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General Education and Special Education Teachers' Attitudes Toward Inclusion

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COLLEGE OF EDUCATION

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Abstract

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MA, South Carolina State University, 2001

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

Educational reformers have mandated inclusion of students with disabilities in the general education classroom. However, general education teachers often do not regularly receive training in inclusive practices, and this lack of training can affect teachers' attitudes and levels of self-efficacy, which may ultimately affect their ability to successfully teach students with disabilities. The purpose of this study was to examine the difference in general education and special education teachers' attitudes towards inclusion of students with disabilities and if levels of self-efficacy (overall and 3 subscales), gender, education level, teacher type, and grade level taught were predictors of Teachers' Attitudes Toward Inclusion. The theoretical framework for this cross-sectional study was Bandura's theory of self-efficacy. The sample consisted of 118 elementary and middle school teachers in a rural district in South Carolina. Data were collected using an online survey, and a 2-way ANOVA and multiple regression were conducted to answer the research questions. Results indicated that special education teachers' attitudes towards inclusion were significantly more positive than those of general education teachers and that teacher type and the 3 self-efficacy subscales were predictors of Teachers' Attitudes Toward Inclusion. For each, higher levels of self-efficacy were associated with more positive attitudes toward inclusion. Social change may be achieved if school district administrators implement teacher training to improve teacher self-efficacy regarding inclusive practices. By doing so, teachers might increase their appropriate use of inclusive strategies, which might ultimately improve student outcomes.

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Dedication

I would like to dedicate my doctoral study to God, who is the head of my life. For without Him, none of this would have been possible.

Acknowledgements

First and foremost, I would like to thank God for giving me strength to endure throughout this journey. For without Him, none of this would have been possible. I would like to thank my husband, Michael, and my daughter, Micayla, for their love and support throughout the years during my doctoral study. Thank you for your prayers, understanding, and patience. I also would like to acknowledge my natural and my spiritual family members, friends, and coworkers who supported me throughout this journey. Your encouraging words, assistance, and prayers are deeply appreciated. I also would like to thank my committee chairperson, Dr. James Miller, as well as committee members, Dr. Lynn Varner and Dr. David A. Hernandez, for their support and feedback throughout the years. Finally, I would like to thank Susan Blatnik and Dr. George Smeaton for their support. Thank you all for having faith in me.

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Section 1: Introduction to the Study

Until recently, students with disabilities had been denied access to public education (Yell, 2006). However, a wave of reform starting in 1975 with the passage of the Education for All Handicapped Children Act (EAHCA) has culminated in changes in public education focusing on (a) educating students with disabilities in general education settings and (b) providing those students with appropriate support services (Yell, 2006). In particular, the Individuals with Disabilities Education Act (IDEA) Amendments of 1997 and the No Child Left Behind Act of 2001 (NCLB; 2002) required the integration of students with disabilities into regular education classrooms.

According to Itkonen (2007), amendments to IDEA, NCLB, and their subsequent reauthorizations have moved the topic of special education from the realm of civil rights to education law. For example, Kimbrough and Mellen (2012) reported that the purpose of IDEA (2004) was to ensure that all students with disabilities are given equal opportunities to participate in their education in the least restrictive environment regardless of intellectual, physical, or emotional disability. While emphasizing high academic standards and accountability (Itkonen, 2007), these laws were designed to promote the academic success of students with disabilities as defined by individual education plans (IEPs) designed to meet their unique needs and capabilities (Yell, 2006). Students with IEPs are often fully included in the general education classroom (McLeskey, Landers, Williamson, & Hoppey, 2012). Inclusion is the process of providing students with disabilities "equitable opportunities to receive effective educational services, with the needed supplementary aids and support services, in age

appropriate classrooms in their neighborhood schools, in order to prepare students for productive lives as full members of society" (National Center on Educational Restructuring and Inclusion, 1995, p. 99). The practice of inclusion has generated both support and opposition.

Proponents such as Sayeski (2009) have claimed that inclusion is beneficial because through collaboration, special education teachers bring specialized knowledge to the general education classroom, such as an understanding of students with disabilities and appropriate instructional design and strategies (p. 38). Inclusion also provides an opportunity for students with disabilities and their general education peers to (a) form and nurture friendships (Estell, Jones, Pearl, & Van Acker, 2009; Litvack, Ritchie, & Shore, 2011); (b) gain social skills (Lamport, Graves, & Ward, 2012; Vygotsky, 1978); (c) acquire behavioral skills and develop a work ethic (Murawski & Hughes, 2009); and (d) collaborate, which can promote academic success (Meadan & Monda-Amaya, 2008; Vygotsky, 1978) and social awareness (Mastropeiri, Scruggs, & Berkley, 2007).

Despite claims that inclusion offers benefits to students and teachers, Litvack et al. (2011) found that high-achieving students in general education classrooms felt that inclusive practices negatively impacted their learning, and Fletcher (2010) discovered that including students with emotional disabilities in kindergarten classes resulted in regular education students' reading and math performance decreasing by 10% by the beginning of the first grade. Other researchers have noted barriers to the implementation of inclusive practices in the general education classroom. For example, Fuchs (2009) found that the implementation of inclusive strategies is hindered by unrealistic

responsibilities and expectations for general education teachers. Idol (2006) identified lack of knowledge, support, and collaboration as barriers to inclusion, and numerous researchers have identified lack of training as a barrier to inclusion (Allison, 2011; Cipkin & Rizza, 2010; Fuchs, 2009; Glazzard, 2011). In addition, Orr (2009) suggested that (a) general education teachers' negative attitudes toward inclusion, (b) support staff's lack of knowledge of inclusion, and (c) lack of administrative support for inclusion could serve as barriers to successful inclusion.

Problem Statement

General education teachers in elementary and middle schools in a rural, public school district in South Carolina do not regularly receive training in the inclusion of students with disabilities in the general education classroom. Lack of training in inclusive practices is problematic because, according to Hodkinson and Devarakonda (2006), teachers' perceptions and misconceptions about inclusion may affect their attitudes toward inclusive education. More specifically, based on elements of Bandura's (1977) theory of self-efficacy, lack of training in inclusive strategies may affect general education teachers' levels of self-efficacy. Through cognitive, motivational, and affective processes, low levels of self-efficacy may hinder teachers' ability to master the skills necessary to properly implement inclusive strategies in the general education classroom.

In a cyclical fashion, this task failure can serve as an example of a past experience that further lowers levels of self-efficacy. Specifically, low levels of self-efficacy can foster poor teacher attitudes (cognitive process) and inhibit teacher motivation (motivational process) to persist in implementing inclusive strategies (Tschannen-Moran

& Woolfolk Hoy, 2001). If teachers do not support the concept of inclusion, do not persist in their efforts to implement inclusive strategies, and fail to master the skills needed to appropriately implement inclusive strategies, those strategies will not be implemented. When inclusive strategies are not implemented or are not implemented properly, students with disabilities in the general education classrooms do not receive the support they need to reach their fullest potential. Ultimately, lack of teacher training in inclusive practices could have a negative impact on the academic (Fuchs, 2009) and social (Sayeski, 2009) success of students with disabilities.

