demographics (Logan & Wimer, 2013). Section two of the survey contained questions examining beliefs about inclusion, the allotment of time to successfully teach in the inclusive setting, benefits of inclusion, preparation for teaching, and sufficient materials for inclusion in the classroom (Logan & Wimer, 2013).

The last section of the survey allowed teachers to provide any comments or concerns regarding inclusion. Responses indicated that teachers were not prepared to teach or implement modifications for students with disabilities (Logan & Wimer, 2013). Teachers were not confident about training received before licensure and were not prepared to teach special-needs students. Moreover, stress, knowledge, and beliefs were indicated as being in direct relation to the attitudes of teachers in inclusive classrooms (Logan & Wimer, 2013). Teachers' comments indicated the belief that other students within the classroom are neglected because of the amount of time needed to aid students with disabilities (Logan & Wimer, 2013). After analyzing data provided by teachers, researchers recognized that teachers who had a positive attitude about inclusion usually had more experience within inclusive classrooms (Logan & Wimer, 2013). Kahn and Lewis (2014) expanded the subject of teacher preparation in relation to teachers' attitudes regarding inclusion shortly after Logan and Wimer (2013) published the findings

concerning teachers' attitudes about inclusion.

Similar to the research conducted by Logan and Wimer (2013), Kahn and Lewis (2014) conducted a mixed methods study to identify if teachers were prepared for special-needs students and to determine attitudes about teaching in the inclusive classroom (Kahn & Lewis, 2014). Participants were comprised of 1,088 teachers from all grade levels across the nation. An online survey was conducted and responses indicated that little training was provided (Kahn & Lewis, 2014). Teachers indicated a lack of preparation for teaching special-needs students. Due to this lack and that of teachers' attitudes, the success of students within inclusive classrooms may be inhibited (Kahn & Lewis, 2014). Despite these obstacles, teachers indicated the willingness to participate in training to overcome barriers to inclusion (Kahn & Lewis, 2014). Perceptions and attitudes of special education teachers are additional barriers to inclusion (Kahn & Lewis, 2014).

Perceptions and attitudes of special education teachers. A fundamental element of effective inclusion is the perceptions and attitudes of special education teachers (Shady et al., 2013). Teachers' beliefs, perceptions, and attitudes are all essential to students being accepted within the inclusive setting. These elements also affect teachers' commitment to the success of implementing inclusive strategies (Shady et al., 2013; Strieker et al., 2013). Moreover, most teachers agree with the concept of inclusion, but feel that the success of incorporating special-needs students into a general education classroom is unrealistic (Shady et al., 2013). Negative perceptions and attitudes of either special or general education teachers can be detrimental to the success of the students. Teachers who have a positive attitude and believe that inclusion is helpful will strive to aid the students in achieving success within the classroom (Shady et al., 2013). Utilizing

the strategy of collaboration is vital to teachers within the inclusive classroom and will aid in promoting positive attitudes and beliefs to assist students in achieving success (Strieker et al., 2013).

A qualitative study conducted by Strieker et al. (2013) was implemented to determine the effects of a program to educate middle school general and special education teachers on methods to collaborate with preservice special education teachers in the inclusive setting. Participants included 120 preservice teachers (Strieker et al., 2013). General and special education teachers participated in a seminar, readings, observations and interviews, and a debriefing to share what was learned about coteaching and collaboration during training (Strieker et al., 2013). Teachers cotaught with preservice teachers within the classroom setting when training was completed. Results indicated that preservice teachers learned how to (a) implement components of collaboration, (b) balance roles with coteachers, (c) communicate successfully with coteachers, and (d) recognize the roles of the special education teachers within the inclusive classroom (Strieker et al., 2013). Preservice teachers also indicated that attitudes and perceptions regarding inclusion had positively changed at the point of culmination (Strieker et al., 2013). Expanding the work of Strieker et al., Lane et al. (2015) determined types of instruction most successful for students within an inclusive setting.

Following the study implemented by Strieker et al. (2013), Lane et al. (2015) conducted a qualitative study to determine what type of instruction was most successful for teachers and students within the inclusive classroom. Participants included one special-needs student and one general education student who were attending first grade at a public school (Lane et al., 2015). A general education instructor, teacher assistant, and

special education instructor attended a meeting to plan the intervention, learn the approaches to be utilized, and complete a quiz to ensure that teachers could implement the strategies successfully (Lane et al., 2015).

The first strategy taught in the meeting was across-task choices. This strategy allows students to view a list of assignments for a day and decide in what order to complete them. The second strategy was within-task choices (Lane et al., 2015). A list of materials to complete the tasks for the day was provided, and students could pick which materials to utilize for completing the assignments. Teachers informed students in what order the assignments had to be completed (Lane et al., 2015).

Results indicated that teachers could implement both strategies successfully. The special needs student was most successful with the across-task choices strategy, whereas the general education student was more successful with the within-task choices strategy (Lane et al., 2015). A reduction of disruptive behavior was also noted for the general education student (Lane et al., 2015). Moreover, teachers indicated that training to assist preservice teachers in achieving self-efficacy, regarding the implementation of various strategies, would facilitate the teachers in having positive perceptions and attitudes towards inclusion (Lane et al., 2015; Monsen et al., 2014; Polirstok, 2015).

Findings of Applied Research Studies Regarding Preservice Teachers

Numerous researchers have conducted applied research studies and reported findings involving negative teacher perceptions and attitudes toward the inclusion of students with special needs in the general education classroom (Monsen et al., 2014; Polirstok, 2015). Of interest to this study is that related perspectives begin at or prior to the preservice level (Ajuwon et al., 2015; Flores, 2012; Ko & Boswell, 2013). As one example, Ajuwon et al. (2015) administered a pre- posttest survey to identify changes in

the perspectives and attitudes of preservice teachers after completing a course pertaining to the inclusion of students with vision impairments within the general education classroom. The researchers used a modified version of the Preservice Inclusion Survey (Shippen, Crites, Houchins, Ramsey, & Simon, 2005) as the data collection instrument. A total of 91 preservice teachers, attending three different universities, participated in the study by completing the Likert-scale instrument (Ajuwon et al., 2015). A repeated measure analysis of variance was used to analyze data.

Findings reflected that teachers' perceptions and attitudes toward the inclusion of students with vision impairments within the general education classroom did not improve, although course performance reflected that teachers' related knowledge and skills increased over the duration of the course (Ajuwon et al., 2015). Applying social cognitive theory (Bandura, 1986, 1997, 2006), improved self-efficacy involving the ability to include students with vision impairments in the general education instructional processes should have positively affected teachers' perceptions and attitudes toward inclusive practices. This, however, was not the case. Based on findings, Ajuwon et al. (2015) expressed uncertainty as to whether related training and increased self-efficacy can influence teachers' perceptions and attitudes involving the inclusion of students with vision disabilities.

McHatton and Parker (2013) conducted a similar study to investigate the perceptions and attitudes of general and special education preservice teachers toward inclusion. Participants ($N = 56$) were preservice teachers enrolled in a methods class at a large metropolitan university. As also noted in the Ajuwon et al. (2015) study, McHatton and Parker administered the Preservice Inclusion Survey (Shippen et al., 2005), and a repeated measure analysis of variance was used to analyze data.

Results acquired by McHatton and Parker (2013) suggested that training and increased self-efficacy involving the inclusion of students with disabilities positively influenced preservice teachers' perceptions and attitudes about inclusion. This finding was unlike that of Ajuwon et al. (2015) who expressed uncertainty as to whether related training and increased self-efficacy can influence teachers' perceptions and attitudes involving the inclusion of students with vision disabilities. Applying social cognitive theory (Bandura, 1986, 1997, 2006), the improved self-efficacy of general education preservice teachers involving the ability to provide inclusive environments for students with disabilities positively affected perceptions and attitudes toward inclusive practices.

Findings of Applied Research Studies Regarding Licensed Teachers

Flores (2012) conducted a qualitative case study with three general education elementary teachers. Data collection included personal interviews, classroom observations, and the examination of personal artifacts to determine teachers' perceptions and attitudes toward inclusion (Flores, 2012). Through analysis, data were categorized to identify overarching themes that included a personal ownership of the educational achievement of assigned students with disabilities, a high level of collaboration with special education teachers, and both positive and negative attitudes toward students with disabilities (Flores, 2012).

A primary finding of the study was that teachers' beliefs pertaining to improved self-efficacy involving the ability to include students with disabilities within the general education environment did not affect perceptions and attitudes toward inclusive practices (Flores, 2012). This finding was similar to that acquired by Ajuwon et al. (2015) who suggested that training and increased self-efficacy involving the inclusion of students with disabilities did not influence preservice teachers' perceptions and attitudes involving

inclusion. More specifically, teachers believed personal disposition regarding inclusive practices was established prior to participating in related training (Flores, 2012).

Applying social cognitive theory (Bandura, 1986, 1997, 2006), the improved self-efficacy of general education preservice teachers involving the ability to provide inclusive environments for students with disabilities should have improved perceptions and attitudes toward inclusive practices yet did not. Perhaps this finding was based on related constructs established prior to participation in the training. Reflected in findings and significant to this study is Flores' (2012) belief that the quality of collaborative efforts between general and special education teachers is influential on teachers' perceptions and attitudes involving the inclusion of students with disabilities.

Ko and Boswell (2013) also conducted a qualitative case study; participants were seven physical education elementary teachers. Similar to the Flores (2012) study, data collection included personal interviews as well as the examination of artifacts and journals. The purpose of the study was to determine teachers' (a) perceptions and attitudes toward inclusion, (b) training needs for promoting inclusion, and (c) challenges involving inclusion (Ko & Boswell, 2013). Through analysis, data were categorized to identify overarching themes that included (a) a personal dedication to inclusion, (b) the necessity of instructional adaptations, and (c) challenges to inclusion (Ko & Boswell, 2013).

The primary finding, similar to that of Flores (2012), was that general education teachers had developed perceptions and attitudes toward students with disabilities prior to assuming teaching positions (Ko & Boswell, 2013). Participants' viewed students with disabilities as equal to nondisabled peers. Participants additionally described interactions involving students with disabilities as enjoyable, demonstrating positive perceptions and

attitudes toward this student population (Ko & Boswell, 2013).

Another finding involved the challenge of providing an inclusive environment, as participants emphasized the ongoing need to revise instructional practices for students with disabilities through the differentiation of instruction (Ko & Boswell, 2013). Findings additionally included the concept that general education teachers realized the need to experiment to determine the most beneficial practices. Also, rather than depending on special education teachers, participants cited the use of Internet-based resources, again suggesting that collaboration with special education teachers was either nonexistent or inadequate (Ko & Boswell, 2013). The primary finding involving challenges to inclusion, however, was that preservice training did not include practices involving the inclusion of students with disabilities, which emphasizes the need for professional development in this area. Prior to the Ko and Boswell (2013) study, Flores (2012) reported this finding.

Applying social cognitive theory (Bandura, 1986, 1997, 2006) to the findings of Ko and Boswell (2013), the minimal level of self-efficacy described by participating general education teachers involving the ability to provide inclusive environments for students with disabilities did not negatively affect perceptions and attitudes toward inclusive practices. Instead, teachers held positive perceptions and attitudes while searching for ways to improve inclusive practices (Ko & Boswell, 2013). As also noted in Flores' (2012) study, the constructs of perceptions and attitudes were established without related training. Based on findings, and significant for this study, is Ko and Boswell's expressed belief that an inadequate nature of collaborative efforts between general and special education teachers did not influence teachers' perceptions and attitudes involving the inclusion of students with disabilities. This finding was in opposition to a related finding of Flores that indicated the quality of collaborative efforts between general and

special education teachers would primarily influence perceptions and attitudes involving the inclusion of students with disabilities. Ko and Boswell (2013) emphasized, however, that inadequate collaboration did create a burden on general education teachers struggling to differentiate instruction for students with disabilities. Strategies and training for teachers are vital to the success of students within an inclusion classroom (Crosland & Dunlap, 2012).

Strategies and Training for Teachers

Training to provide various strategies for teachers to implement within the inclusive setting is essential. Gupta and Rous (2016) stated that it takes approximately 4 years to gain full knowledge of a new strategy, understand how to successfully implement it, and integrate it within the classroom. The four stages to utilizing a new strategy are exploration, installation, initial implementation, and full implementation (Gupta & Rous, 2016). During exploration, teachers decide which strategy to employ within the classroom. Installation consists of adopting a small portion of a strategy and determining how to apply it in the inclusion classroom (Gupta & Rous, 2016). Initial implementation is experimenting with a strategy in small increments while teaching (Crosland & Dunlap, 2012; Gupta & Rous, 2016). Finally, during full implementation, teachers skillfully utilize all aspects of the strategy. Training for teachers cannot be overemphasized when recognizing the importance of skillful execution of a new strategy (Gupta & Rous, 2016; Lucas & Frazier, 2014).

Training develops the skills necessary for teachers to be successful within the inclusive classroom (Lucas & Frazier, 2014). Moreover, teachers of high quality are imperative to the success of students' achievement. To develop teachers of high quality, training must be supplied to provide skills, prepare teachers, and perpetuate collaboration

among peers (Crosland & Dunlap, 2012; Lucas & Frazier, 2014). Four key components integral to the successful training of teachers within inclusive classrooms are personal supports, universal design, collaboration, and administration supports (Brooks, 2016; DeMatthews, 2015).

These four components are intertwined to create a successful inclusive setting (Brooks, 2016). Personal supports, the first component, are significant to students. These supports consist of coteachers placed within the classroom of special-needs students and peer tutors (Brooks, 2016). The second component, universal design, occurs when teachers develop lesson plans and activities within the classroom to support the learning of all students. This is important, as modifications or accommodations will be at a minimum for special-needs students (Brooks, 2016). Collaboration, the third component, consists of a relationship between general and special education teachers (Brooks, 2016; DeMatthews, 2015). This relationship can enable both teachers to work together to modify the curricula and meet the needs of the special-needs students (Brooks, 2016; DeMatthews, 2015). The fourth component, administrative support, is of utmost importance because this support provides reassurance, supervision, and reinforcement for teachers (Brooks, 2016). The inclusive setting can be stressful when teachers are unsure of how to adapt instruction and curriculum to the needs of all students. When administration provides support, it increases the self-efficacy of teachers and enables them to be successful in the inclusive setting (Brooks, 2016).

Collaboration and administrative support. Less than one third of general education teachers and less than one half of special education teachers indicate any instruction on how to collaborate with peers (Strieker et al., 2013). Collaboration is key to growth for teachers (Gupta & Rous, 2016). Collaboration in the form of coteaching is

beneficial to students either with or without disabilities. Additionally, coteaching is beneficial to both licensed teachers and preservice teachers (Lucas & Frazier, 2014).

Coteaching provides supplementary support for all students within the classroom (Lucas & Frazier, 2014; Shogren et al., 2015) Collaboration and administrative support are both essential aspects of teaching in the inclusive setting (Gupta & Rous, 2016).

Administrative support encourages learning, teamwork, and inclusion within the classrooms (Gupta & Rous, 2016). Moreover, collaboration is beneficial within the school, but also between the school and the community (Gross et al., 2015).

Gross et al. (2015) conducted a qualitative study to determine what types of community partnerships are established by successful school leaders, and what factors support the development of these partnerships. Participants included men and women from different businesses, organizations, and colleges near the five elementary schools and one middle school, located in each section of the United States, that were involved in this study (Gross et al., 2015). School leaders recruited participants for the focus groups of this study. Each focus group attended a session at one of the schools, which was comprised of an overview of the study and a discussion between leaders and members of the focus groups concerning what aspects create a successful partnership between schools and communities (Gross et al., 2015). Results indicated the two main factors, collaboration and communication, that support the development of community partnerships (Gross et al., 2015). Both community partners and schools benefit from this collaboration (DeMatthews, 2015; Gross et al., 2015). Community partnerships are beneficial to schools that practice inclusion with greater opportunities afforded the distribution of leadership within the inclusive setting (DeMatthews, 2015).

Following the work of Gross et al. (2015), a qualitative study was conducted by

DeMatthews (2015) to examine the distribution of leadership, the actions by leaders, and challenges related to a greater inclusive setting within the school. Participants included one elementary school principal at a school within an urban district (DeMatthews, 2015). Interviews were conducted with the staff and principal, and observations were conducted during collaboration within the inclusive classroom setting. The principal of the school was present for all observations during the study (DeMatthews, 2015). Through observation, coaching, and supporting lead teachers, the principal could prepare teachers to perform additional leadership tasks and remain successful with tasks previously retained. Actions and challenges that were indicated as relating to a greater inclusive setting within the school were collaboration, problem solving, and training for teachers (DeMatthews, 2015). An additional strategy recommended for training to aid teachers with a more inclusive setting, was differentiation of instruction (DeMatthews, 2015).

Differentiation of instruction. Teachers are challenged with the task of differentiating instruction (Kahn & Lewis, 2014). Many find it overwhelming to develop lesson plans that fit the needs of all students within the inclusive classroom (Carr, 2013; Kahn & Lewis, 2014). Because of standardized test results, teachers are under additional stress to enhance instruction and aid students to gain higher achievement (Carr, 2013). The task of differentiating also applies to homework assigned outside of the classroom. Many students struggle within the classroom and with homework assignments (Carr, 2013).

To increase the effectiveness of homework, five characteristics should be present in each assignment (Carr, 2013). The first characteristic is purpose. Every assignment should have meaning, and each student should have the capability to complete it without assistance to increase academic knowledge. Homework should also provide the feedback

teachers need to ensure that the students are understanding class instruction (Carr, 2013). Second, the time it takes to complete homework should be efficient. Carr (2013) stated that lengthy homework decreases students' achievement.

An additional characteristic that students should sense regarding homework is ownership (Carr, 2013). Students who have a sense of ownership are motivated to complete the work and learn more than when ownership is not experienced. The fourth characteristic of effective homework is competence (Carr, 2013). All students should feel capable of completing the work. For homework to encompass this characteristic, teachers may need to differentiate the assignments to support all students within the inclusive setting (Carr, 2013).

The last characteristic of effective homework is that it should be visually appealing (Carr, 2013). This can be achieved by not having too many problems or information on one page, giving room for students to write answers or notes, and placing some pictures on the page to attract students' interest (Carr, 2013). Utilizing these characteristics can enable students to take pride in a job well done and experience a greater sense of ownership. Three successful strategies to aid students in homework completion are to encourage parental involvement, facilitate teacher collaboration, and teach self-management strategies (Carr, 2013; Firmender, Reis, & Sweeny, 2013).

Firmender et al. (2013) conducted a quantitative study to determine the comprehension and fluency levels of students in elementary schools. This examination was implemented to determine the diversity of students within the classrooms, and to determine the type and level of differentiation teachers would need to implement for all students to be successful within the inclusive setting (Firmender et al., 2013). Participants included 1,149 students enrolled in five elementary schools throughout the United States.

A standardized assessment for oral reading fluency and a reading comprehension test were given to all participants (Firmender et al., 2013). Moreover, researchers implemented pretests to measure oral reading fluency over a period of two weeks at each elementary school. Three passages utilized for oral reading were supplied by the researchers for the students (Firmender et al., 2013).

Researchers made notes and scored students on the number of words read per minute and the accuracy of the reading passages. Test results from all five schools indicated that students exhibited a wide array of abilities in reading (Firmender et al., 2013). The range was so extensive that the need to differentiate instruction in reading was emphasized across all schools and grade levels. Firmender et al. indicated that skills and strategies should be taught to teachers in training to enable them to be successful in the inclusive setting (Firmender et al., 2013). Little, McCoach, and Reis (2014) expanded the study concerning differentiated instruction to examine helpful strategies after the findings by Firmender et al. were published relating to increasing reading comprehension and fluency levels with differentiated instruction.

Following the work of Firmender et al. (2013), a study to examine differentiated instructional strategies was conducted by Little et al. (2014). A mixed methods study was conducted by Little et al. to examine differentiated instruction involving strategies to improve reading achievement while eliminating customary reading instruction. Participants included 2,150 students enrolled in four middle schools and 47 teachers employed at the schools (Little et al., 2014). A pretest and posttest were given to students to determine if an increase in reading fluency and comprehension was achieved following the intervention. The control group was comprised of 20 teachers, while 27 teachers were assigned to the treatment group (Little et al., 2014). Administrators of the schools

randomly assigned students to each group. Teachers of the treatment group attended professional-development training to learn differentiated instruction techniques and modelling strategies (Little et al., 2014). Teachers were observed within the classroom to determine if any additional support was needed at 2 to 3 week intervals. The treatment group also attended a group session in the middle of the year to address any additional concerns (Little et al., 2014).

A pretest was provided to all students, within both the treatment group and the control group, at the beginning of the school year prior to the intervention. Teachers of the treatment group employed differentiated instruction strategies for 3 hours a week, and did not provide group instruction as previously offered prior to the intervention (Little et al., 2014). Simultaneously, teachers of the control group continued group instruction without offering the differentiated instructional strategies within the classroom. At the end of the school year, a posttest was administered to all students within both groups (Little et al., 2014). Results of the posttest indicated that the students who participated in the treatment group scored equivalent or higher in both fluency and comprehension than students within the control group (Little et al., 2014). Studies indicate that teachers can assist all students with learning by implementing various differentiated instructional strategies while students utilize self-management interventions to obtain greater achievement levels within the inclusive classroom (Crosland & Dunlap, 2012; Little et al., 2014).

Self-management interventions. Students who exhibit the ability to employ self-management interventions can function independently within the classroom (Crosland & Dunlap, 2012). Self-management interventions equip students with behavioral issues to (a) set goals, (b) observe and record behaviors, (c) maintain motivation, and (d)

administer reinforcements based upon behavior (Carr, 2013; Crosland & Dunlap, 2012; Otero & Haut, 2015). Students within inclusive classrooms have additional opportunities to participate in activities in the class and connect with peers when successful with self-management strategies (Crosland & Dunlap, 2012).

Teachers are key to students learning effective self-management strategies (Carr, 2013; Crosland & Dunlap, 2012). Students who are taught these strategies within the classroom setting can apply them without adult supervision (Carr, 2013; Crosland & Dunlap, 2012). Strategies modeled by teachers, as well as the utilization of planners, can assist students with managing behavior and assignments. Self-management strategies enable students to experience additional success in all areas of life (Carr, 2013; Crosland & Dunlap, 2012).

A qualitative study conducted by Koegel, Park, and Koegel (2014) examined the effectiveness of self-management interventions, teaching social conversation skills in responsiveness, asking questions, and strategies regarding how to expand a conversation. Participants included two children and one teen with autism (Koegel et al., 2014). A graduate student conducted the conversations with the participants. Researchers supplied the graduate student with 10 questions that were open-ended and based on a topic of interest to the participants (Koegel et al., 2014). Sessions were (a) conducted at the home of the participants, (b) recorded, and (c) approximately 10 minutes in length. Data analysis indicated that discussions and dialogs improved in all three skill areas of successful conversation (Koegel et al., 2014). Otero and Haut (2015) expanded the study of self-management interventions shortly after Koegel et al. published their results.

Similar to the research conducted by Koegel et al. (2014), Otero and Haut (2015) conducted a qualitative study to evaluate a self-management intervention for students

within the inclusive setting who exhibited behaviors that interfered with the ability to function within the classroom. Participants included three intermediate school students within the United States (Otero & Haut, 2015). Students met with researchers for training on three separate occasions. The first training session was utilized to explain what conduct was expected of the students, and to clarify why the behavior was important within the classroom (Otero & Haut, 2015). During the second session, students were taught how to complete the form for the data collection and how to recognize, by a hand signal given by the teacher, when to complete the form. The last day of training allowed students to practice with what was expected behavior during the intervention (Otero & Haut, 2015).

The intervention was implemented after the third training session. The intervention focused on self-management within the inclusive classroom, and consisted of 12 sessions lasting 20 minutes in length (Otero & Haut, 2015). During class instruction, when teachers provided the hand signal, participants stopped and completed the form provided by the researchers. Responses were utilized to determine if teachers had students' full attention, or if the students were not focused during instruction. At random times throughout sessions, teachers gave the students a reward if responses indicated that students were attentive during instruction (Otero & Haut, 2015). At the culmination of the 12 sessions, forms were gathered for data analysis. Results indicated that the intervention was successful in maintaining the attention of the participants (Otero & Haut, 2015). When not being monitored, students' attention was not focused on the class materials provided by the teachers (Otero & Haut, 2015). Self-management interventions, in conjunction with peer-mediated interventions, aid students in achieving academic success (Brooks, 2016; Otero & Haut, 2015).

Peer-mediated interventions. Peers within the inclusive classroom assist in encouraging proper social conduct, academic performance, and communication for special-needs students (Brooks, 2016; Crosland & Dunlap, 2012; Simpson & Bui, 2016). Tutoring conducted by peers has proven to be beneficial for all students within the classroom (Carter et al., 2016; Crosland & Dunlap, 2012; Simpson & Bui, 2016). Peer-mediated interventions can be altered to fit the needs of special-needs students while increasing the knowledge of the peers. Teachers are an integral part of knowing which students to pair together for the interventions to achieve the most success (Carter et al., 2016). Peer-mediated interventions promote learning and socialization for both students involved in the group (Carter et al., 2016; Simpson & Bui, 2016).

Carter et al. (2016) conducted a quantitative study to determine the success of peer-mediated interventions for disabled high school students socially, and in the area of academics. Participants included 51 disabled students, 51 staff from the high school, and 48 student peers. Students were grouped together by the nine special educators and 42 additional staff members from the high school (Carter et al., 2016). Participants were enrolled in 21 high schools, in 12 different districts, within two states. Carter et al. conducted an initial training session for all staff members participating in the study. The goals of the peer-mediated intervention were provided during the training, as well as ideas to aid in peer recruitment, plans for the student peers to follow, and strategies to assist students during the intervention (Carter et al., 2016).

Peer coaches attended a training session prior to implementing the intervention. Upon completion, peer coaches went into the classroom and sat by the assigned special-needs students (Carter et al., 2016). Peer coaches demonstrated appropriate academic and social behaviors for the special-needs students, and worked jointly on assignments during

the intervention. Carter et al. observed the first three classes and the last three classes of the semester to determine the effectiveness of the intervention. Results indicated that benefits were evident both socially and academically (Carter et al., 2016). Opportunities for interaction between peer coaches and special-needs students were increased and progress was evident for both cohorts. Simpson and Bui (2016) conducted a study that contributed to the findings of the study conducted by Carter et al. (2016).

Simultaneous to the study conducted by Carter et al. (2016), Simpson and Bui (2016) conducted a quantitative study to determine the effects of a peer-mediated reading intervention on social interactions of peers and students with disabilities in elementary schools. Participants included 24 general education students and eight special-needs students who were not in an inclusive classroom (Simpson & Bui, 2016). All participants were assembled in eight groups for the duration of the study. Each group consisted of one special-needs student and three peers. A book was chosen by each group, and each student within the group took turns reading (Simpson & Bui, 2016). Each time the special-needs student responded appropriately, by reading or taking part in the discussion, one of the peers in the group would give the student a card with a happy face on it (Simpson & Bui, 2016).

At the end of the day, the student could turn the cards in for a tangible reward. Results indicated that academic skills of the peers within each group increased during the intervention (Simpson & Bui, 2016). Moreover, the special-needs students were more involved in the group, thus, increasing social interactions by responding correctly to peers during the sessions (Simpson & Bui, 2016). Differentiation of instruction, self-management strategies, and peer-mediated interventions are all important within the inclusive classroom (Simpson & Bui, 2016). Training is beneficial for teachers to learn

how to successfully implement these strategies and increase self-efficacy within the inclusive classroom (Guo, Sawyer, Justice, & Kaderavek, 2013).

Self-efficacy. Academic achievement is significantly affected by teachers' self-efficacy (Crowson & Brandes, 2014; Guo et al., 2013). Teachers who hold the belief that they can successfully implement strategies within the classroom and aid students in academic achievement are referred to as having high self-efficacy (Ajuwon et al., 2015; Crowson & Brandes, 2014; Guo et al., 2013). Quality of instruction, motivation to teach, and performance within the inclusive setting can all be affected by teachers' self-efficacy (Crowson & Brandes, 2014; Guo et al., 2013).