Purpose

The purpose of this study was to determine if there were differences in Teachers' Attitudes Toward Inclusion in the general education classroom at the elementary and middle levels between teachers of varying types (general education and special education) and education levels (bachelor's and master's) and if (a) levels of teacher self-efficacy in instructional strategies, classroom management, and student engagement; (b) gender; (c) education level; (d) teacher type; and (e) grade level taught (elementary and middle) were predictors of Teachers' Attitudes Toward Inclusion. In light of the insight gained from this research, school district administrators may decide to implement teacher training in inclusive practices as a means of improving teacher self-efficacy with regard to inclusive practices. My goal was that ultimately student achievement may be improved through the increased and appropriate implementation of inclusive strategies for students with disabilities in general education classrooms.

Nature of Study

To examine if there were differences in attitudes toward inclusion between general education and special education teachers of varying educational levels and if teacher self-efficacy could predict teachers' attitudes toward the inclusion of students with disabilities while controlling for gender, education level, teacher type, and grade level taught, I used nonexperimental, cross-sectional survey research to collect data from teachers in a rural school district in South Carolina. I invited 245 general education and 51 special education teachers from 12 schools (eight elementary, two middle, and two middle/high) in the district to (a) provide data about their gender, grade level, and type and level of education and (b) complete the Scale of Teachers' Attitudes Toward Inclusive Classrooms (STATIC; Cochran, 1997) survey and the Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001). I used descriptive and inferential statistics (two-way ANOVA for Research Question 1 and multiple regression for Research Question 2) to answer two specific research questions:

Research Question 1. Is there a significant difference in Attitude Toward Inclusion between teachers of differing teacher types and education level?

Research Question 2. Does teacher efficacy (Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management) predict Teachers' Attitudes Toward Inclusion while controlling for gender, education level, teacher type, and grade level taught?

Theoretical Model

As a theoretical model framing this study, I used Bandura's theory of self-efficacy and social cognitive theory. In this subsection, I describe Bandura's model. Then, to provide a broader understanding of efficacy as it may be applicable to this study, I describe different types of efficacy. Finally, I describe the application of the theoretical model in this study.

Bandura's Theory of Self-Efficacy and Social Cognitive Theory

Based on elements of social learning theory, Bandura (1977) defined the concept of self-efficacy. According to Bandura (1997), self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 37). These beliefs affect behaviors and ultimately performance outcomes (Bandura, 1977). Bandura (1977) described four sources of self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective responses (p. 39).

Bandura (1982, 1986) maintained that mastery experiences (performance accomplishments) are the most effective way to develop a strong sense of efficacy. Successful performances serve as positive examples that may shape perceptions about future capability to perform that or a similar task again (Bandura, 1977). This positive shaping of perceptions is what Bandura considered improving self-efficacy. Conversely, failing at a task or challenge can weaken self-efficacy by serving as a negative past performance that may negatively shape perceptions about capability (Bandura, 1977).

Another way to develop self-efficacy is through vicarious experiences, which are generated through social models (Bandura, 1977). Bandura and Barab (1973) stated that "observing others perform intimidating responses without adverse consequences can reduce fears and inhibitions" (p. 1), thus motivating action. As a result, people who observe others performing intimidating responses without adverse consequences are more apt to believe their attempts at the same action would be successful (Bandura, 1977).

A third way to develop self-efficacy is through verbal/social persuasion, commonly used to influence behavior because it is easy to use and readily accessible (Bandura, 1977). Through other people's suggestions (either live or virtual models), people are prompted to believe that they have the capability to accomplish a task that they previously felt ill-equipped to accomplish (Bandura, 1977). However, verbal persuasion alone will not prompt effective performance—people also must receive the appropriate tools needed to perform a given task (Bandura, 1977).

The last way to develop self-efficacy is through physiological and affective states. Bandura (1997) suggested that one's physical and mental states can impact one's perception about performance, thus affecting self-efficacy and ultimately performance outcomes. Emotional arousal to stressful situations may promote fear and anxiety, which negatively influences performance (Bandura, 1977). In a reciprocal fashion, those negative performance outcomes affect a person's physiological and affective states (Bandura, 1977).

In addition to the four sources of self-efficacy Bandura (1977) identified, he also distinguished between efficacy expectation and outcome expectation. An outcome

expectation is “a person’s estimate that a given behavior will lead to certain outcomes. An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes” (Bandura, 1977, p. 193). Thus, a person can believe that a certain behavior will have a certain outcome, but if the person seriously doubts his or her ability to be successful performing the activity, outcome expectancy will not influence his or her behavior (Bandura, 1977). This is particularly applicable to verbal persuasion, which will not be successful in influencing behavior unless a person’s efficacy expectations match his or her outcome expectations.

Social Cognitive Theory of Learning and Behavior

Based on his theory of self-efficacy (and concepts drawn from the social learning theory), Bandura (1989) developed his social cognitive theory, in which he suggested that not only is behavior influenced by personal factors such as self-efficacy but by environmental factors as well. Environmental factors may include physical factors present in one’s immediate setting or social factors such as the influence of family members, friends, and colleagues (Bandura, 2001). Personal factors include cognitive, motivational, affective, and selection process associated with self-efficacy as an agent of behavioral change (Bandura, 1993).

Cognitive processes involve a person’s self-efficacy and his or her ability to shape thought processes regarding tasks. People with high levels of self-efficacy set higher goals for themselves and are willing to face challenges (Bandura, 1993). In contrast, people with low self-efficacy tend to be negative about their ability to complete a task or expect to fail at the task (Bandura, 1993).

Motivation is essential in completing challenges and overcoming obstacles (Bandura, 1989). According to Bandura (1993), "self-efficacy beliefs contribute to motivation in several ways: They determine the goals people set for themselves, how much effort they expend, how long they persevere in the face of difficulties, and their resilience to failures" (p. 131). This perseverance in the face of adversity and failure helps people accomplish tasks and reach goals they otherwise would abandon when experiencing barriers to those tasks and goals (Bandura, 1989). In addition, because people with high levels of self-efficacy believe they will be successful, they also tend to have high levels of motivation, whereas people with low self-efficacy tend to be less motivated and avoid challenging and difficult tasks to avoid failure (Bandura, 1993).

Self-efficacy influences behavior through affective processes by influencing a person's emotional state. According to Bandura (1989), levels of self-efficacy can affect levels of stress and depression a person experiences as a result of challenging situations. In addition, how a person assesses his or her ability to function in challenging situations also can contribute to his or her affective state. Low levels of self-efficacy result in negative affective states, which impair functioning and therefore poor behavioral outcomes (Bandura, 1989). However, high levels of self-efficacy promote the ability to cope with stressful situations without negative reactions, thus resulting in more positive behavioral outcomes (Bandura, 1989).

Selection processes involve the choices people make based on their perceptions of ability. People typically tend to embrace challenges they know they are capable of achieving and avoid the ones they believe they cannot achieve (Bandura, 1989, 1993).

For example, “the more efficacious people judge themselves to be, the wider the range of career options they consider appropriate and the better they prepare themselves educationally for different occupational pursuits” (Bandura, 1989, p. 1178). According to Bandura (1989), career limitations tend to be more the result of people’s perceptions of their inability rather than a condition of their actual ability.

Application of the Theory in This Study

The purpose of this study is to determine the differences between general education and special education Teachers’ Attitudes Toward Inclusion and to determine the strength of the relationship between teacher self-efficacy and Teachers’ Attitudes Toward Inclusion. Using Bandura’s theory of self-efficacy as a theoretical model for this study will provide a foundation for understanding the conditions associated with teacher attitude and self-efficacy toward inclusive practices. Such an understanding will be beneficial for interpreting and discussing the results of this study.