Classroom environment and learning can also be altered by teachers' self-efficacy (Guo et al., 2013). Implementing new strategies within an inclusive classroom is perceived, by teachers who lack self-efficacy, as unprofitable to the learning environment (Crowson & Brandes, 2014; Guo et al., 2013). Training for teachers that includes strategies to implement within the inclusive classroom is beneficial for teachers and students (Crowson & Brandes, 2014). Teachers gain the confidence and skills needed to employ strategies that assist all students, within the inclusive setting, through attending training (Crowson & Brandes, 2014).

Rogers-Haverback and Mee (2015) conducted a mixed methods study to determine the overall perceptions of self-efficacy held by middle school preservice teachers. Participants included 8 preservice teachers who were student teaching and enrolled in a reading course (Rogers-Haverback & Mee, 2015). Preservice teachers learned strategies for reading and theory during the course. Immediately following course completion, the teachers entered classrooms within the middle school to teach the strategies to students (Rogers-Haverback & Mee, 2015). After each strategy was taught,

the preservice teachers met with the professor from the university and other teachers within the school to discuss how the strategy was utilized within the classroom (Rogers-Haverback & Mee, 2015). At the beginning, middle, and end of the year, the preservice teachers completed a survey and written logs in order to measure progress. Researchers analyzed data, and the results indicated that all participants grew in self-efficacy and experienced increased knowledge throughout the year of how to implement the strategies (Rogers-Haverback & Mee, 2015). As teachers' self-efficacy increases, the ability to successfully implement accommodations and modifications of curriculum increases (Brooks, 2016).

Accommodations and modification of curriculum. The standard of classroom resources and materials taught to students are not altered when accommodations are utilized by teachers (Brooks, 2016). Accommodations can include worksheets printed in larger font, extended time to complete assignments, and reading answers aloud instead of writing them down (Brooks, 2016; Soukakou et al., 2014). Modifications require adaptation to the classroom resources and materials for the academic needs of students (Soukakou et al., 2014). Curriculum and assignments may be altered to make them adequate for special-needs students within the inclusive setting (Brooks, 2016; Furman, 2015; Soukakou et al., 2014). The abilities of special-needs students vary, and the collaboration of special education teachers with general education teachers is essential to determine the best course of action for each student (Brooks, 2016; Soukakou et al., 2014).

West and Pirtle (2014) conducted a qualitative study to determine what skills and knowledge special education teachers should acquire when preparing to teach.

Participants included nine men and four women who were all parents of special-needs

children. Participants were divided into two focus groups, one for women and one for men (West & Pirtle, 2014). Researchers provided an overview of the study and presented each group with five questions regarding the study in the session. Questions focused on the themes of teachers' communication, understanding, personality, training, and methods utilized in the classroom (West & Pirtle, 2014). The sessions for each focus group were conducted separately. Responses indicated that teachers should understand what disability and needs each student may have, and how conduct and home dynamics may affect behaviors displayed within the classroom (West & Pirtle, 2014). Participants from both focus groups agreed that accommodations and modifications, experience, collaboration, listening, and asking questions are all important aspects for teachers to demonstrate within the classroom.

Communication with parents and with collaborative teachers was indicated as being critical to developing successful environments within the inclusive setting (West & Pirtle, 2014). Adequate resources and a commitment from all staff within a school to provided quality education within inclusive classes were also indicated as being integral to success (West & Pirtle, 2014). Finally, participants indicated that teachers should be able to see potential in every child and to believe that the child can learn no matter how severe the disability may be. When these aspects are accomplished, teachers should, then, utilize strategies to aid the child in academic success (West & Pirtle, 2014).

Accommodations and modifications are enhanced when utilizing strategies such as modelling (Shady et al., 2013; West & Pirtle, 2014).

Strategy of modelling. Teachers and students alike benefit from the strategy of modelling (Shady et al., 2013). This strategy can be utilized by teachers modelling for other teachers, teachers modelling for students, or students modelling for other students.

Modelling is a key strategy for the development of teachers and students in an inclusive setting (Ajuwon et al., 2015; Shady et al., 2013). Academic motivation and self-esteem for all involved can be enhanced by this strategy.

A quantitative study conducted by Nowicki and Brown (2013) was implemented to identify effective strategies for teachers and students in inclusive settings. Participants included 20 boys and 16 girls who were enrolled in middle school (Nowicki & Brown, 2013). Five middle school principals expressed interest in the study. Researchers conducted an interview at the five middle schools with each of the participants. Participants indicated various strategies to utilize in inclusive settings (Nowicki & Brown, 2013). Suggestions that were indicated by participants that teachers could utilize within the inclusive classroom included providing information to other students about disabilities, activities that enable all students within the classroom to work together, and modified instructional support to accommodate all students (Nowicki & Brown, 2013). Moreover, participants specified strategies that peers could utilize within the classroom to assist special-needs students.

These strategies included differentiation of instruction, additional time given when completing assignments, and adjusting the academic level of instruction (Nowicki & Brown, 2013). Participants also indicated the importance of peers giving encouragement, advice, and assistance to special-needs students within the classroom. All participants agreed that determining what areas special-needs students have in common with peers, and not focusing on differences is beneficial (Nowicki & Brown, 2013). Modelling was indicated as a strategy peers could assist with by demonstrating how to be respectful, kind, and to provide an example of the behaviors required in order to be awarded by the teachers utilizing the behavioral interventions in the classroom (Polirstok,

2015).

Behavioral interventions. Inclusive classrooms are comprised of students with diverse behavioral challenges (Polirstok, 2015). For teachers to utilize successful strategies within the classroom that aid students academically and behaviorally is important (Polirstok, 2015). Interruptions within the classroom create a disadvantage for students who are struggling to learn and techniques to avoid these interruptions should be applied (Polirstok, 2015). If possible, these interruptions should be kept to a minimum (Polirstok, 2015).

One technique teachers can utilize is to recognize students verbally for appropriate behaviors. Inappropriate behaviors within the inclusive classroom can be minimized when teachers reinforce appropriate behaviors (Polirstok, 2015). If a student behaves inappropriately, and is not harmful to themselves or other students, teachers can choose to ignore the inappropriate behavior and verbally praise another student who is performing appropriately (Polirstok, 2015). An additional technique is for teachers to respond calmly and not to exhibit fear to avoid escalating inappropriate behavior (Polirstok, 2015). Finally, punishment can be utilized for inappropriate behaviors, but this is not as effective as positively reinforcing suitable behaviors (Polirstok, 2015).

Shogren et al. (2015) conducted a study to examine students in inclusive schools. Perceptions of the inclusion and the practices employed to aid all students in the inclusive setting were documented. Participants were comprised of 86 students from five elementary schools and one middle school within the United States (Shogren et al., 2015). Participants were divided into 11 focus groups. Six focus groups consisted of general education students and five groups comprised of special education students (Shogren et al., 2015). Researchers conducted focus groups, interviews, and student

observations two different times during the school year (Shogren et al., 2015). Data were gathered from the interviews to determine if students perceived that techniques utilized at the school were successful, unity existed in the inclusive setting, and a positive impact was evident throughout the school from the employed practices (Shogren et al., 2015). Results indicated that strategies implemented within the classroom were perceived as beneficial by the students (Shogren et al., 2015). Participants also indicated that special education students received more access to technological supports than general education students (Shogren et al., 2015).

Summary

Theoretical perspective. Social cognition (Bandura, 1986, 1997, 2006) was used as the theoretical perspective of this study. Central to the theory is the belief that environmental influences, many of which affect self-efficacy, are central to developing the skills, perceptions, and attitudes that directly affect performance (Bandura, 1986, 1997, 2006). The use of social cognition is prevalent in the literature: (a) Zundans-Fraser and Lancaster (2012) applied the theory to teaching performance by underscoring the role of self-efficacy in the development of effective instructional practices; (b) Crowson and Brandes (2014), as well as Hartmann (2012), used tenets of the theory in discussion of instructional improvements involving students with disabilities; and (c) McHatton and Parker (2013) maintained that teachers' self-efficacy affects perceptions and attitudes toward the inclusion of students with disabilities. To ensure the consistent application of social cognition throughout this study, findings of each researcher were compared with the theory.

Primary factors affecting the implementation of inclusive education. Inclusive education enables all students, either with or without disabilities, to learn in the public

school setting. The effectiveness of inclusion, however, depends upon the existence of suitable support networks, as well as teachers' (a) self-efficacy, (b) skills, and (c) positive perceptions and attitudes (Vaughn & Bos, 2011). Flores (2012) and Siwatu et al. (2011) reported that a significant factor for inclusion is the adequate training of general education teachers; this perception is reflective of social cognitive theory (Bandura, 1986, 1997, 2006). The effectiveness of inclusion is also affected by teachers' perceptions and attitudes toward inclusion as well as the beliefs of general education teachers involving the ability to teach students with special needs (Siwatu et al., 2011; Vaughn & Bos, 2011).

Findings of applied research studies regarding preservice teachers. Two studies were utilized to examine preservice teachers' perceptions and attitudes toward students in the inclusive setting. Ajuwon et al. (2015) analyzed results and indicated that the perspectives and attitudes of teachers did not improve after completing a course pertaining to the inclusion of students with special needs. Related knowledge and skills had, however, increased self-efficacy. Conversely, McHatton and Parker (2013) found that self-efficacy was increased, and preservice teachers' perceptions and attitudes involving inclusion were influenced. Moreover, another noteworthy finding in the literature was that preservice training often does not include practices involving the inclusion of students with disabilities, underscoring the need for professional development in this area (Flores, 2012; Ko & Boswell, 2013).

Findings of applied research studies regarding licensed teachers. Related studies were described, and two primary themes emerged from the investigations. The first theme is that training involving the inclusion of students with disabilities positively influenced teachers' self-efficacy as well as related perceptions and attitudes (Ko &

Boswell, 2013; McHatton & Parker, 2013). Conversely, the second theme is that training did not positively influence teachers and that self-efficacy, perceptions, and attitudes were all established prior to training (Flores, 2012).

Strategies and training for teachers. Various strategies were highlighted throughout the literature to equip teachers to be successful within the inclusive setting. To promote success, training is recommended to provide support, collaboration, and exploration of strategies to be employed within the inclusive setting (Crosland & Dunlap, 2012; Gupta & Rous, 2016; Lucas & Frazier, 2014). Strategies recommended throughout the literature were collaboration and administrative support, differentiation of instruction, self-management strategies, peer-mediated interventions, self-efficacy, accommodations and modification of curriculum, modelling, and behavioral interventions (Brooks, 2016; Carr, 2013; DeMatthews, 2015; Lucas & Frazier, 2014).

Collaboration and administrative support is key to teachers' growth (Brooks, 2016; DeMatthews, 2015; Gupta & Rous, 2016). These supports encourage achievement and successful inclusion within the classrooms, and can aid teachers in learning how to differentiate instruction (Gupta & Rous, 2016). Differentiation of instruction is an additional strategy promoted throughout the literature in order for inclusion to be effective within the classroom (Carr, 2013; Kahn & Lewis, 2014; Little et al., 2014). Differentiation of instruction was also found to be helpful when teachers applied it to homework assignments (Carr, 2013).

Self-management is an additional strategy that is essential for students, whether in the classroom or at home (Carr, 2013; Crosland & Dunlap, 2012). Self-management interventions were recommended to enable students to focus during class instruction, and to help them with behavioral issues (Carr, 2013; Crosland & Dunlap, 2012; Otero &

Haut, 2015). These strategies also promote peer interaction (Crosland & Dunlap, 2012). Peer-mediated interventions, such as peers tutoring special-needs students, benefit both students within the inclusive setting (Carter et al., 2016; Crosland & Dunlap, 2012; Simpson & Bui, 2016). Consequently, teachers should focus upon students' attitudes, demeanor, and work habits when deciphering who to pair together for peer-mediated interventions (Carter et al., 2016). Teachers' perceptions are fundamental to implementing peer-mediated interventions within the inclusive setting (Crowson & Brandes, 2014; Guo et al., 2013).

Teachers' self-efficacy must be increased throughout the training for the strategies to be implemented correctly and for academic success to be achieved (Crowson & Brandes, 2014; Guo et al., 2013). Learning, classroom environment, and students' perceptions can all be altered by a teachers' self-efficacy (Ajuwon et al., 2015; Crowson & Brandes, 2014; Guo et al., 2013). Accommodations and modification of curriculum are also important strategies for teachers to implement. Students within an inclusive classroom may vary academically, but some accommodations and modifications can be utilized for everyone within the classroom (Brooks, 2016; Soukakou et al., 2014). This technique lessens some of the demands experienced by teachers (Brooks, 2016). Modelling and behavioral interventions are both keys to success when implementing accommodations and modifications within the inclusive classroom (Polirstok, 2015; Shady et al., 2013).

Modelling can be utilized throughout the inclusive setting (Shady et al., 2013). This strategy is beneficial when teachers allow peers to model for special-needs students during instruction or free time (Ajuwon et al., 2015; Shady et al., 2013). Lastly, behavioral interventions are of utmost important within the inclusive classroom

(Polirstok, 2015). Interruptions within the inclusive setting can interfere with the learning environment; consequently, teachers should understand how to utilize techniques to promote appropriate behavior (Polirstok, 2015). Upon review of the literature, researchers are in consensus that training for teachers can aid educators in increasing self-efficacy while utilizing strategies within the inclusive setting (Ajuwon et al., 2015; Bandura, 1986, 1997, 2006; Crowson & Brandes, 2014; Dewar et al., 2013; Guo et al., 2013).

Research Questions

This sequential mixed methods study was guided by the following research questions:

Research Question 1. What are the differences in self-reported levels of self-efficacy between general and special education teachers?

Research Question 2. What is the difference in self-efficacy between preservice or graduates with inclusion training and more experienced teachers?

Research Question 3. What are the perceptions of administrator's regarding the effectiveness of preservice or graduate's inclusion training compared to their perception of veteran teachers?

Research Question 4. What do general education, special education, and administrators perceive as the greatest needs related to improving teacher self-efficacy?

Chapter 3: Methodology

This chapter describes the details of implementing this sequential mixed methods study. The problem the study addressed was school administrators were uncertain about the perceptions of general and special education teachers' self-efficacy regarding effective inclusion within the general education classroom. This study compared the perceived self-efficacy of elementary and middle school general and special education teachers, as well as the perception of administrators, in order to identify specific areas of needed support and training. This chapter describes the method through which the questions that guide this study were addressed beginning with the potential participants invited to contribute to the research study, data collection instruments, and how data were analyzed and presented.