Based on the literature, it was plausible that I might find general education teachers had lower levels of self-efficacy than special education teachers. Training as a means of improving self-efficacy has been indicated in the literature (see Fuchs, 2009; Horne & Timmons, 2009). In addition, teachers who have successful student academic and social outcomes are more confident in their capabilities to teach various types of students (Tschannen-Moran & Woolfolk Hoy, 2001). Considering the purpose of my study and the associated literature, applying the theory of self-efficacy (Bandura, 1977) and social cognitive theory (Bandura, 1989) to this study was beneficial because it provided a perspective for understanding the potential value of teacher training for

improving teacher skills and ultimately student outcomes and how those improved student outcomes could work in a reciprocal fashion to further improve teacher self-efficacy. Teacher training could provide a means of altering teachers' expectancy outcomes by not only serving as a tool for achieving success in combination with verbal persuasion but by providing a means of promoting mastery and vicarious experiences. In Figure 1, I present a graphic representation of how Bandura's theories could be used to understand participant behavior that may be demonstrated in my study results and to provide direction for making recommendations for action and prompting changes in current educational practices.

Definition of Terms

The following terms and phrases are defined as used in this study:

Efficacy: According to Tschannen-Moran and Woolfolk Hoy (2001) and measured in this study by the TSES, efficacy refers to a "teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 233)—conditions Bandura (1977) referred to as self-efficacy. Although Tschannen-Moran and Woolfolk Hoy also considered efficacy to be affected by analysis of both the task at hand (personal teaching efficacy) and the conditions surrounding the task (general teaching efficacy), for the purposes of this study with regard to teachers' general perceptions of their ability to accomplish a task, Tschannen-Moran and Woolfolk Hoy's definition of efficacy will be understood to be synonymous with the term self-efficacy.

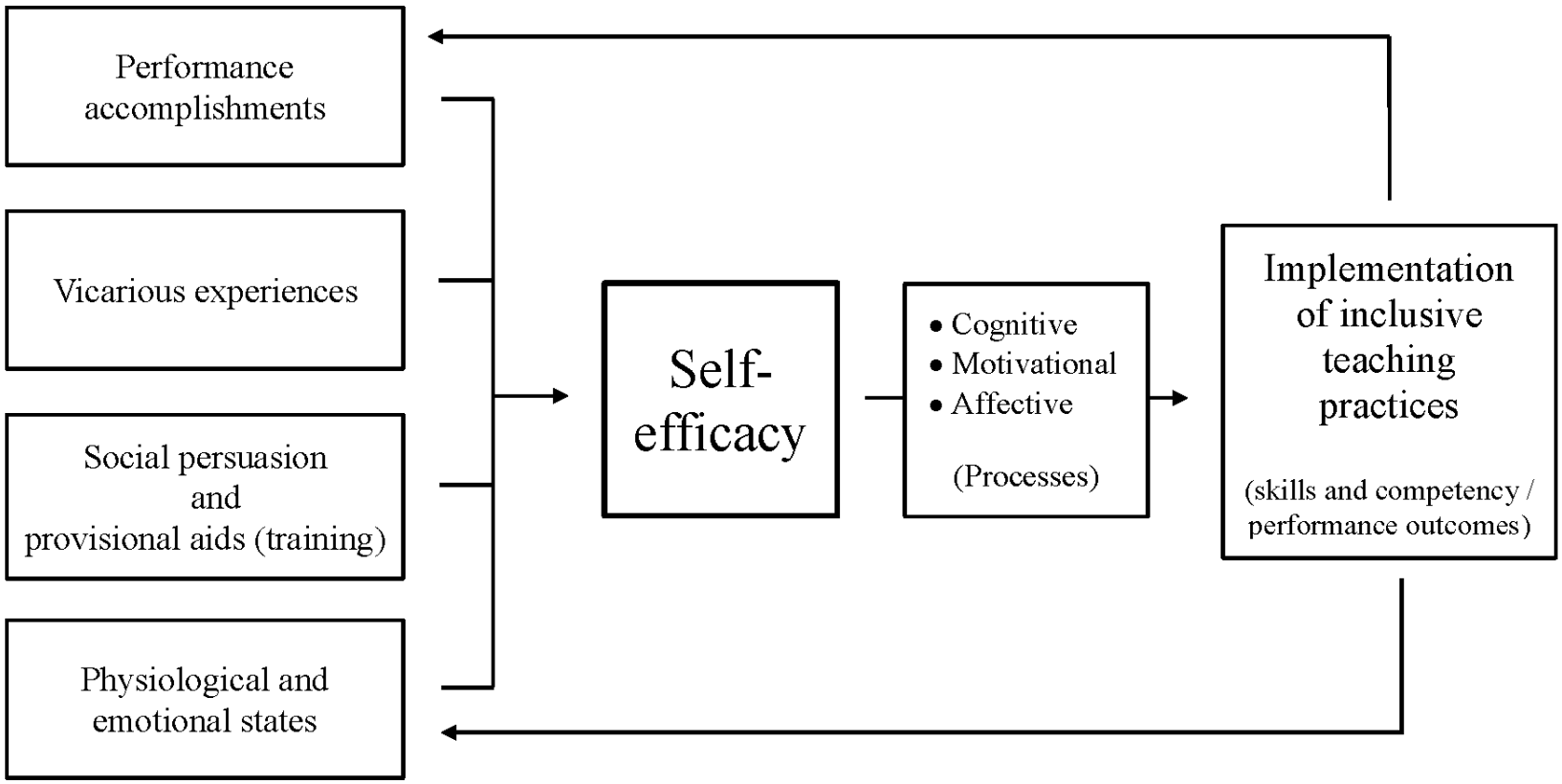

Figure 1. Conceptual model of the use of teacher training to influence self-efficacy and change teacher behavior and performance. Adapted from D. S. Staples, J. S. Hulland, & C. A. Higgins (1998). A self-efficacy theory explanation for the management of remote workers in virtual organizations. *Journal of Computer-Mediated Communication, 3*(4). Copyright 2013 by John Wiley & Sons, Inc. Reprinted with permission (see Appendix A).

Inclusive environment: An inclusive environment is a setting with diverse learners who are actively engaged in an environment that is supportive and promotes academic achievement (Lawrence-Brown, 2006). In this study, inclusive environment will refer to the general education setting in which students with disabilities receive educational services as appropriate and as defined by their IEPs.

Least restrictive environment (LRE): LRE refers to the concept that whenever possible, students with disabilities should be educated with their peers in regular education classrooms—education in other environments should occur "only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily" (IDEA, 2004, Section Title I, B, 612, a, 5, A).

Self-efficacy: According to Bandura (1995), self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2).

Assumptions and Limitations

While preparing this study, I made several assumptions and recognized potential limitations. First, I assumed that the potential teacher participants had an inherent interest in improving outcomes for students and thus would answer the survey questions honestly. This assumption was a potential limitation because dishonest responses from participants could have skewed my results. However, to encourage honest responses on all communications with participants as well as on the survey itself, I reminded participants that their responses would be anonymous.

Second, I assumed that the teachers who participated in my study would represent the general population of teachers at the study site. However, because I used convenience sampling to recruit participants in my study, I was not be able to generalize my results to the larger population of teachers in other school districts in the state or at the national level. Despite this limitation, in this study, I was able to generate data regarding teachers' attitudes toward inclusion, which the district could use to make decisions about professional development opportunities for teachers.