Participants

The study site was an urban, Title I elementary and middle school in the southeastern area of the United States; students include kindergarten through Grade 8. At the time of this study, 42 teachers, ranging in age from 25 to 61, provided instruction within general education classrooms. Four additional teachers are responsible for the educational services provided to special education students and were placed in resource rooms or self-contained classrooms. The researcher was one of the four special education teachers. The school administrators also included the principal and vice-principal.

These teachers provide instruction to a student population that includes 570 students. Of the student population, 55 have been diagnosed with learning, behavioral, or emotional disabilities. Student exceptionalities include (a) autism; (b) emotional, intellectual, and learning disabilities; and (c) other health impairments.

The potential participants for this study are part of a homogeneous sampling of

the 42 general education and three other special education teachers that provide instruction within inclusive classrooms. All 45 teachers were invited to participate in the survey (see Appendix A) and participate in the qualitative interviews (see Appendix B). Volunteers for the interviews were limited to a maximum nine participants, with at least four being general education teachers, two special education teachers and two administrators at the research site.

Instruments

Data collection instruments used included a quantitative survey questionnaire and a qualitative interview protocol.

Quantitative survey questionnaire. The researcher received permission to use the survey instrument entitled Teachers' Sense of Efficacy Scale (see Appendix A) that was developed in 2001 at Ohio State University by Tschannen-Moran and Woolfolk Hoy (2001, 2007, 2009). The survey used in this study was the long-form version of the scales that the researchers developed. The scale was broken down in to three subscales. The overall reliability of the survey instrument yields a Cronbach's Alpha of 0.90 indicating a high standard of reliability. According to Creswell (2012), a score of 0.7 is considered an acceptable reliability level.

The first subscale is efficacy in student engagement. This subscale includes survey items 1, 2, 4, 6, 9, 12, 14, and 22. The reliability of this subscale according to the Cronbach's Alpha is 0.81. The second subscale is efficacy in instructional strategies and includes survey items 7, 10, 11, 17, 18, 20, 23, and 24. The Cronbach's Alpha reliability factor is 0.86. The third subscale is efficacy in classroom management and includes survey items 3, 5, 8, 13, 15, 16, 19, and 21. The reliability according to Cronbach's Alpha is 0.86.

The researcher added demographic information to the survey to answer research questions. The demographics information requests participants to disclose if they are a general education teacher or a special education teacher. The next item had the participant indicate years of teaching experience broken down into selected categories. The third question had the participant indicate by yes or no if they had training during preservice or graduate education to prepare them for inclusive teaching. The next item asked the participant to determine what training had given them the greatest preparation for inclusive teaching. Finally, the last question asked participants to indicate what training was needed in order to assist them to feel more prepared to handle inclusive classroom instruction.

Interview protocol. The interview protocol (see Appendix B) was selected as a qualitative instrument for data collection. When compared to written questionnaires and surveys, the interview protocol gives the participants an ideal opportunity to expound upon any perceptions and ideas (Gay, Mills, & Airasian, 2012). The interview protocol was a researcher-developed instrument based on the influence of the literature. Additionally, this instrument gave the researcher the opportunity to search data and literature for trends that could be used to analyze interpretations for recommending training or further research.

Panel review of data collection instruments. In order to ensure that the qualitative survey instrument was trustworthy and reflective of what was intended to be measured, a panel of teachers convened to review the self-developed instrument. The researcher believes that the instruments are reflective of the literature and appropriate to the study. Chenail (2011) and Fitzpatrick, Sanders, and Worthen (2010) recommended that, in order to ensure instrument integrity, an ad hoc panel should be created to make

that determination.

The researcher asked two general education teachers and two special education teachers from different schools, but within the local school district, to serve on the panel. The teachers were all females, and ages ranged from 28 to 47. Additionally, each teacher held a master's degree in education. The years of experience for the teachers ranged from 6 to 17 years.

The review of instruments took about an hour. At the beginning of the meeting, the researcher reviewed the problem that the study was to address and proceeded to describe the purpose. In reviewing the interview protocol (see Appendix B), the panel ensured the form answered the research questions addressed within the study. The panel recommended removal of two questions and worked on modifying the remaining questions for clarity. The panel believed that an effective interviewer should be able to move through the questions within one hour per interview.

Procedures

Design. Once approval had been received from Nova Southeastern University to conduct the study, the researcher received final permission from the school district to conduct the study. This research study was conducted over a period of 10 weeks (see Table 1) and involved multiple steps.

This study was conducted using a mixed methods design and used to discover the underlying issue (Edmonds & Kennedy, 2013). According to Creswell (2012) it may be necessary to use more than one method to comprehend complex circumstances. In conducting this study, the researcher was using a quantitative data collection instrument for individual responses and was using a qualitative interview process to ensure that both methods of design are combined to strengthen this study (Creswell & Plano Clark, 2011).

Table 1

Timeline of Study Procedures

| Week | Procedure |
|------|---|
| 1 | Sent an electronic message to teachers asking for participation and giving a link to access the survey via SurveyMonkey (2017). |
| 3 | Sent another electronic message as a reminder, including the upcoming deadline at the end of the week. |
| 3-4 | Gathered and organized responses from SurveyMonkey. |
| 4 | Sent an electronic message to teachers and administrators asking for interview volunteers. |
| 5-7 | Scheduled and conducted interviews from volunteers. Interviews were typewritten and presented to the participant for correction and clarification of response. |
| 8-10 | Interview data were received, followed by analysis of interview responses and comparison with survey coded themes. Analyzed data results and prepared for answering research questions. |

Participant recruitment and data collection for survey instrument. After receiving Nova Southeastern University approval, the researcher sent an electronic mail message (see Appendix C) and an approved copy of the participation letter to the 45 teachers and administrators who were employed at the research study site, asking them to voluntarily participate in the survey (see Appendix A) using software from SurveyMonkey (2017).

SurveyMonkey (2017) is a secure website tool to survey participants. Use of this software ensured that participant identity was anonymous and confidential. Upon accessing the link at SurveyMonkey, the participants were directed to the approved participation letter. In order to continue to the survey, the participant must give consent to

participate in the survey. The survey took less than 30 minutes to complete. The electronic mail message was resent the final week the survey was open as a reminder to participate.

Participant recruitment and data collection for interviews. An electronic mail message (see Appendix D) was sent to all general education teachers asking for volunteers to participate in an interview. The researcher accepted the first four teachers from this group who volunteered to participate. The process was repeated using the same letter for special education teachers and again for administrators. The researcher expected to receive at least four participants from the general education teachers, two participants from special education teachers and two from administration. The expected interviews for this study were eight in total but no more than nine would be accepted.

The interviews were scheduled, and informed consent forms were given to each participant. The participants were asked to attend the interview with signed forms, which allows time for considering participation. The interview lasted no longer than one hour, and the researcher went through each question and took notes. The notes were transcribed, and each person met for a second time with the researcher to approve the transcription of the interview or make the necessary changes at the meeting. This process was used to strengthen the qualitative trustworthiness (Chenail, 2011; Merriam, 1998).

Trustworthiness

Because qualitative data are largely about collecting the opinions and perceptions of others, these weaknesses have the potential to lessen the trustworthiness of a research study. The recognition of methodological weaknesses and steps taken to minimize the negative effects is important (Gay et al., 2012; Merriam, 1998). As stated by Chenail (2011), trustworthiness is an important factor in qualitative inquiry and crucial in

evaluating the worth of a research study. The credit for the focus on trustworthiness in qualitative studies is usually given to Lincoln and Guba (1985), according to Bogdan and Biklen (2011) and Creswell (2012).

In conducting this study, the trustworthiness was decided by the following factors: (a) confirmability, (b) credibility, (c) dependability, and (d) transferability. The first factor, confirmability, is the objectivity that is given in the collection, analysis, and the understanding of data. The researcher used a survey instrument that had been validated to ensure confirmability. Further confirmability was initiated by understanding any biases, assumptions, or beliefs that may contribute to collection efforts. To ensure the practices in this study increased trustworthiness, the researcher remained open to bias possibilities within the study implementation and provided necessary details of any occurrences.

The second factor affecting trustworthiness was whether data were credible. Credibility infers data collected will truly measure the area intended in the research study. To establish credibility, the researcher met with each interview participant after transcribing the notes from the original meeting to ensure the participants were given the opportunity for revisions or corrections to intended responses

The third factor was dependability of qualitative data. The degree to which data were coded consistently is known as dependability. Mills (2013) indicated in his research that through the detailed use of recording data collection and analysis the trustworthiness of a study could be increased. The fourth factor of trustworthiness is transferability. This refers to the extent to which the results of the study can be replicated in a different environment (Lincoln & Guba, 1985). To ensure the trustworthiness of the study in relation to transferability, the researcher carefully recorded the details used in the study site so that transferability for other researchers can be determined.

Data analysis. Survey data were completed with a download into a spreadsheet from the secure website, SurveyMonkey (2017). Data used a 9-point Likert scale for quantitative data results. In order to analyze data, descriptive statistics were used to determine the responses for each survey item and subscale category using mean, standard deviation, and mode based upon demographic data. The first grouping of responses was by general education and special education responses to answer Research Question 1. Based upon the responses to demographic information in answer to years of teaching experience, the second grouping of responses compared preservice or graduate training to veteran teacher responses using mean, standard deviation, and mode descriptive statistics to answer Research Question 2. The third grouping of responses were by general education and administration responses in order to answer Research Question 3. All responses for each grouping used the subscale category of student engagement, instructional strategies, and classroom management for comparison. Comparisons were made using *t*-tests for statistical significance. As reported by Creswell (2012), statistical significance is frequently used in social sciences with a probability level or alpha response of .05 or less.

Qualitative responses received for open-ended quantitative survey questions and interview protocols (see Appendices A and B) were analyzed by the researcher. The researcher made the decision to personally review and analyze data rather than attempt to use an available software program. This decision was made because of the researcher's personal connection to the school environment for data analysis and an interpretation of qualitative data derived from both the survey questions and the participant interviews (Merriam, 1998, 2009; Mills, 2013).

Survey question responses were sorted according to general education teacher and

special education teacher responses. The survey results received from each group of participants, along with the interview notes from each group, were typewritten into a word document. The documents were inductively analyzed utilizing specific categories collected from analysis of data. Until the survey and interview responses were received, the categories that were identified were unclear. Data were analyzed to review patterns and overarching themes. Connections were established by narratives used to describe the perceptions of the participants. The results were analyzed to provide answers for Research Question 4 of this study.

Chapter 4: Results

The problem this sequential mixed methods study addressed was school administrators were uncertain about the perceptions of general and special education teachers' self-efficacy regarding effective inclusion within the general education classroom. This study compared the perceived self-efficacy of elementary and middle school general and special education teachers, as well as the perception of administrators, in order to identify specific areas of needed support and training.

Research Question 1 Results

The research question was as follows: What are the differences in self-reported levels of self-efficacy between general and special education teachers? In order to answer this research question, the survey responses were separated by general education and special education teachers. Descriptive statistics were used to determine the differences between the two groups to each question in the subscale categories (see Table 2, Table 3, and Table 4).

A *t* test calculation was performed for each subscale of the survey for the general education and special education teacher responses. Participant responses to each question were compiled for each subscale in order to perform the *t* test. The subscales included student engagement, classroom management, and instructional strategies. These subscales were used to compare general education participant responses against special education teacher surveyed results.

Survey subscale student engagement. In the subscale category of student engagement, the general education teachers had a mean score of 6.73 with a standard deviation of 1.44 compared to a score of 6.87 and a standard deviation of 1.17 for perceptions of special education teachers. The difference in mean scores was 0.14

percentage points and reflected a higher rating that was not statistically significant difference for special education teachers. The t test results were $t(41) = -0.55, p = 0.587242$.

Table 2

Student Engagement: General Education and Special Education Teachers

| Survey Item | General education | | | Special education | | |
|--|-------------------|-----------|-------------|-------------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 1. How much can you do to get through to the most difficult students? | 6.27 | 1.77 | 5 | 7.00 | 1.63 | 7 |
| 2. How much can you do to help your students think critically? | 6.93 | 1.25 | 7 | 6.00 | 1.55 | 7 |
| 4. How much can you do to motivate students who show low interest in school work? | 6.38 | 1.32 | 7 | 7.00 | 0.00 | 7 |
| 6. How much can you do to get students to believe they can do well in school work? | 7.41 | 1.12 | 7 | 8.00 | 1.15 | 9 |
| 9. How much can you do to help your students value learning? | 6.72 | 1.49 | 7 | 7.00 | 0.00 | 7 |
| 12. How much can you do to foster student creativity? | 7.07 | 1.46 | 7 | 6.50 | 1.00 | 7 |
| 14. How much can you do to improve the understanding of a student who is failing? | 6.43 | 1.32 | 7 | 7.00 | 0.00 | 7 |
| 22. How much can you assist families in helping their children do well in school? | 6.64 | 1.45 | 7 | 6.50 | 1.91 | 5 |

Note. $N = 34$. Special education $N = 4$. 1 = Nothing. 3 = Very little. 5 = Some influence. 7 = Quite a bit. 9 = A great deal.

Survey subscale classroom management. In the subscale category of classroom management, the general education teachers had a mean score of 7.08 with a standard deviation of 1.41 compared to a score of 7.48 and a standard deviation of 1.27 for perceptions of special education teachers. The difference in mean scores was 0.40 percentage points and reflected a higher positive difference for special education teachers that was not statistically significant. The t test results were $t(37) = -1.60, p = 0.119011$.

Survey subscale instructional strategies. In the subscale category of instructional strategies, the general education teachers had a mean score of 7.21 with a standard deviation of 1.39 compared to a score of 7.41 and a standard deviation of 1.12 for perceptions of special education teachers. The difference in mean scores was 0.20

percentage points and reflected a higher positive difference for special education teachers that was not statistically significant. The t test results were $t(40) = -0.91, p = 0.369635$.