Third, I assumed that Bandura's theory of self-efficacy (1977) and his social cognitive theory (1986) would offer an appropriate lens through which to explore the effects of self-efficacy on teachers' behaviors in the local setting of focus in this study. This assumption was a potential limitation because by using only Bandura's theories, the interpretation of my data was limited to perspectives posed by those theories. However, the pervasive use of Bandura's theory of self-efficacy (1977) and social cognitive theory (1986) in studies exploring the relationship between self-efficacy and behavioral outcomes served as evidence that these theories would be appropriate for the similar purpose in this study. Moreover, I used additional perspectives posed in the literature as appropriate.

An additional limitation was that I did not consider the length of time teachers had been teaching For instance, a general education teacher with many years of teaching experience may report high levels of self-efficacy with inclusive practices when compared to an inexperienced first-year special education teacher, which may mean length of time teaching (or teaching experience) is more important than teacher type

(regular vs. special education). Therefore, results based on teacher type may not accurately reflect the influence of time (experience) on the outcome, attitudes toward students with disabilities and inclusion.

Scope and Delimitations

I limited the scope of this study to the dependent variable Teachers' Attitudes Toward Inclusion and five independent variables: teacher self-efficacy (instructional strategies, classroom management, and student engagement), gender, education level, teacher type, and grade level taught. I delimited the study to the examination of the impact of the independent variables on Teachers' Attitudes Toward Inclusion. I did not examine teachers' attitudes toward other aspects of teaching. I delimited the sample population to general and special education teachers who teach in inclusive settings in elementary and middle schools in one rural public school district in South Carolina. I delimited the measurement of teachers' attitudes to the STATIC instrument and the measurement of self-efficacy to the TSES instrument.

Significance and Social Impact of the Study

Based on elements of Bandura's (1977) theory of self-efficacy and social cognitive theory (1986), lack of training in inclusive strategies may affect teachers' levels of self-efficacy. Through multiple cognitive processes, low levels of self-efficacy may hinder a teacher's ability to master the skills necessary to properly implement inclusive strategies in the general education classroom. When inclusive strategies are not implemented or are not implemented properly, students with disabilities in the general education classrooms do not receive the support they need to reach their fullest potential.

The district under study included eight elementary schools, two middle schools, two middle/high schools, three traditional high schools, one alternative school, and one health professions charter school. The district served 6, 869 students during the 2013-2014 school year. Of those students, 947 were students with disabilities (PK-Grade 5 = 532, Grades 6-8 = 185, Grades 9-12 = 230). Considering that 45% of those students were served in inclusive classrooms, the potential that inclusive strategies are not being implemented or are not being implemented properly is an important concern. Because 95% of school-aged students (ages 6 to 21 years) with disabilities were enrolled nationally in public school during the 2009-2010 academic school year and "63% of students with specific learning disabilities . . . spent most of their school day in general classes" (Aud et al., 2012, p. 32), this concern was applicable at the state and national levels as well.

Both qualitative and quantitative research have been conducted on inclusion and teachers' attitudes at the urban and rural elementary and middle school levels (see Damore & Murray, 2007; Idol, 2006; Swick & Hook, 2005). However, this study added new knowledge in the field by exploring the relationship between Teachers' Attitudes Toward Inclusion and both gender and teacher level of education. This study was valuable overall because it generated insight that may be shared with the school district under study to prompt the implementation of teacher training in inclusive practices as a means of improving teacher self-efficacy. Improved self-efficacy among teachers may improve the amount and quality of inclusive practices in the classroom. Thus, potential for social change may exist in the form of improved student achievement resulting from

increased and appropriate implementation of inclusive strategies for students with disabilities in general education classrooms in the focus schools in the district under study.

Summary

As indicated in the literature, lack of teacher training in inclusive practices could have a negative impact on the academic (Fuchs, 2009) and social (Sayeski, 2009) success of students with disabilities in the focus school district in this study. For this reason, I examined the difference between general education and special education teachers' attitudes toward inclusion and feelings of self-efficacy toward teaching students with disabilities in the general education classroom at the elementary and middle levels (Research Question 1). I also considered if (a) levels of teacher self-efficacy in instructional strategies, classroom management, and student engagement; (b) gender; (c) education level; (d) teacher type; and (e) grade level taught were predictors of Teachers' Attitudes Toward Inclusion (Research Question 2).

To conduct this study, I used a non-experimental, cross-sectional study design and survey approach to collect data from 296 regular and special education elementary and middle school teachers in a rural school district in South Carolina. After collecting data via an online survey, I conducted descriptive and inferential statistics (two-way ANOVA for Research Question 1 and multiple regression for Research Question 2). I used Bandura's theory of self-efficacy and social cognitive theory as lenses for understanding and interpreting the results of my analysis.

Although I made assumptions in my study that potentially could have limited my study and my findings, I attempted to control and/or reduce the impact of those potential limitations. In addition, although I may not be able to generalize my results, in this study I generated valuable data that the district under study could use to prompt training of general education teachers in inclusive practices at the classroom level. Improvement at this level may contribute to positive social change through improved outcomes for students with disabilities.

In Section 2, I present a review of current and related literature. In Section 3, I present the methodology for this study. In Section 4, I present my results, and in Section 5, I discuss my findings and implications for social change, present my recommendations for action and further study, and make concluding remarks.

Section 2: Literature Review

General education teachers do not regularly receive training in inclusive practices, which ultimately can result in poor academic (Fuchs, 2009) and social (Sayeski, 2009) outcomes for students with disabilities. Therefore, the purpose of this study was to determine general education and special education teachers' attitudes toward inclusion and if self-efficacy is a predictor of inclusion. To find information on inclusion and teachers' attitudes toward and self-efficacy with students with disabilities, I searched multiple databases: EBSCOHost, ProQuest Dissertation and Theses database, ERIC, and JSTOR. Search terms included *teacher, attitude, perception, inclusion, inclusive education, special education, efficacy,* and *self-efficacy.* In this section, I offer a discussion of topics relevant to inclusion with a particular focus on teacher self-efficacy, inclusion in the public school setting, and benefits of and barriers to effective inclusion.

Teacher Self-Efficacy

Although researchers may discuss self-efficacy as one general concept, Gibson and Dembo (1984) identified two types of self-efficacy specific to teachers: personal teaching efficacy and general teaching efficacy. Personal teaching efficacy refers to teachers' beliefs about their own ability to complete tasks necessary to promote student achievement and "reflects the teachers' responsibility in student learning and behavior" (Gibson & Dembo, 1984, p. 573). Because motivation and teachers' perceptions about their own ability to accomplish a task contribute to this type of efficacy, Gibson and Dembo compared it to Bandura's concept of efficacy expectation (self-efficacy). According to Gibson and Dembo, general teaching efficacy focuses on an individual's

belief that teaching itself can generate learning. Because the researchers acknowledged that the extent of "any teachers' ability to bring about change is significantly limited by factors external to the teacher" (p. 574) and the teachers' beliefs that those external (environmental) factors can be controlled or manipulated, they compared general teaching efficacy to Bandura's concept of outcome expectation.

Description of Teachers

Generally, teachers with low levels of efficacy tend to become frustrated easily and give up quickly when they receive undesirable outcomes (Gibson & Dembo, 1984). Teachers with high levels of efficacy tend to be confident, motivated, persistent, academically focused in the classroom (Gibson & Dembo, 1984), and dedicated to academic excellence (Hoy & Woolfolk, 1993). Swackhammer, Koellner, Basile, and Kimbrough (2009) found that teachers with high levels of self-efficacy were professionally and personally motivated to enroll in math and science content courses to improve their levels of content knowledge. Chong, Klassen, Huan, Wong, and Kates (2010) asserted that in comparison to teachers who teach in typical schools, teachers who teach in schools especially designed for high-achieving students demonstrated significantly higher levels of self-efficacy. This condition may be the result of prior student performance and teacher expectation (Chong et al., 2010). Specifically, teacher perception that students are highly capable and motivated and less likely to engage in off-task and/or disruptive behavior may promote higher expectations for positive teaching experiences (i.e., increased levels of teacher self-efficacy; Chong et al., 2010). Fives and Buehl (2009) revealed that years of teaching experience and grade level taught affected

teachers' self-efficacy. Specifically, the researchers discovered that elementary school teachers and those with 10 or more years of experience in the classroom had higher level of self-efficacy than teachers who taught in higher grades and preservice teachers. In addition, because practicing teachers have more experience than preservice teachers, types of teaching efficacy may be more differentiated for practicing teachers when compared to preservice teachers. For example, Fives and Buehl found that although preservice teachers demonstrated a one factor structure of efficacy, practicing teachers demonstrated a three-factor structure: classroom management, instructional practices, and student engagement. Finally, Pas, Bradshaw, Hershfeldt, and Leaf (2010) found that teachers who exhibited low levels of efficacy tended to generate fewer student referrals to the student support team than teachers with high levels of efficacy. This finding was contrary to what the researchers expected to discover and suggested the condition might be the result of teacher avoidance of collaboration, which might be expected from teachers with low self-efficacy.

Factors That Affect Self-Efficacy

Researchers have identified a variety of factors that influence teacher self-efficacy. In early research in the field, Hoy and Woolfolk (1993) focused their research on the effects of personal variables (teacher experience, gender, and education level) and organizational variables (institutional integrity, principal influence, consideration, resource support, morale, and academic emphasis) on teachers' perceptions of their personal and general teaching efficacy. The findings indicated that principal influence, academic emphasis, and education level had a significant impact on teachers' sense of

personal efficacy. In contrast, institutional integrity, academics, and experience predicted general teaching efficacy (Hoy & Woolfolk, 1993). However, the relationship between general and personal teaching efficacy was weak (Hoy & Woolfolk, 1993).

Ongoing collaboration in a variety of forms can contribute to high levels of teacher self-efficacy. In particular, collective teacher efficacy can contribute to a teacher's personal sense of self-efficacy (Chong et al., 2010; Viel-Ruma, Houchins, Jolivette, & Benson, 2010). Viel-Ruma et al. (2010) found this to be the case regardless of type of teaching level, classroom setting, or teacher certification.

Other factors that can influence teacher efficacy are teachers' personal attributes and level of education (Tschannen-Moran & Woolkfolk Hoy, 1998). In a quantitative study of middle school in-service teachers, Swackhammer et al. (2009) found that content knowledge gained through math and science content courses positively affected teachers' levels of outcome efficacy (the belief that students can learn through the educational process) such that teachers who enrolled in four or more math or science courses demonstrated higher levels of outcome efficacy than teachers who enrolled in fewer courses. However, acquisition of content knowledge did not affect levels of personal efficacy (Swackhammer et al., 2009).

In various combinations, years of experience teaching, gender, grade level taught, type of school, and sources of classroom stress can influence a teachers' levels of classroom management efficacy, instructional strategies efficacy, and student engagement self-efficacy (Klassen & Chiu, 2010). Klassen and Chiu (2010) indicated that only years of experience affected all three types of teacher self-efficacy but found a

positive relationship only through year 23 after which time levels of self-efficacy decreased. The researchers suggested their results are supported by Huberman's career stages, which include the characteristic of disengagement for teachers in the later stages of their careers. In addition, Klassen and Chiu discovered that kindergarten and elementary teachers demonstrated higher levels of self-efficacy for classroom management and student engagement than teachers in higher grades.

Effects of Efficacy in the School Setting

According to McGuire (2011), teacher self-efficacy, in particular teacher efficacy in student engagement, is a predictor of math achievement for high school students in Grades 9 and 10. When multiple variables are combined as predictors, teacher efficacy in student engagement and teacher efficacy in classroom management together with teacher age and experience are the strongest predictors of student achievement (McGuire, 2011). Moreover, teacher self-efficacy can directly impact level of teacher satisfaction in the job setting (Klassen & Chiu, 2010) and is a significant predictor of teacher job satisfaction (Viel-Ruma et al., 2010). Viel-Ruma et al. (2010) indicated that levels of teacher self-efficacy and subsequent job satisfaction are not affected by teaching level, setting, and certification type.

Both personal teacher efficacy and general teacher efficacy may affect the environment of a learning organization (Tschannen-Moran & Woolfolk Hoy, 1998). In addition, when mediated by collective teacher efficacy, teacher efficacy is a significant predictor of academic climate, with higher levels of teacher self-efficacy being predictive of more positive perceptions of academic climates (Chong et al., 2010).

Inclusion in the Public School Setting

Prompted by IDEA (1997) and NCLB (2002), students with disabilities are integrated into regular education classrooms through either full or partial inclusion, and instruction for these students may occur through a coteaching partnership between the general education and special education teachers. Despite the implementation of inclusive practices in the school setting, not all teachers have similar attitudes toward the inclusive process: While some teachers have positive attitudes toward inclusion, other teachers have negative attitudes. Student attitudes may differ as well. Factors that contribute to these attitudes vary as do expectations for teachers in inclusive settings. I discuss these various concepts associated with inclusion in the public school setting in more detail in this section.

Models of Inclusion

Service models for students with disabilities vary depending on the type of institutional setting in which they function and may represent a spectrum of teaching arrangements, student placements, and levels of student IEP implementation (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). In the public school setting, there are two types of inclusion, full inclusion and partial inclusion, both, according to Giangreco (2007), provide students with disabilities an equal opportunity to learn in the same environment as their regular education peers. Full inclusion occurs when all students with various levels of ability and disability receive instruction entirely in the regular education classroom with their same-aged peers (Council for Exceptional Children, 2011). This instruction includes any additional support needed by students with disabilities (provided

by special education teachers) and requires that general education teachers collaborate with special education teachers to design and implement appropriate instructional strategies to meet the needs of students with disabilities (Fuchs, 2009).

Partial inclusion, also called pullout or resource services, occurs when students receive some instruction in the regular education setting (as described for full inclusion) and some instruction in a resource room (a self-contained classroom in which students with disabilities receive instruction directly from a special education teacher; Friend, 2008). Specifically, partial inclusion is defined by student participation in special education and related services outside the regular education setting for at least 21% and no more than 60% of the school day (Center for Effective Collaboration and Practice, 2001).

Instruction in the inclusive setting may occur in the form of coteaching. The practice of coteaching occurs when a general education teacher and a special education teacher partner in order to deliver special education and related services to students with disabilities in the general education setting (Friend et al., 2010). At the time of this study, coteaching as an approach to collaboration in the classroom was becoming increasingly popular (Fenty & McDuffie-Landrum, 2011; Forbes & Billet, 2012), had been shown to improve student outcomes (McDuffie, Mastropieri, & Scruggs, 2009), and in fact was one of the most common ways that teachers could deliver instruction to meet the needs of diverse learners (Conderman, 2011; Pugach & Winn, 2011).