Table 3

Classroom Management: General Education and Special Education Teachers

| Survey Item | General education | | | Special education | | |
|---|-------------------|-----------|-------------|-------------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 3. How much can you do to control disruptive behavior in the classroom? | 6.86 | 1.51 | 7 | 7.50 | 1.91 | 9 |
| 5. To what extent can you make your expectations clear about student behavior? | 7.76 | 1.35 | 9 | 8.50 | 1.00 | 9 |
| 8. How well can you establish routines to keep activities running smoothly? | 7.48 | 1.27 | 7 | 7.50 | 1.00 | 7 |
| 13. How much can you do to get children to follow classroom rules? | 7.28 | 1.39 | 7 | 7.67 | 1.15 | 7 |
| 15. How much can you do to calm a student who is disruptive or noisy? | 6.31 | 1.23 | 7 | 7.00 | 0.00 | 7 |
| 16. How well can you establish a classroom management system with each group of students? | 7.13 | 1.38 | 7 | 7.00 | 0.00 | 7 |
| 19. How well can you keep a few problem students from ruining an entire lesson? | 6.79 | 1.11 | 7 | 7.50 | 1.00 | 7 |
| 21. How well can you respond to defiant students? | 7.07 | 1.68 | 7 | 6.50 | 1.00 | 7 |

Note. $N = 34$. Special education $N = 4$. 1 = Nothing. 3 = Very little. 5 = Some influence. 7 = Quite a bit. 9 = A great deal.

Research Question 2 Results

The research question was as follows: What is the difference in self-efficacy between preservice or graduates with inclusion training and more experienced teachers? In order to answer this question, the participant responses were first separated by the demographics question, “Did you receive training in preservice or graduate education to prepare you for inclusive classroom training? This question was yes or no. Out of the 38 respondents only 9 answered no to the question (see Table 5). Out of each category between 25% to 33% did not have inclusion training as part of preservice or graduate education.

Table 4

Instructional Strategies: General Education and Special Education Teachers

| Survey Item | General education | | | Special education | | |
|--|-------------------|-----------|-------------|-------------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 7. How well can you respond to difficult questions from your students? | 7.59 | 1.08 | 7 | 8.00 | 1.15 | 7 |
| 10. How much can you gauge student comprehension of what you have taught? | 7.14 | 1.30 | 7 | 7.00 | 1.63 | 7 |
| 11. To what extent can you craft good questions for your students? | 7.40 | 1.22 | 7 | 7.00 | 2.00 | NA |
| 17. How much can you do to adjust your lessons to the proper level for individual students? | 7.13 | 1.57 | 7 | 7.67 | 1.15 | 7 |
| 18. How much can you use a variety of assessment strategies? | 7.27 | 1.26 | 7 | 7.50 | 1.00 | 7 |
| 20. To what extent can you provide an alternative explanation or example when students are confused? | 7.21 | 1.66 | 7 | 7.00 | 0.00 | 7 |
| 23. How well can you implement alternative strategies in your classroom? | 7.14 | 1.51 | 7 | 7.50 | 1.00 | 7 |
| 24. How well can you provide appropriate challenges for very capable students? | 6.86 | 1.51 | 7 | 7.50 | 1.00 | 7 |

Note. $N = 34$. Special education $N = 4$. 1 = Nothing. 3 = Very little. 5 = Some influence. 7 = Quite a bit. 9 = A great deal.

Table 5

Demographics of Participants not Receiving Preservice or Graduate Inclusion Training

| Teaching experience | Participants | Yes | No |
|---------------------|--------------|-----|----|
| 0 to 2 Years | 4 | 3 | 1 |
| 3 to 5 Years | 4 | 3 | 1 |
| 5 to 10 Years | 0 | 0 | 0 |
| 10 to 15 Years | 10 | 8 | 2 |
| 15 to 20 Years | 12 | 8 | 4 |
| 20 or more years | 7 | 6 | 1 |

Note. $N = 37$.

To compare the self-efficacy of teachers who had received training in preservice or graduate education preparation and those who had not received training, the responses were separated by the yes and no answer to each survey question. Descriptive statistics

were used to determine mean and standard deviation. The mode was also used to determine the most frequent response of the group. The self-efficacy subscales were compared for each group by survey question (see Table 6, Table 7, and Table 8).

Table 6

Student Engagement: Preservice or Graduate Inclusion Training

| Survey Item | Training | | | Without training | | |
|--|----------|-----------|-------------|------------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 1. How much can you do to get through to the most difficult students? | 6.57 | 1.91 | 5 | 6.11 | 1.45 | 5 |
| 2. How much can you do to help your students think critically? | 6.92 | 1.17 | 7 | 6.78 | 1.56 | 7 |
| 4. How much can you do to motivate students who show low interest in school work? | 6.56 | 1.28 | 7 | 6.33 | 1.00 | 7 |
| 6. How much can you do to get students to believe they can do well in school work? | 7.67 | 1.11 | 7 | 7.00 | 1.00 | 7 |
| 9. How much can you do to help your students value learning? | 7.00 | 1.13 | 7 | 6.33 | 2.00 | 7 |
| 12. How much can you do to foster student creativity? | 7.30 | 1.32 | 7 | 6.33 | 1.41 | 5 |
| 14. How much can you do to improve the understanding of a student who is failing? | 6.77 | 1.31 | 7 | 6.11 | 1.05 | 7 |
| 22. How much can you assist families in helping their children do well in school? | 6.61 | 1.27 | 7 | 7.00 | 1.86 | 5 |

Note. $N = 37$. Special education $N = 4$. 1 = Nothing. 3 = Very little. 5 = Some influence. 7 = Quite a bit. 9 = A great deal.

A t test calculation was performed for each subscale of the survey for those who had received preservice or graduate inclusion training and those who had not. Participant responses to each question were compiled for each subscale to perform the t test. The subscales included student engagement, classroom management, and instructional strategies. These subscales were used to compare participants with and without preservice or graduate inclusion training.

Survey subscale student engagement. In the subscale category of student engagement, the teachers who reported not having preservice or graduate inclusion training had a mean score of 6.52 with a standard deviation of 1.45 compared to a score of 6.92 and a standard deviation of 1.37 for teachers with inclusion training. The

difference in mean scores was 0.40 percentage points and reflected a positive statistically significant difference for teachers with inclusion training. The t test results were $t(114) = -2.06, p = 0.042036$.

Table 7

Classroom Management: Preservice or Graduate Inclusion Training

| Survey Item | Training | | | Without training | | |
|---|----------|-----------|-------------|------------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 3. How much can you do to control disruptive behavior in the classroom? | 7.15 | 1.46 | 7 | 6.78 | 1.94 | 9 |
| 5. To what extent can you make your expectations clear about student behavior? | 7.96 | 1.02 | 7 | 7.44 | 1.94 | 9 |
| 8. How well can you establish routines to keep activities running smoothly? | 7.59 | 1.22 | 7 | 7.22 | 1.20 | 7 |
| 13. How much can you do to get children to follow classroom rules? | 7.46 | 1.30 | 7 | 7.22 | 1.56 | 7 |
| 15. How much can you do to calm a student who is disruptive or noisy? | 6.54 | 1.30 | 7 | 6.11 | 1.05 | 7 |
| 16. How well can you establish a classroom management system with each group of students? | 7.21 | 1.30 | 7 | 7.44 | 1.67 | 9 |
| 19. How well can you keep a few problem students from ruining an entire lesson? | 7.00 | 1.36 | 7 | 6.78 | 0.67 | 7 |
| 21. How well can you respond to defiant students? | 7.15 | 1.69 | 7 | 7.00 | 1.41 | 7 |

Note. $N = 37$. Special education $N = 4$. 1 = Nothing. 3 = Very little. 5 = Some influence. 7 = Quite a bit. 9 = A great deal.

Survey subscale classroom management. In the subscale category of classroom management, the teachers who reported not having preservice or graduate inclusion training had a mean score of 7.02 with a standard deviation of 1.46 compared to a score of 7.28 and a standard deviation of 1.37 for teachers with inclusion training. The difference in mean scores was 0.26 percentage points and reflected a positive difference for teachers with inclusion training. The t test results, while not statistically significant, were $t(113) = -1.30, p = 0.197527$.

Survey subscale instructional strategies. In the subscale category of instructional strategies, the teachers who reported not having preservice or graduate

inclusion training had a mean score of 6.71 with a standard deviation of 1.68 compared to a score of 7.46 and a standard deviation of 1.16 for teachers with inclusion training. The difference in mean scores was 0.75 percentage points and reflected a positive statistically significant difference for teachers with inclusion training. The t test results were $t(87) = -3.39, p = 0.001042$.

Table 8

Instructional Strategies: Preservice or Graduate Inclusion Training

| Survey Item | Training | | | Without training | | |
|--|----------|-----------|-------------|------------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 7. How well can you respond to difficult questions from your students? | 7.81 | 1.00 | 7 | 7.00 | 1.15 | 7 |
| 10. How much can you gauge student comprehension of what you have taught? | 7.37 | 1.11 | 7 | 6.56 | 1.67 | 7 |
| 11. To what extent can you craft good questions for your students? | 7.52 | 1.19 | 7 | 7.22 | 1.56 | 7 |
| 17. How much can you do to adjust your lessons to the proper level for individual students? | 7.59 | 1.34 | 7 | 6.25 | 1.83 | 7 |
| 18. How much can you use a variety of assessment strategies? | 7.50 | 1.04 | 7 | 6.78 | 1.56 | 7 |
| 20. To what extent can you provide an alternative explanation or example when students are confused? | 7.54 | 1.21 | 7 | 6.33 | 2.00 | 7 |
| 23. How well can you implement alternative strategies in your classroom? | 7.22 | 1.15 | 7 | 7.00 | 2.00 | 7 |
| 24. How well can you provide appropriate challenges for very capable students? | 7.15 | 1.23 | 7 | 6.56 | 1.94 | 7 |

Note. $N = 37$. Special education $N = 4$. 1 = Nothing. 3 = Very little. 5 = Some influence. 7 = Quite a bit. 9 = A great deal.

Research Question 3 Results

The research question was as follows: What are the perceptions of administrator's regarding the effectiveness of preservice or graduate's inclusion training compared to their perception of veteran teachers? In order to answer this question, the perceptions of administrator survey results were compared to those of general and special education teacher responses. The preservice and graduate inclusion training was not particular to any group of teachers based upon experience so the entire subgroup of administration and

general education teachers were used for comparison (see Table 9, Table 10, and Table 11).

Table 9

Student Engagement: Teachers and Administration

| Survey Item | Teachers | | | Administration | | |
|--|----------|-----------|-------------|----------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 1. How much can you do to get through to the most difficult students? | 6.35 | 1.76 | 5 | 7.67 | 2.31 | 9 |
| 2. How much can you do to help your students think critically? | 6.82 | 1.26 | 7 | 7.67 | 1.15 | 7 |
| 4. How much can you do to motivate students who show low interest in school work? | 6.45 | 1.25 | 7 | 7.00 | 0.00 | 7 |
| 6. How much can you do to get students to believe they can do well in school work? | 7.48 | 1.12 | 7 | 7.67 | 1.15 | 7 |
| 9. How much can you do to help your students value learning? | 6.75 | 1.41 | 7 | 7.67 | 1.15 | 7 |
| 12. How much can you do to foster student creativity? | 7.00 | 1.41 | 7 | 7.67 | 1.15 | 7 |
| 14. How much can you do to improve the understanding of a student who is failing? | 6.50 | 1.24 | 7 | 7.67 | 1.15 | 7 |
| 22. How much can you assist families in helping their children do well in school? | 6.63 | 1.48 | 7 | 7.67 | 1.15 | 7 |

Note. $N = 3$. Administration $N = 3$. 1 = Nothing, 3 = Very little, 5 = Some influence, 7 = Quite a bit, 9 = A great deal.

A *t* test calculation was performed for each subscale of the survey for the general and special education teacher and administrator responses. Participant responses to each question were compiled for each subscale in order to perform the *t* test. The subscales included student engagement, classroom management, and instructional strategies. These subscales were used to compare teacher participant responses against administrator surveyed results.

Survey subscale student engagement. In the subscale category of student engagement, the general and special education teachers had a mean score of 6.75 with a standard deviation of 1.41 compared to a score of 7.58 and a standard deviation of 1.08 for administrative perceptions of self-efficacy. The difference in mean scores was 0.83

percentage points and reflected a statistically significant difference for administrators.

The t test results were $t(30) = 3.47, p = 0.001601$.

Table 10

Classroom Management: Teachers and Administration

| Survey Item | Teachers | | | Administration | | |
|---|----------|-----------|-------------|----------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 3. How much can you do to control disruptive behavior in the classroom? | 6.94 | 1.54 | 7 | 8.33 | 1.15 | 9 |
| 5. To what extent can you make your expectations clear about student behavior? | 7.85 | 1.33 | 9 | 7.67 | 1.15 | 7 |
| 8. How well can you establish routines to keep activities running smoothly? | 7.48 | 1.23 | 7 | 7.67 | 1.15 | 7 |
| 13. How much can you do to get children to follow classroom rules? | 7.31 | 1.35 | 7 | 8.33 | 1.15 | 9 |
| 15. How much can you do to calm a student who is disruptive or noisy? | 6.38 | 1.18 | 7 | 7.00 | 2.00 | NA |
| 16. How well can you establish a classroom management system with each group of students? | 7.18 | 1.34 | 7 | 8.33 | 1.15 | 9 |
| 19. How well can you keep a few problem students from ruining an entire lesson? | 6.88 | 1.22 | 7 | 7.67 | 1.15 | 7 |
| 21. How well can you respond to defiant students? | 7.00 | 1.61 | 7 | 8.33 | 1.15 | 9 |

Note. $N = 3$. Administration $N = 3$. 1 = Nothing. 3 = Very little. 5 = Some influence. 7 = Quite a bit. 9 = A great deal.

Survey subscale classroom management. In the subscale category of classroom management, the general and special education teachers had a mean score of 7.13 with a standard deviation of 1.40 compared to a score of 7.91 and a standard deviation of 1.18 for administrative survey responses. The difference in mean scores was 0.78 percentage points and reflected a statistically significant difference. The t test results were $t(29) = 3.08, p = 0.0044668$.

Survey subscale instructional strategies. In the subscale category of instructional strategies, the general and special education teachers had a mean score of 7.24 with a standard deviation of 1.36 compared to a score of 7.78 and a standard deviation of 0.98 for administrative perception survey responses. The difference in mean

scores was 0.54 percentage points and reflected a statistically significant difference. The t test results were $t(30) = 2.43, p = 0.021204$.