Coteaching involves mutual cooperation and participation in the planning, implementing, and assessing aspects of classroom instruction (Conderman, Johnston-

Rodriguez, & Hartman, 2009) and may occur in a variety of formats: one teach one assist, station teaching, parallel teaching, alternate teaching, and team teaching (Friend et al., 2010). Joy and Murphy (2012) asserted that classrooms that integrate various models of coteaching models are most beneficial to all students in the inclusive setting.

Working as collaborative partners, coteachers combine their expertise and share responsibilities for teaching curriculum standards and for meeting students' individual needs and IEP goals (Conderman, 2011; Conderman & Hedin, 2012; Murawski, 2012). Successful coteachers are typically receptive to sharing roles, dedicated to collaborating with each other (Wastson & McCathren, 2009), communicative, encouraging, and supportive (Murwaski & Dieker, 2008). Teachers who share similar positive perspectives about educating students with disabilities tend to collaborative more successfully than those who do not share similar perspectives in this regard (Carter, Prater, Jackson, & Marchant, 2009).

Attitudes Toward Inclusive Education

Some teachers have negative attitudes toward inclusion and inclusive instructional practices. The focus of teachers' negativity toward inclusive education varies. When Orr (2009) asked preservice special education teachers to share their experiences with general education teachers in the field, the special education teachers described general education teachers as negative. General education teachers appeared to exhibit more negative attitudes toward teaching students who require modified instruction (vs. additional support in the classroom), such as students with vision and hearing impairments, but the most negative attitudes toward students with severe disabilities, such as behavioral and

emotional disorders (Orr, 2009). General education teachers were most positive about teaching students with language deficits and physical disabilities (Orr, 2009). In addition, to the special education teachers, it appeared that the general education teachers expected that the special education teachers be liable for students with disabilities (Orr, 2009).

Cassady (2011) also found that general education teachers held negative attitudes toward students with emotional and behavioral disabilities but also toward students with autism. However, the teachers were more receptive to teaching students with autism than to teaching students with emotional or behavioral disabilities (Cassady, 2011). Ultimately, despite teachers' confidence in their ability to implement IEPs, adapt lessons, and provide accommodations for students with autism, negative teacher attitudes toward students with autism and emotional and behavioral disabilities had an impact on their overall willingness to have any students with the disabilities in their regular education classrooms (Cassady, 2011).

In a study of general education teachers and students with and without mild disabilities, many general education teachers reported that specialized instruction is disruptive to the instructional routine of the general education classroom (O'Rourke & Houghton, 2009). Specifically, teachers cited "fundamental changes to curriculum requirements, instructional and grading methods, and related expectations of student performance" (O'Rourke & Houghton, 2009, p. 24) as reasons for perceiving specialized instruction as disruptive. Other teachers indicated that, in cases of partial inclusion, inclusion keeps students from feeling a sense of cohesion between their instructional settings and among their courses but also that it keeps students from developing

relationships that could benefit them socially (O'Rourke & Houghton, 2009). Teachers in Horne and Timmons's (2009) study had negative attitudes toward inclusion because they felt that continually having to make modifications and accommodations to meet IEP requirements made teaching students with disabilities time consuming.

Similarly, 65% of general and special education teachers in Cipkin and Rizza's (2010) study agreed that not all children benefit from inclusive practices. In some cases, negative teacher attitudes can impact their behavior in the classroom. For example, in their study of Korean teachers, Hwang and Evans (2011) found that 55% of teachers were unwilling to participate in inclusive practices, a condition the researchers attributed to negative teacher attitudes.

Other teachers have expressed positive attitudes toward inclusion and inclusive instructional practices. For example, O'Rourke and Houghton (2009) found that although general education teachers in their study recognized challenges associated with inclusion, they accepted the practice as part of the school culture and reported maintaining positive attitudes toward included students. Similarly, although Ross-Hill (2009) discovered discrepant cases, overall, she did not find significant differences in teacher attitude toward inclusion: All teachers in general were positive about inclusion and confident in their ability to teach students with special needs in the general education classroom. Although results from Hwang and Evans's (2011) study showed mixed results (positive attitudes = 41.37%, negative attitudes = 34.47%, neutral attitudes = 24.13%), more teachers had positive attitudes than negative or neutral attitudes. Regardless of varying perspectives pertaining to inclusion, most teachers have reported believing that inclusion

is beneficial for students with disabilities because it provides a means for equal educational opportunities (Allison, 2011) and provides social benefits (Hwang & Evans, 2011; Parker, 2009).Of all teachers in Parker's (2009) study, 42% of general education teachers and 58% of special education teachers agreed that all students benefit from the practice of inclusion.

Like teachers, students may have differing attitudes with regard to including students with disabilities in the general education classroom. Both students with and without disabilities may develop negative attitudes toward including students with disabilities in the general education setting (Combs, Elliott, & Whipple, 2010; Fletcher, 2010; Lamport et al., 2012; Litvack et al., 2011). When Litvack et al. (2011) studied the attitudes of average and high achieving students with regard to including students with disabilities in the general education classroom, both average and high achieving students failed to identify academic benefits to the inclusive process, and some high achieving students expressed concern that including students with disabilities in the general education classroom affected their learning or academic performance in a negative manner because the behavior of students with disabilities often was inappropriate. Students in Fletcher's (2010) study specifically identified students with severe emotional disabilities as disruptive and a hindrance to their learning. Katz and Porath (2012) also found that general education students were concerned about the potential for diminished grades when working in general education settings with students with disabilities, but unlike students in the Litvack et al. and Fletcher studies who were concerned with potential behavioral issues, students in Katz and Porath's study were concerned about the

academic capacity of students with learning disabilities when students were given collaborative assignments.

Katz and Porath (2012) found that students with disabilities in particular had negative feelings about having an aide in the general education classroom because the presence of the extra educator interfered with their interactions with their classmates. Because students with disabilities are more likely to be bullied or teased by their peers without disabilities, students with disabilities often have lower self-esteem and as a result tend to disrupt the classroom, which can be interpreted as a negative attitude toward the inclusive process (Combs et al., 2010). On the other hand, students without disabilities may have positive feelings about the benefits of inclusion. For example, according to Litvack et al. (2011), both average and high achieving regular education students found social and intrapersonal benefits to having students with disabilities in the classroom.

Factors That Affect Attitude Toward Inclusive Education

With regard to the factors that may affect teacher attitude toward inclusive education, results from the literature are mixed. Results from some studies indicated variables such as gender, age, years of experience, and level of teacher confidence may impact teachers' attitudes toward inclusion while results from other studies do not indicate the potential for these variables to affect teachers' attitudes.

With regard to gender, Cipkin and Rizza's (2010) found that 100% of male teachers disagreed that inclusion was beneficial for students with disabilities. Results were mixed for female teachers; however, the majority of teachers strongly agreed that students with severe disabilities benefit from inclusion (Cipkin & Rizza, 2010). In

comparison, Buford and Casey (2012) found no differences in attitude toward inclusion between the genders. These researchers also found no differences in attitude toward inclusion based on level of education: both teachers with bachelor's degrees and those with more advanced degrees in general had positive attitudes toward inclusion.

Some researchers have found that age and years of teaching experience have been associated with teachers' attitudes toward inclusion. Because teacher age and years of teaching experience tend to be inherently linked (younger teachers naturally have less experience than older teachers although not all older teachers necessarily have more experience), researchers appear to study these concepts together. When Buford and Casey (2012) explored the relationship between both age and years of experience, and teacher attitude toward inclusion, the researchers found a significant difference between age groups, with the youngest age group of teachers (< 36) having the most positive attitudes toward inclusion, and that years of teaching experience was not related to teacher attitudes. According to the researchers, as years of experience increased, teacher attitudes appeared to remain generally positive.