Table 11

Instructional Strategies: Teachers and Administration

| Survey Item | Teachers | | | Administration | | |
|--|----------|-----------|-------------|----------------|-----------|-------------|
| | <i>M</i> | <i>SD</i> | <i>Mode</i> | <i>M</i> | <i>SD</i> | <i>Mode</i> |
| 7. How well can you respond to difficult questions from your students? | 7.65 | 1.08 | 7 | 7.67 | 1.15 | 7 |
| 10. How much can you gauge student comprehension of what you have taught? | 7.12 | 1.32 | 7 | 7.67 | 1.15 | 7 |
| 11. To what extent can you craft good questions for your students? | 7.36 | 1.27 | 7 | 8.33 | 1.15 | 9 |
| 17. How much can you do to adjust your lessons to the proper level for individual students? | 7.18 | 1.53 | 7 | 9.00 | 0.00 | 9 |
| 18. How much can you use a variety of assessment strategies? | 7.29 | 1.22 | 7 | 7.67 | 1.15 | 7 |
| 20. To what extent can you provide an alternative explanation or example when students are confused? | 7.19 | 1.55 | 7 | 7.67 | 1.15 | 7 |
| 23. How well can you implement alternative strategies in your classroom? | 7.18 | 1.45 | 7 | 7.00 | 0.00 | 7 |
| 24. How well can you provide appropriate challenges for very capable students? | 6.94 | 1.46 | 7 | 7.67 | 1.15 | 7 |

Note. $N = 3$. Administration $N = 3$. 1 = Nothing, 3 = Very little, 5 = Some influence, 7 = Quite a bit, 9 = A great deal.

Research Question 4 Results

The research question was as follows: What do general education, special education, and administrators perceive as the greatest needs related to improving teacher self-efficacy? In order to answer this research question, the interview protocol responses were inductively analyzed from data collecting during the interviews from each group of participants. Interviews were conducted with five general education teachers, two special education teachers, and two administrators from the research study site.

General education teachers interview responses. The questions from the interview protocol were used to respond to the research question. Five general education teachers were interviewed. The teachers revealed that the experiences with special-needs students within an inclusive classroom had provided effective accommodations and

modifications of instruction, the ability to decipher what is expected from what can be accomplished, positive communications with parents, collaboration with special needs teachers, the ability to include special needs students in small groups, and the help of special education teachers in providing assistance in instructing students with special needs. The general education teachers perceived effectiveness levels had changed positively in the following ways: (a) aggressive lesson planning to ensure reaching students with special needs, (b) communication with students and peers, and (c) teaching styles, methods, or strategies. Effectiveness changed in a negative manner for one general education teacher who stated, “It is difficult to work with students with special needs because the setting is too fast paced and they get frustrated.”

General education teachers believed that the inclusive experience benefited students with special needs. Those benefits included: (a) socialization, (b) some level of academic success, (c) exposure to different learning styles, (d) limited frustrations, (e) a sense of accomplishment, (f) ability to participate with whole group instruction, (g) participate in small group instruction, and (h) access to additional special education teacher accommodations, if necessary. The perceived benefits for students without special needs was that coteachers also help these students who sometimes need one-on-one time. Students also receive the benefit of teachers having more planning time. While helping others, students share sensitivity experiences, learn leadership skills, and that they can be an inspiration for a peer

The benefit of inclusion to general education teachers was that a greater sense of accomplishment from students learning was achieved, collaboration partners, the opportunity to be more effective through collaboration and reaching every student, allows the teacher to use differentiated instruction, better organization, and planning. The

general education teachers believed the benefits for special education teachers were more collaboration to ensure student success, seeing kids feel successful, lesson planning, coteaching, coplanning, and being part of a cohesive team.

The effectiveness of inclusion can be improved within the general education classroom by making sure that the focus is on all subjects and not just reading and mathematics. Other suggestions from general education teachers included more resource teachers, time for coteachers to plan lessons together, training on effectively including special-need students, grouping students by academic levels, and more one-on-one time with students with special needs. General education teachers believe that student needs are being met but can be improved.

General education teachers do believe that students with special needs are receiving the attention necessary to succeed. Some of the ways students are receiving attention is through collaboration and lesson planning with special education teachers, peer helpers, small group instruction, classroom monitoring, written and oral communication, one-on-one education time, progress monitoring, accommodations, checking for understanding, parental support, tutoring, intervention, and pull-out sessions. Students without special needs are also receiving needed attention. Many times, it comes in the same form as those with special needs that benefits general education students. The general education teachers identified the following benefits specifically for students without special needs: (a) monitoring to ensure the student is being successful, (b) receiving time and attention, (c) observations, (d) feedback, (e) positive communication, (f) encouragement, (g) tutoring, (h) interventions, (i) small groups, and (j) peer helpers.

General education teachers interviewed reported how training and education had

prepared them to teach in an inclusive classroom. “I feel more training should have been given on special education students. Work experience has been biggest trainer.” Another participant response was, “In college there was a lot of theory, not actual training.” Another response was, “Student teaching and family connections helped me understand what is needed for special-needs students.” Another participant stated, “My education didn’t prepare me to effectively teach students with special needs.” The final general education participant added, “My education gave me a better understanding of what was needed from me.” General education teachers believed that the strengths of both general and special education teachers were: (a) knowledge of learning styles, behavior expertise, and personality traits working for student success, (b) coteaching with two sets of expertise, (c) good common sense, (d) variety of teaching methods and strategies, (e) techniques to reach all students, and (f) teachers working as a team to ensure student success.

Based upon the interviews of the perceptions of general education teachers, school leadership supports successful inclusion by: (a) being flexible and understanding that all students do not learn the same way, (b) maximizing teacher time, (c) one-on-one support from special education teachers, (d) documentation of special interventions, (e) acting as a buffer with student behaviors, and (f) understanding the individualized education plan and special education needs of students. General education teachers believe in order for inclusion to be successful that more training is needed for reading deficiency, assistance for struggling readers, importance of following individualized plans, accommodations, modeling of inclusive classroom, teaching techniques, coteaching, mentoring, and special education foundational training. One general education teacher said, “Colleges should implement more experience working with

students with special needs.”

Special education teacher interview responses. The questions from the interview protocol were used to respond to the research question. Two special education teachers were interviewed. Both teachers revealed that the experiences with special-needs students had provided positive collaborative teaching relationships and improved differentiated instructions for the general education classrooms. Both teachers believed that the experience for the students with special needs gave them more self-confidence and increased socialization skills. The perceived benefits for students without special needs was that these students, who sometimes struggle with instruction also, can benefit without being uncomfortable and having to ask for additional help. The students also benefit by being peer helpers to students with special needs.

The effectiveness of inclusion can be improved within the general education classroom by making sure that special education teachers are used in activities related to educating students instead of assigned to more mundane tasks that can be done by nonteaching staff. Other ideas were smaller classrooms, more utilization of peer helpers, and even more differentiated instruction. Special education teachers believe that student needs are being met but can be improved.

Special education teachers believe that students with special needs are receiving attention necessary to succeed. Some of the ways they are receiving attention is through differentiated instruction, collaborative, and strategic teaching. Additionally, this is accomplished by following the individual educational plan and teaching to the learning style of the student. Students without special needs are also receiving needed attention. This comes in the form of receiving extended time and scaffolded assignments because of special-needs students within the classroom. This also gives these students more tiered

assignments, the opportunity to apply learning received through alternative approaches, and the students can move ahead through extensive activities.

Both special education teachers interviewed reported how training and education had prepared them to teach in an inclusive classroom. One teacher nicely summed the basic thoughts of both teachers stating, “My education didn’t teach me how to effectively teach students, but my experience has.” The other special education teacher also had a mentor that taught her how to effectively teach students with special needs. Both teacher groups believed that the strengths of both general and special education teachers were “The ability to think outside the box, the ability to work cooperatively, and the ability to believe that all children can learn, just in a different way.”

Based upon the interviews of the perceptions of special education teachers, school leadership does not invest or provide needed support for effective inclusion. Teachers believe leaders think that providing data will drive up student scores. Teachers are not given the necessary time to (a) collaborate for the greatest impact, (b) deliver interventions, or (c) effectively plan. Special education teachers believe in order for inclusion to be successful that more training is needed for paraprofessional support and how to change the mindset of teachers on special education and inclusive classrooms.

Administrative interview responses. The questions from the interview protocol were used to respond to the research question. Two administrative members of the staff were interviewed. Both administrators revealed that the experiences with special-needs students had provided positive collaborative with teacher relationships and improved coteaching with differentiated instructions for the general education classrooms. Additionally, effectiveness was seen with small explicit groups and peer tutoring. Both administrators believed inclusion effectiveness was gained through pursuing

differentiated instruction knowledge and students with special needs were learning more social skills utilizing varied instruction and modeling with exposure to grade-level standards. The perceived benefits for students without special needs was differentiated instruction. These students learned social skills on how to interact with students with disabilities.

The administration response to the interviews believed that general education teachers get frustrated because the inclusive classroom hinders the general education students because of the extra time needed for students with special needs. Administrators believed that special education teachers were excited that special education students were learning and because collaborative teaching was working well. Furthermore, they perceived “morale is lifted, test scores are better, and the school isn’t on the failure list.”

The effectiveness of inclusion can be improved within the general education classroom by allowing teachers time to plan and the “development of grade level material for special needs students but on a lower level.” Administrators believe that students with special needs are receiving attention necessary to succeed. Some of the ways they are receiving attention is through differentiated instruction, reteaching in the resource room, specialized instructions, tier assignments, extra time, and peer tutoring. Students without special needs are also receiving needed attention. This comes in form of tier assignments, extra time for learning skills, peer tutoring, and explicit instructions.

One administrator reported that learning about exceptionalities and how to teach based upon learning styles was part of education and training received on how to teach in an inclusive classroom in college. The other administrator believed that professional development was better education than that received at college. Both administrators believed that the strengths of both general and special education teachers were strategies,

team work, collaboration, and cohesiveness when working on the academic success of students.

Based upon the interviews of the perceptions of administrators, school leadership supports effective inclusion by providing needed resources for special-needs students, and sending teachers to workshops. Administrators also believe more hands-on training and support is needed for teachers to be successful at inclusion and the learning styles of exceptional students.

Summary of interviews. The research question was: What do general education, special education, and administrators perceive as the greatest needs related to improving teacher self-efficacy? All three groups interviewed had general ideas and thoughts that related well to each other. Six ways were agreed upon that would increase teacher self-efficacy and improve inclusion within the general education classroom. Based upon the responses of general and special education teachers, as well as administrators, the best way to improve inclusion and increase teacher self-efficacy is to: (a) more training and assistance for students with reading deficiency; (b) paraprofessional support training; (c) teaching strategies that focus on all subjects and not just on reading and mathematics; (d) mentoring; (e) hands-on training and teaching techniques for exceptional student learning styles and how to effectively include and teach special-needs students; and (f) create time for coteachers to plan lessons together, collaborate for greatest impact, and how to deliver intervention for the academic success of all students.

Chapter 5: Discussion

This chapter was completed by interpreting data from results of the research study. Elaborations were given for each research question and the literature was used to make implications from the results. This final chapter concludes by discussing the study limitations and recommendations.

Overview of the Applied Dissertation

This sequential mixed methods study was designed to compare the perceptions, attitudes, and self-efficacy of elementary and middle school general and special education teachers, and administrators regarding inclusion. The study identified specific areas of needed support and training to improve these factors. The study took place at a kindergarten through Grade 8 research site in the southeastern portion of the United States. The problem that must be addressed was that school administrators are uncertain about the perceptions of general and special education teachers' self-efficacy regarding effective instructional inclusion of students with special needs in the general education classroom.

Using quantitative survey inquiry and qualitative interview protocols, the study examined the perceptions of general, special education teachers, and administrators to compare responses to the research questions. Research questions inquired into the perceptions of inclusion effectiveness and what training could be provided to assist with the challenges of inclusion within the general classroom.

Elaboration and Interpretation of Results

Research Question 1. The first research question was as follows: What are the differences in self-reported levels of self-efficacy between general and special education teachers? The survey divided the questions into three subscales categories of student

engagement, classroom management, and instructional strategies. Upon comparison of special education and general education teachers the results did not find any category that showed a statistically significant difference in self-efficacy between the two groups of teachers. The category that had the most difference in self-efficacy reporting was for the subscale of classroom management. The special education teachers felt more confident in managing students with disabilities. The special education scoring slightly higher in self-efficacy for classroom management, student engagement, and instructional strategies should be expected as teachers have had more training in these areas for student with special needs.

According to Strieker et al. (2013) after preservice teachers have attended education methods classes which are devoted to inclusive methods self-efficacy increases. This was further confirmed by Scheer, Scholz, Rank, and Donie (2015) who states that preservice teachers, especially those engaging in special education generally think more positively of inclusion within a general education classroom. Furthermore, elementary or primary school teachers also have a tendency to be more positive towards inclusion than teachers secondary or high school teachers (Scheer et al., 2015).

A study conducted by Shoulders and Krei (2015) investigated whether a significant difference could be perceived between the mean scores of teachers' self-efficacy between general and special education teachers in the three subscales. The researchers used the short version of the form used in this study. The Teachers' Sense of Efficacy Scale was used in the Shoulders and Krei study to survey 256 teachers from 21 rural public high schools in Tennessee and Indiana. The results of the Shoulders and Krei study using convenience sampling, revealed that a statistically significant difference in mean scores between instructional practices and classroom management when looking at

years of teaching experience. For the student engagement category, the results were similar to the findings in this study that revealed all teachers viewed self-efficacy about the same (Shoulders & Krei, 2015).

Research Question 2. Research Question 2 was as follows: What is the difference in self-efficacy between preservice or graduates with inclusion training and more experienced teachers? Since all teacher experience levels had between 25% to 33% who responded with having had no preservice or graduate inclusion training, the groups were compared by those with preservice or graduate training and those without training. In the subscale category of student engagement and instructional strategies those with training revealed results that statistically significant when compared to the teachers without preservice or graduate training. Furthermore, in all three subscales, those with training had improved scores compared those without training.

The survey questions in this study did not ask the nature of the preservice or graduate inclusion training received from participants. The training did make a statistically significant difference according to self-efficacy survey results when compared to participants without training. The value of preservice training was determined to very effective in a study conducted by Rogers-Haverback and Mee (2015). This study investigated the self-efficacy of 8 preservice teachers from a university cohort preparing to teach middle school students. The participants completed the same survey used in this study at three points during a yearlong internship to teach reading methods to middle school students. Additionally, the preservice teachers maintained reflection logs. A significant increase existed between the self-efficacy of the preservice teachers, and the reflection logs indicated an increase in the ability and the understanding of how to teach middle school students reading strategies (Rogers-Haverback & Mee, 2015).