Hwang and Evans (2011) also found that younger and less experienced teachers in Korea had a more positive attitude than older and more experienced teachers. However, the researchers also found a negative correlation between years of experience and teacher attitude such that the more experience teachers gained, the more negative their attitude became. With regard to age and years of experience, Hwang and Evans also found that younger (<30) and less experienced teachers demonstrated a greater willingness to include students with disabilities in their regular education classrooms..

In Berry's (2010) study of preservice and early career general education teachers, the researcher also found differences based on experience. Result indicated three types of teachers:

> keen, but anxious, beginners (mostly preservice teachers with positive attitudes, but who worried about being effective inclusion teachers); positive doers (more experienced teachers whose struggles with the challenges of inclusion had not deterred their positive attitudes); and resisters (mostly experienced teachers whose concerns about fairness signified their resistance to inclusion). (Berry, 2010, p. 75)

Among these groups, preservice teachers (keen but anxious), were likely to have positive attitudes towards inclusion despite being concerned about their capacity to educate students with disabilities in the general education setting. More specifically, preservice teachers generally demonstrated more positive attitudes with regard to inclusion, fairness, and accommodations for students with disabilities when compared to teachers with more experience (resisters) who indicated that inclusion is unfair to general education students whose learning may be hindered by the process of accommodating students with special needs (Berry, 2010).

On the other hand, in a study of differences in teacher attitude between general education teachers at the elementary and secondary levels, Ross-Hill (2009) did not find significant differences in overall teacher attitude. Teachers at both levels were generally positive about inclusion (Ross-Hill, 2009). However, the researcher did suggest that years of experience may be responsible for differences in teacher attitude in discrepant cases.

Based on interview responses from special education teachers, Orr (2009) concluded that lack of confidence on the part of the general education teacher with respect to teaching students with special needs is likely the underlying cause of general education teachers' negative attitudes toward students with special needs and inclusion in general. Results from Chhabra, Srivastava, and Srivastava's (2010) study were similar although in this study, general education teachers described their own behavior. The teachers said they felt unprepared to work with students with disabilities in the general education setting, which led them to be apprehensive about working with that population of students, ultimately resulting in frustration, hostility, and negative attitudes toward teaching the students (Chhabra et al., 2010). Conversely, Forlin and Chambers (2011) found that when teachers participated in a training unit to improve their levels of confidence with regard to teaching students with disabilities in the general education setting, their attitudes improved significantly.

Researchers also have found additional variables that can affect teacher attitude toward inclusion. For example, in a phenomenological study of teachers in a large urban school district, Allison (2011) found that "professional development opportunities, administrator support, and mutual respect between general and special education teachers" (para. 1) fostered positive teacher attitudes toward inclusion. Although Ross-Hill (2009) did not specifically find significant differences in attitude toward inclusion between elementary and secondary education teachers with regard to levels of teacher training (generally positive), the researcher did suggest that level of training in special education may be responsible for differences in teacher attitude in discrepant cases.

Expectations for Teachers in Inclusive Settings

Both special education teachers and general education teachers are responsible for a variety of essential functions in the classroom. For example, special education teachers must be able to identify individual student needs and develop appropriate instructional plans that include curriculum modification and differentiated instruction (Sayeski, 2009). In order to fulfill these roles, special education teachers must stay current with special education issues and understand continually changing special education guidelines, legislation, and legal procedures (Sayeski, 2009). In addition, special education teachers must be knowledgeable in critical areas (Ernst & Rogers, 2009) such as the materials needed to accommodate students with special needs (Sayeski, 2009).

Expectations for general education teachers have changed since many special education students were moved out of self-contained classrooms and into general education classrooms as the result of special education legislation (Fakolade, Adeniyi, & Tella, 2009). More recently, general education teachers are accountable for preparing their students with disabilities for state- and district-wide assessments (Rosenzweig, 2009) as well as promoting their overall academic achievement (Fakolade et al., 2009). General education teachers' increased accountability for special education students in their classrooms has posed challenges (Fuchs, 2009) for these teaches and increased their professional responsibilities (Maanum, 2009).

Moreover, general education teachers not only are expected to be familiar with the modifications and adaptations in students' IEPs (Rosenzweig, 2009), they are expected to actively perform in the development and implementation of those IEP

modifications and adaptations (Fuchs, 2009). Implementation of these modifications and adaptations may require that general education teachers restructure the curriculum or implement specific strategies, such as providing frequent breaks, using large print, using graphic organizers, or allowing oral student responses (Alquraini & Gut, 2012; Rosenzweig, 2009). Finally, in order to meet expectations, general education teachers must invest their time, something of which they often have little (O'Rourke & Houghton, 2009). However, teachers generally have agreed that responsibilities and expectations of regular education teachers are unreasonable, especially considering that general education teachers typically receive little formal education or training with regard to mainstreaming practices (Fuchs, 2009).

Benefits of and Barriers to Effective Inclusion

Researchers have indicated both benefits and barriers to effective inclusion. Benefits of inclusion include opportunities for student socialization and improved student outcomes. Collaboration between general and special education teachers may be both a benefit of inclusion and a barrier to effective inclusion. Barriers to effective inclusion include poor relationships between general and special education teachers, poor teacher preparation and lack of experience, poor support for teachers in the educational setting, and negative teacher attitude.

Opportunities for Student Socialization

Students in inclusive classrooms may improve their socialization skills by working collaboratively with other students (Lamport et al., 2012) and by developing and nurturing friendships (Estell et al., 2009; Hollingsworth & Buysee, 2009; Joy & Murphy,

2012; Litvack et al., 2011; McDuffie et al., 2009).The structure of inclusive classrooms affords students with disabilities the opportunity to seek acceptance from their peers without disabilities (Joy & Murphy, 2012). As the students with disabilities gain acceptance from their peers without disabilities, they become more comfortable in the classroom and feel a sense of belonging in the learning environment (Mowat, 2009; Odoms, Buysee, & Soukakaou, 2011; Watson & McCathren, 2009). However, results from a study of friendships among general and special education students showed that although students with disabilities had the same number of best friends over a 2-year period as did students without disabilities, students with disabilities most often made friends with other students with disabilities and only 42% of those friendships were intact at the end of the 2-year period (Estell et al., 2009).

Similarly, Reed, McIntyre, Dusek, and Quintero (2011) found that students with disabilities favored their peers with disabilities. Although the third, fourth, and fifth grade students in the study had limited interactions with students without disabilities, the students ranked themselves as having higher social skills compared to their nondisabled peers (Reed et al., 2011). In a study of early childhood inclusive environments, Hollingsworth and Buysee (2009) found that teachers and parents can play an important role in helping foster relationships between students with and without disabilities by providing opportunities for interaction and educating their children about the value of friendships.

Improved Student Outcomes

Inclusive practices may improve student outcomes through peer interactions. In some cases, students with disabilities, especially those with behavioral problems, can learn appropriate behavior from their nondisabled peers through observation (Lamport et al., 2012). In addition, as students interact, they may share knowledge with each other; when students with disabilities are able to share knowledge with and receive knowledge from their nondisabled peers, they may gain a sense of acceptance, satisfaction, and accountability in the educational setting (Lamport et al., 2012).