Preservice teachers who positively believe they have control through self-efficacy over the performance of student-level achievement have more positive attitudes and less anxiety (Senler, 2016). This was demonstrated in the study conducted by Senler with 356 preservice teaching students from public universities. The study was conducted to examine relationships between self-efficacy, locus of control, attitude towards teaching, and subject anxiety. The results demonstrated that the positive correlation was between self-efficacy and attitude. The results also showed that preservice teachers who believed they controlled the learning environment and student achievement were less anxious and more comfortable teaching (Senler, 2016).

Research Question 3. This research question was as follows: What are the perceptions of administrator's regarding the effectiveness of preservice or graduate's inclusion training compared to their perception of veteran teachers? Since all teacher experience levels had between 25% to 33% who responded with having had no preservice or graduate inclusion training, the teacher group included general and special education teachers and were compared with results from administrators. In the subscale categories of student engagement, classroom management, and instructional strategies the administrator responses indicated a perception that inclusion self-efficacy of teachers was statistically significantly higher than that of the teachers. The incongruence is that administrators believe general and special education teachers are more effective within the inclusive classroom than either the general or special education teachers rate themselves. This incongruence is not uncommon between leadership and teachers.

In a study conducted by Goff, Goldring, and Bickman (2014) the purpose was to determine if the perception ratings of administration on leadership effectiveness were congruent with perceptions of teachers. This study was developed with 76 principals and

over 2100 teachers completing a 72-item survey. The survey forms for each group were the same. The survey results indicated rather large gaps in the perceptions between these administration leadership and teachers. The survey established a need for administrative leaders to provide an avenue for useful and structured feedback from teachers.

The results from Goff et al. (2014) are similar to the incongruent results from teachers and administrators in a study conducted by Ham, Duyar, and Gumus (2015). In this study, the effects of ratings of instructional leadership were reviewed to determine effect on the self-efficacy of teachers. Instructional leadership is defined as actions either direct or indirect that affect teacher instruction and student achievement. Using an international survey, the results from 672 principals and 11,323 teachers in four countries were analyzed. The results in study revealed that in all four countries the incongruence of instructional leadership perceptions negatively and significantly influenced teacher self-efficacy. Modern approaches to instructional leadership suggest that this should be a collaborative team effort instead of a task shouldered solely by principals. As schools move to this model the results should become congruent (Ham et al, 2015).

Research Question 4. This research question was as follows: What do general education, special education, and administrators perceive as the greatest needs related to improving teacher self-efficacy? In order to answer this research question, the interview responses collected were analyzed. Interviews were conducted with five general education teachers, two special education teachers, and two administrators from the research study site. Based upon interview responses the best way to improve inclusion and increase teacher self-efficacy is training that includes reading deficiency, paraprofessional support, teaching strategies for all subjects, hands-on training, exceptional student learning styles, and how to effectively include special-needs students.

Another improvement is to provide a mentoring program because many indicated that the most effective learning was provided by mentors. The final way to improve inclusion and self-efficacy is to create time needed for coteacher collaboration.

An important finding during this study, was that teachers learned more from experience and mentors than from preservice or graduate training. Senler (2016) suggested that preservice or beginning attitudes to teaching may be improved by mentor-teachers or peers who demonstrative positive attitudes and increase self-efficacy. In additional ways, the literature supported the findings of teachers who believed they learned more from experience and professional development than from preservice or graduate education.

In a mixed methods designed study conducted by Sandholtz and Ringstaff (2014). In the longitudinal study, 39 teachers from 16 school districts underwent a 3-year professional development training designed to increase self-efficacy in teaching science to elementary students in prekindergarten to Grade 2. All the teachers had completed at least one course in science. The professional development provided over 100 hours of training to the teachers over 3 years and was designed to increase science content knowledge and to foster use of instructional strategies.

The study revealed that the overall self-efficacy of teachers increased with statistical significance each year, throughout the professional development curriculum for teachers. At the beginning of the study, 51% did not believe to know the necessary steps to teach science. At the end of the study all teachers reported to know steps needed to teach science. A positive relationship exists between the self-efficacy of teachers, professional development, and the use of instructional practices (Sandholtz & Ringstaff, 2014).

Conclusions and Summary of Results

In all three subscales of the survey, the special education teachers scored slightly higher than general education teachers for self-efficacy. With the additional training provided to special education teachers for inclusion this is not surprising. Of interest was all experience levels of teachers had both received and not received preservice or graduate training on inclusion. The researcher anticipated that teachers with less experience would have received the training and that many of the more experienced teachers would not have received the training. Yet, a solid 25% to 33% in each category responded that they did not received preservice or graduate training on inclusion. Another interesting factor was that administrator responses revealed that they thought teachers were doing well with inclusion and had all the support and materials needed. That was not the perception of teachers who perceived a need for more support and training. Administrators did also believe that more training was also needed.

Based upon interview responses the best way to improve inclusion and increase teacher self-efficacy is training that includes reading deficiency, paraprofessional support, teaching strategies for all subjects, hands-on training, exceptional student learning styles, and how to effectively include special-needs students. Another improvement is to provide a mentoring program because many indicated that the most effective learning was provided by mentors. The final way to improve inclusion and self-efficacy is to create time needed for coteacher collaboration.

Implications of Findings

The problem this sequential mixed methods study addressed was school administrators were uncertain about the perceptions of general and special education teachers' self-efficacy regarding effective inclusion within the general education

classroom. This study compared the perceived self-efficacy of elementary and middle school general and special education teachers, as well as the perception of administrators, in order to identify specific areas of needed support and training.

The difference between general and special education teacher perceptions of self-efficacy was insignificant. A slightly higher perception of self-efficacy was perceived among special education teachers that may be attributed to additional education on teaching special needs students. The difference is not statistically significant and with continuous ongoing training for all teachers the gap should become even less. A difference existed between teachers who experienced preservice and graduate training for inclusion and those who did not. As inclusion has become the standard classroom instead of the exception, almost all preservice teachers will be receiving training in the future. Ongoing and continuous professional development will continue to improve the self-efficacy of those who did not receive preservice or graduate training for inclusion.

Administrators believed that training, especially hands-on training, for inclusion methods and strategies would improve inclusion within the general education classroom. This is consistent with the options of both general and special education teachers and is important because administrator perceptions of the abilities of teachers to manage inclusive classrooms is not congruent. Teachers should ensure that administrators are aware of any concerns and needs to provide resources within the general education classroom. This communication of needed resources and training aligns with the recommendations of all three groups regarding the best way to improve inclusion and increase teacher self-efficacy.

Based upon interview responses the best way to improve inclusion and increase teacher self-efficacy is training that includes reading deficiency, paraprofessional

support, teaching strategies for all subjects, hands-on training, exceptional student learning styles, and how to effectively include special-needs students. Another improvement is to provide a mentoring program because many indicated that the most effective learning was provided by mentors. The final way to improve inclusion and self-efficacy is to create time needed for coteacher collaboration.

Limitations

As described by Creswell (2012), limitations can exist within either the design or the implementation of a study, and several have been identified that may exist within this study. One limitation was that the researcher developed the interview instrument based upon the literature review. Researcher bias may have influenced the instrument design. The threat of this possibility was minimized by using a panel to offer feedback on the instrument design. Another potential threat to internal validity that was beyond the researcher's control was that participants may be affected by their own experiences, biases, maturity levels, and years of experience. Another limitation was that the results of this study may not be able to be applied to other school sites, but this is a common limitation in research and is unavoidable (Creswell, 2012). In order to limit the potential threat of this transferability, the researcher completely analyzed data responses and documented the details to increase the transferability of the findings (Lincoln & Guba, 1985, Merriam, 1998, 2009).

Recommendations

Recommendations for future practice based upon the research study results were a part of this dissertation. Based upon the study results, a few recommendations were revealed. One recommendation is to assign new teachers, who do not have much teaching experience a mentor. Many teachers reported that the best training was received from

mentors who took the time to help them learn. Senler (2016) suggested that preservice or beginning attitudes to teaching may be improved by mentor-teachers or peers who demonstrative positive attitudes and increase self-efficacy.

Research shows that a positive relationship is evident between teacher self-efficacy and student achievement (Almeida, Jameson, Riesen, & McDonnell, 2016; Ham et al., 2015; Hen & Goroshit, 2016; Sandholtz & Ringstaff, 2014; Senler, 2016; Shoulders & Krei, 2015; Yoon, Evans & Strobel, 2014). Teachers in this study believed they could influence students and outcomes *quite a bit*. The higher rating, however, would have been for teachers to agree they had *a great deal* of influence. A need exists to increase teacher self-efficacy to maximize student achievement. One recommendation to accomplish this increase in self-efficacy is for ongoing professional development to be provided for the best practices in the area of instructional strategies.

A final recommendation is to explore in more depth the incongruence between administration's perceptions of teacher effectiveness and the self-efficacy perceptions of teachers. The survey revealed a disconnect between leadership support and special education teacher views of leadership support. Based upon the interviews of the perceptions of special education teachers, school leadership does not invest or provide needed support for effective inclusion.

References

- Ajuwon, P. M., Sarraj, H., Griffin-Shirley, N., Lechtenberger, D., & Zhou, L. (2015). Including students who are visually impaired in the classroom: Attitudes of preservice teachers. *Journal of Visual Impairment and Blindness, 109*, 131-140.
- Almeida, C. M., Jameson, J. M., Riesen, T., & McDonnell, J. (2016). Urban and rural pre-service special education teachers' computer use and perceptions of self-efficacy. *Rural Special Education Quarterly, 35*(3), 12-19.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman.
- Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science, 1*, 164-180. <http://dx.doi.org/10.1111/j.1745-6916.2006.00011.x>
- Basen-Engquist, K., Carmack, C. L., Li, Y., Brown, J., Jhingran, A., Hughes, D. C., . . . Waters, A. (2013). Social cognitive theory predictors of exercise behavior in endometrial cancer survivors. *Healthy Psychology, 32*, 1137-1148. <http://dx.doi.org/10.1037/a0031712>
- Bogdan, R. C., & Biklen, S. K. (2011). *Qualitative research for education: An introduction to theory and methods* (5th ed.) Boston, MA: Allyn and Bacon.
- Brooks, R. (2016). Quality teachings in inclusive settings. *Voices From the Middle, 23*(4), 10-13.
- Cameron, D. L., & Cook, B. G. (2013). General education teachers' goals and expectations for their included students with mild and severe disabilities.

Education and Training in Autism and Developmental Disabilities, 48, 18-30.

- Carr, N. S. (2013). Increasing the effectiveness of homework for all learners in the inclusive classroom. *School Community Journal*, 23(1), 169-182. Retrieved from <http://www.adi.org/journal/2013ss/CarrSpring2013.pdf>
- Carter, E. W., Asmus, J., Moss, C. K., Biggs, E. E., Bolt, D. M, Born, T. L, . . . Weir, K. (2016). Randomized evaluation of peer support arrangements to support the inclusion of high school students with severe disabilities. *Exceptional Children*, 82, 209-233. <http://dx.doi.org/10.1177/0014402915598780>
- Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *The Qualitative Report*, 16, 255-262. Retrieved from <http://nsuworks.nova.edu/tqr/vol16/iss1/16/>
- Creswell, J. W. (2012). *Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.) Thousand Oaks, CA: Sage.
- Crosland, K., & Dunlap, G. (2012). Effective strategies for the inclusion of children with autism in general education classrooms. *Behavior Modification*, 36, 251-269. <http://dx.doi.org/10.1177/0145445512442682>
- Crowson, H. M., & Brandes, J. A. (2014). Predicting pre-service teachers' opposition to inclusion of students with disabilities: A path analytic study. *Social Psychology of Education*, 17, 161-178. <http://dx.doi.org/10.1007/s11218-013-9238-2>
- Dayton, J. (2012). *Education law: Principles, policies, and practice*. Bangor, ME: Wisdom Builders Press.

- DeMatthews, D. E. (2015). Clearing a path for inclusion: Distributing leadership in a high performing elementary school. *Journal of School Leadership, 25*, 1000-1038.
- Dewar, D. L., Plotnikoff, R. C., Morgan, P. J., Okely, A. D., Costigan, S. A., & Lubans, D. R. (2013). Testing social-cognitive theory to explain physical activity change in adolescent girls from low-income communities. *Research Quarterly for Exercise and Sport, 84*, 483-491. <http://dx.doi.org/10.1080/02701367.2013.842454>
- Edmonds, W. A., & Kennedy, T. D. (2013). *An applied reference guide to research designs: Quantitative, qualitative, and mixed methods*. Thousand Oaks, CA: Sage.
- Firmender, J. M., Reis, S. M., & Sweeny, S. M. (2013). Reading comprehension and fluency levels ranges across diverse classrooms: The need for differentiated reading instruction and content. *Gifted Child Quarterly, 57*, 3-14. <http://dx.doi.org/10.1177/0016986212460084>
- Fitzpatrick, J. L., Sanders, J. R., & Worthen, B. R. (2010). *Alternative approaches and practical guidelines* (4th ed.). Boston, MA: Pearson.
- Flores, K. V. (2012). *Inclusive general education teachers' perspectives on inclusion: A qualitative case study* (Master's thesis). Retrieved from <http://csus-dspace.calstate.edu/bitstream/handle/10211.9/1823/PDF.pdf?sequence=1>
- Furman, C. E. (2015). "Why I am not a painter": Developing an inclusive classroom. *Education and Culture, 31*(1), 61-76. <http://dx.doi.org/10.1353/eac.2015.0007>
- Gay, L. R., Mills, G. E., & Airasian, P. W. (2012). *Educational research: Competencies for analysis and application* (10th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Goff, P. T., Goldring, E., & Bickman, L. (2014). Predicting the gap: Perceptual

- congruence between American principals and their teachers' ratings of leadership effectiveness. *Educational Assessment, Evaluation and Accountability*, 26, 333-359. <http://dx.doi.org/10.1007/s11092-014-9202-5>
- Gross, J. M. S., Haines, S. J., Hill, C., Francis, G. L., Blue-Banning, M., & Turnbull, A. P. (2015). Strong school-community partnerships in inclusive schools are “part of the fabric of the school....we count on them.” *School Community Journal*, 25(2), 9-34. Retrieved from <http://www.adi.org/journal/2015fw/GrossEtAlFall2015.pdf>
- Guo, Y., Sawyer, B. E., Justice, L. M., & Kaderavek, J. N. (2013). Quality of the literacy environment in inclusive early childhood special education classrooms. *Journal of Early Intervention*, 35, 40-60. <http://dx.doi.org/10.1177/1053815113500343>
- Gupta, S. S., & Rous, B. S. (2016). Understanding change and implementation: How leaders can support inclusion. *Young Children*, 71(2), 82-91.
- Ham, S.-H., Duyar, I., & Gumus, S. (2015). Agreement of self-other perceptions matters: Analyzing the effectiveness of principal leadership through multi-source assessment. *Australian Journal of Education*, 59, 225-246. <http://dx.doi.org/10.1177/0004944115603373>
- Hartmann, E. (2012). A scale to measure teachers' self-efficacy in deaf-blindness education. *Journal of Visual Impairment and Blindness*, 106, 728-738.
- Hen, M., & Goroshit, M. (2016). Social-emotional competencies among teachers: An examination of interrelationships. *Cogent Education*, 3(1), 1151996. <http://dx.doi.org/10.1080/2331186X.2016.1151996>
- IDEA Partnership. (2006). *IDEA regulations: Monitoring, technical assistance and enforcement*. Retrieved from <http://www.ideapartnership.org/using-tools/topic>

-briefs/regulatory-provisions/1681-monitoring-technical-assistance-and-enforcement.html

- Kahn, S., & Lewis, A. R. (2014). Survey on teaching science to K-12 students with disabilities: Teacher preparedness and attitudes. *Journal of Science Teacher Education, 25*, 885-910. <http://dx.doi.org/10.1007/s10972-014-9406-z>
- Kluth, P. (2013). *Don't we already do inclusion: 100 ideas for improving inclusive schools*. Cambridge, WI: Cambridge Book Review Press.
- Ko, B., & Boswell, B. (2013). Teachers perceptions, teaching practices, and learning opportunities for inclusion. *Physical Educator, 70*, 223-242.
- Koegel, L. K., Park, M. N., & Koegel, R. L. (2014). Using self-management to improve the reciprocal social conversation of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 44*, 1055-1063. <http://dx.doi.org/10.1007/s10803-013-1956-y>
- Lane, K. L., Royer, D. J., Messenger, M. L., Common, E. A., Ennis, R. P., & Swogger, E. D. (2015). Empowering teachers with low-intensity strategies to support academic engagement: Implementation and effects of instructional choice for elementary students in inclusive settings. *Education and Treatment of Children, 38*, 473-504. <http://dx.doi.org/10.1353/etc.2015.0013>
- Library of Congress. (1973). *Rehabilitation Act of 1973*. (P.L. 93-112). Retrieved from <http://thomas.loc.gov/bss/d093/d093laws.html>
- Library of Congress. (2002). *H.R.1 - No Child Left Behind Act of 2001*. Retrieved from <https://www.congress.gov/bill/107th-congress/house-bill/1/text>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

- Little, C. A., McCoach, D. B., & Reis, S. M. (2014). Effects of differentiated reading instruction on student achievement in middle school. *Journal of Advanced Academics*, 25, 384-402. Retrieved from <http://dx.doi.org/10.1177/1932202x14549250>
- Logan, B. E., & Wimer, G. (2013). Tracing inclusion: Determining teacher attitudes. *Research in Higher Education*, 20, 1-10. Retrieved from <http://files.eric.ed.gov/fulltext/EJ1064663.pdf>
- Lucas, D., & Frazier, B. (2014). The effects of a service-learning introductory diversity course on pre-service teachers' attitudes toward teaching diverse student populations. *Academy of Educational Leadership Journal*, 18(2), 91-124.
- Lund, E. M., & Seekins, T. (2014). Early exposure to people with physical and sensory disabilities and later attitudes toward social interactions and inclusion. *Physical Disabilities: Education and Related Services*, 33, 1-16. <http://dx.doi.org/10.14434/pders.v33i1.4825>
- McHatton, P. A., & Parker, A. (2013). Purposeful preparation: Longitudinally exploring inclusion attitudes of general and special education pre-service teachers. *Teacher Education and Special Education*, 36, 186-203. <http://dx.doi.org/10.1177/0888406413491611>
- Merriam, S. B. (1998). *Qualitative research and case study applications in education: Revised and expanded from case study research in education*. San Francisco, CA: Jossey-Bass.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Wiley.
- Mills, G. E. (2013). *Action research: A guide for the teacher researcher* (5th ed.). Upper

Saddle River, NJ: Pearson.

- Mitchell, D. (2014). *What really works in special education and inclusive education: Using evidence-based teaching strategies* (2nd ed.). New York, NY: Routledge.
- Monsen, J. J., Ewing, D. L., & Kwoka, M. (2014). Teachers' attitudes towards inclusion, perceived adequacy of support and classroom learning environment. *Learning Environments Research, 17*, 113-126. <http://dx.doi.org/10.1007/s10984-013-9144-8>
- Nowicki, E. A., & Brown, J. D. (2013). "A kid way": Strategies for including classmates with learning or intellectual disabilities. *Intellectual and Developmental Disabilities, 51*, 253-262. <http://dx.doi.org/10.1352/1934-9556-51.4.253>
- Otero, T. L., & Haut, J. M. (2015). Differential effects of reinforcement on the self-monitoring of on-task behavior. *School Psychology Quarterly, 31*, 91-103. <http://dx.doi.org/10.1037/spq0000113>
- Pitre, C. C. (2014). Improving African American student outcomes: Understanding educational achievement and strategies to close opportunity gaps. *Western Journal of Black Studies, 38*, 209-217.
- Polirstok, S. (2015). Classroom management strategies for inclusive classrooms. *Creative Education, 6*, 927-933. <http://dx.doi.org/10.4236/ce.2015.610094>
- Rogers-Haverback, H., & Mee, M. (2015). Reading and teaching in an urban middle school: Preservice teachers' self-efficacy beliefs and field-based experiences. *Middle Grades Research Journal, 10*(1), 17-30.
- Rose, C. A., Stormont, M., Wang, Z., Simpson, C. G., Preast, J. L., & Green, A. L. (2015). Bullying and students with disabilities: Examination of disability status and educational placement. *School Psychology Review, 44*, 425-444. <http://dx.doi>

.org/10.17105/spr-15-0080.1

- Sandholtz, J. H., & Ringstaff, C. (2014). Inspiring instructional change in elementary school science: The relationship between enhanced self-efficacy and teacher practices. *Journal of Science Teacher Education, 25*, 729-751. <http://dx.doi.org/10.1007/s10972-014-9393-0>
- Scheer, D., Scholz, M., Rank, A., & Donie, C. (2015). Inclusive beliefs and self-efficacy concerning inclusive education among German teacher trainees and student teachers. *Journal of Cognitive Education and Psychology, 14*, 270-293. <http://dx.doi.org/10.1891/1945-8959.14.3.270>
- Senler, B. (2016). Pre-service science teachers' self-efficacy: The role of attitude, anxiety and locus of control. *Australian Journal of Education, 60*, 26-41. <http://dx.doi.org/10.1177/0004944116629807>
- Shady, S. A., Luther, V. L., & Richman, L. J. (2013). Teaching the teachers: A study of perceived professional development needs of educators to enhance positive attitudes toward inclusion practices. *Education Research and Perspectives, 40*, 169-191. Retrieved from <http://www.erpjournals.net/>
- Shippen, M. E., Crites, S. A., Houchins, D. E., Ramsey, M. L., & Simon, N. (2005). Preservice teachers' perceptions of including students with disabilities. *Teacher Education and Special Education, 28*, 92-99. <http://dx.doi.org/10.1177/088840640502800202>
- Shogren, K. A., Gross, J. M. S., Forber-Pratt, A. J., Francis, G. L., Satter, A. L., Blue-Banning, M., & Hill, C. (2015). The perspectives of students with and without disabilities on inclusive schools. *Research and Practice for Persons with Severe Disabilities, 40*, 243-260. <http://dx.doi.org/10.1177/1540796915583493>

- 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), 51-61.
- Simpson, L. A., & Bui, Y. (2016). Effects of a peer-mediated intervention on social interactions of students with low-functioning autism and perceptions of typical peers. *Education and Training in Autism and Developmental Disabilities, 51*, 162-178.
- Siwatu, K. O., Frazier, P., Osaghae, O. J., & Starker, T. V. (2011). From maybe I can to yes I can: Developing pre-service and inservice teachers' self-efficacy to teach African American students. *The Journal of Negro Education, 80*, 209-222.
- Soukakou, E. P., Winton, P. J., West, T. A., Sideris, J. H., & Rucker, L. M. (2014). Measuring the quality of inclusive practices: Findings from the Inclusive Classroom Profile pilot. *Journal of Early Intervention, 36*, 223-240. <http://dx.doi.org/10.1177/1053815115569732>
- Strieker, T., Gillis, B., & Zong, G. (2013). Improving pre-service middle school teachers' confidence, competence, and commitment to co-teaching in inclusive classrooms. *Teacher Education Quarterly, 40*(4), 159-180.
- SurveyMonkey. (2017). *Make better decisions with the world's #1 survey platform*. Retrieved from <http://www.surveymonkey.com>
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education, 17*, 783-805. [http://dx.doi.org/10.1016/S0742-051X\(01\)00036-1](http://dx.doi.org/10.1016/S0742-051X(01)00036-1)
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher*

Education, 23, 944-956. <http://dx.doi.org/10.1016/j.tate.2006.05.003>

Tschannen-Moran, M. & Woolfolk Hoy, A. (2009). Survey instruments to help you in your investigations of schools: Teacher sense of efficacy. Retrieved from <http://wmpeople.wm.edu/site/page/mxtsch/researchtools>

U.S. Congress. (1965). *Elementary and Secondary Education Act of 1965* (P.L. 89-10). Retrieved from ERIC database: <http://files.eric.ed.gov/fulltext/ED017539.pdf>

U.S. Congress. (2004). *Individuals with Disabilities Education Improvement Act of 2004* (P.L. 108-446). Retrieved from <http://idea.ed.gov/part-c/downloads/IDEA-Statute.pdf>

U.S. Department of Education, Special Education and Rehabilitative Services. (2010). *IDEA's impact: Thirty years of progress in educating children with disabilities through IDEA*. Washington, DC: Author.

Vaughn, S., Bos, C. S., & Schumm, J. S. (2013). *Teaching students who are exceptional, diverse, and at-risk students in the general education classroom* (6th ed.). Upper Saddle River, NJ: Pearson.

Vaughn, S. R., & Bos, C. S. (2011). *Strategies for teaching students with learning and behavior problems* (8th ed.). Upper Saddle River, NJ: Pearson.

West, E. A., & Pirtle, J. M. (2014). Mothers' and fathers' perspectives on quality special educators and the attributes that influence effective inclusive practices. *Education and Training in Autism and Developmental Disabilities*, 49, 290-300.

Whitworth, J. (1994). *The Regular Education Initiative: A blueprint for success. A description of a statewide implementation project in Illinois*. Retrieved from the ERIC website: <http://files.eric.ed.gov/fulltext/ED370327.pdf>

- Wiggins, C. C. (2012). *High school teachers' perceptions of inclusion* (Doctoral dissertation). Retrieved from <http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1644&context=doctoral>
- Yoon, S. Y., Evans, M. G., & Strobel, J. (2014). Validation of the Teaching Engineering of Self Efficacy Scale for K-12 teachers: A structural equation modeling approach. *Journal of Engineering Education*, 103, 463-485. <http://dx.doi.org/10.1002/jee.20049>
- Zundans-Fraser, L., & Lancaster, J. (2012). Enhancing the inclusive self-efficacy of preservice teachers through embedded course design. *Education Research International*, 2012 (Article ID 581352), 1-8. <http://dx.doi.org/10.1155/2012/581352>

Appendix A

Teachers' Sense of Efficacy Scale

Appendix A

Teachers' Sense of Efficacy Scale¹

| Teacher Beliefs | How much can you do? | | | | | | | | | |
|--|----------------------|-------------|----------------|-------------|--------------|-----|-----|-----|-----|--|
| | Nothing | Very little | Some influence | Quite a bit | A great deal | | | | | |
| Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential. | | | | | | | | | | |
| 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 from 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)
-

Demographic Information

Choose one:

I am a general education teacher _____

I am a special education teacher _____

I am an administrator _____

Years of teaching experience:

0 -2 _____

10-15 _____

3-5 _____

15-20 _____

5-10 _____

20 or more _____

Did you receive training in preservice or graduate education prepare you for inclusive classroom teaching? Yes _____ No _____

What training best prepared you for inclusion? _____

What training do you need to be better prepared for teaching inclusive classrooms?

Appendix B
Interview Protocol

Appendix B

Interview Protocol

Thank you for agreeing to participate in the interview phase of this study! With your participation, it is expected that we will more fully understand the perceptions of teachers' self-efficacy regarding inclusion of students with special needs within the general education classroom. The overall goal of this study is to identify areas to improve instructional strategies.

Please be very open and candid. To ensure complete confidentiality, please do not identify any teacher by name or any other information that will be significant only to them in this study. This meeting will last no more than 1 hour. Do you have any questions before we begin?

1. What has been your effectiveness experience with special-needs students within a general education classroom?
2. How has your effectiveness level changed with inclusion?
3. What are the benefits of effective inclusion in the general education classroom?
 - a. For students with special needs?
 - b. For students without special needs?
 - c. For general education teachers?
 - d. For special education teachers?
 - e. For the school?
 - f. For the community?
 - g. For novice teachers?
 - h. For veteran teachers?
4. How can the effectiveness of inclusion within the general education classroom be improved?
5. How are students with special needs receiving the attention they need to succeed in the inclusive classroom?
6. How are students without special needs getting the attention they need to succeed in the inclusive classroom?
7. In what ways, if any, do your training or education prepare you to effectively teach students with special needs and trying to raise classroom academic standards at the same time?
8. What do you believe are the strengths that general and special education teachers bring to the general education inclusive classroom?
9. In what way do you believe that school leaders support your needs to provide effective inclusion?
10. What training or support do you feel all teachers need in order to be successful at inclusion?