Students also may benefit from peer tutoring. When McDuffie et al. (2009) examined the effects of peer tutoring on the academic achievement of students with and without disabilities in both cotaught and non-cotaught classrooms, the researchers found that students who participated in peer tutoring outperformed students who did not participate in peer tutoring (McDuffie et al., 2009). (As a variable, the type of teaching model did not affect levels of student performance [McDuffie et al., 2009]). Results indicated that although student outcomes did not improve with regard to cumulative posttests (identification and production questions), student performance on identification questions on unit tests did improve (McDuffie et al., 2009). The researchers concluded that peer tutoring was beneficial for improving student performance of lower-level thinking skills and posited that this outcome was due to increased time on task resulting from peer interactions in which students kept each other focused during the completion of the given assignment.

In a similar study, Scruggs, Mastropieri, and Marshak (2012) found that both students with disabilities and students without disabilities who received instruction in a peer-mediated environment (supplemented by parental support) demonstrated a positive attitude toward their instruction and made significant posttest gains when compared to students who did not receive instruction in a peer-medicated environment. Likewise, Jimenez, Browder, Spooner, and Dibiase (2012) found that peer-mediated instruction led to improved student outcomes for students with moderate learning disabilities. Although the majority of students required additional support to reach the mastery level, students who participated in the peer-mediated instruction demonstrated improvement in correct responses on science unit tests (Jimenez et al., 2012).

Results of a study by Ryndak, Alper, Ward, Storch, and Wilson Montgomery (2010)also indicated that inclusive practices can lead to improved student outcomes. In this study, the researchers explored the experiences of two siblings with significant disabilities, one who was educated in the inclusive setting and one who was educated in a self-contained setting, and found that the sibling who was educated in the inclusive setting outperformed the other sibling with regard to long-term outcomes in the postschool environment. More specifically, despite having had a lower IQ, the sibling who was educated in the inclusive setting engaged in life activities comparable to his general education peers and "demonstrated more skills that were critical both to interacting with peers and adults who did not have disabilities, and to functioning independently across contexts, including at school, at home, and in the community" (Ryndak et al., 2010, p. 50). Although these findings were positive, the researchers

acknowledged the complexity of drawing definitive conclusions from the data and cited a myriad of variables that could have contributed to the improved outcomes for the sibling who was educated in the inclusive setting. In particular, Ryndak et al. acknowledged the impact of parental advocacy and pointed out that the sibling who was educated in the inclusive setting also was the younger of the two siblings, and, therefore, may have benefited from improved parental knowledge and experience with regard to the special education process.

Researchers also have found that the coteaching model of inclusion in particular was effective for improving outcomes for students with disabilities. For example, in the McDuffie et al. (2009) study, the researchers found that although the benefits of peer tutoring were not related to the type of inclusive setting (coteaching vs. non-coteaching) in which the students were educated, students with disabilities educated in coteaching settings outperformed students with disabilities taught in non-coteaching settings. Also, Hang and Rabren (2009) found significant differences between students educated in the coteaching setting and those educated in the non-coteaching setting with regard to achievement in math and reading on the Scholastic Aptitude Test (National Curve Equivalents). McDuffie et al. suggested that the improved outcomes for students with disabilities were the result of "more (a) teacher initiated interactions, (b) individual interactions, (c) interactions of greater length, and (d) behavior oriented interactions" (p. 507) received by the students with disabilities as the result of the coteaching setting.

Collaboration Between General and Special Education Teachers

Collaboration between general education teachers and special education teachers is pivotal to the successful implementation of inclusion in the classroom (Allison, 2011; Catkin & Rizza, 2009) because it allows for general and special education teachers to have equal roles in the planning process (Leatherman, 2009). Leko and Brownwell (2009) contended that in order to meet goals set forth in IDEA, general education teachers and special education teachers must work collaboratively for the particular purpose of delivering instruction to students. Other researchers have suggested that effective implementation of inclusive practices requires collaboration not only between general education teachers and special education teachers but among all stakeholders (Carter et al., 2009; Naraian, 2010).

One reason that collaboration is so important in the inclusive setting is because through the collaborative process, quality of instruction in the classroom can be improved (Conderman, 2011). When students receive high quality instruction, they are more likely to demonstrate high levels of success (Conderman, 2011). The connection between high quality instruction and student success may be the result of specialized knowledge that special education teachers bring to the classroom.

When special education teachers collaborate with general education teachers, whether in a coteaching setting or otherwise, special education teachers are afforded the opportunity to bring their expertise, knowledge, and support to the classroom and thus to students with disabilities (Blair, Lee, Cho, & Dunlap, 2010; Eccleston, 2010; Hepner & Newman, 2010; Leko & Brownwell, 2009; Naraian, 2010; Sayeski, 2009). In particular,

special education teachers bring knowledge about (a) understanding, organizing, and pacing the curriculum (Fenty & McDuffie-Landrum, 2011); (b) individualizing, evaluating, and differentiating instruction (Forbes & Billet, 2012); (c) monitoring students' progress (Murawski & Hughes, 2009); and (d) special education legislation (Sayeski, 2009), as well as how best to provide intensive concepts and skills instruction for students with disabilities (Leko & Brownwell, 2009). In a collaborative setting, this knowledge complements the content knowledge contributed by the general education teacher (Leko & Brownwell, 2009).

School administrators play a vital role in the implementation of inclusion (Leatherman, 2009; Orr, 2009). Administrators are important to this process because they can provide teachers with mutual planning times that teachers may use to plan for collaboration in the classroom (Fuchs, 2009; Mogharreban & Bruns, 2009). Often, however, administrators do not provide teachers with time to collaborate (Allison, 2011; Fenty & McDuffie, 2011; Fuchs, 2009; Leatherman, 2009; Orr, 2009). Moreover, they do not afford teachers planning times that are mutually convenient, assign teachers other duties during their planning periods, or schedule other teacher meetings during these times (Carter et al., 2009). As a result, in most inclusive classrooms, there is a lack of collaboration among the teachers (Conderman et al., 2009) and teachers' ability to address student needs is hindered.

Lack of time to collaborate also is a barrier to inclusion for educational teams that work together to provide inclusion services and/or promote inclusive practices in the classroom. Educational teams may include teachers, teacher aides, various types of

therapists (speech, occupational, and physical), and other specialists (Mogharreban & Bruns, 2009). For collaborative efforts among inclusion teams to be successful, the members must have time to communicate and collaborate on a daily basis (Mogharreban & Bruns, 2009). O'Rourke and Houghton (2009) suggested that increasing time for teachers to collaborate may improve outcomes for students with disabilities in inclusive classrooms.

Relationships Between General and Special Education Teachers

Poor relationships between special education teachers and general education teachers may be barriers to successful inclusion. Fuchs (2009) found that tension between general education and special education teachers caused by perceptions of unequal distribution of duties and ultimate work load was a barrier to effective inclusion. Similarly, Allison (2011) found that 50% of teachers in her study believed that a good relationship between the general and special education teacher was helpful for fostering a successful inclusive environment. Leatherman (2009) suggested that lack of time to collaborate may contribute to poor relationships between general and special education teachers.

Teacher Preparation and Experience

General education teachers are responsible for meeting the needs of students with various ability levels and required accommodations (Dee & Jacob, 2011; Jenkins & Yoshimura, 2010). To meet this responsibility, teachers need to be prepared in programs that stress inclusive models of education for students with disabilities (Oyler, 2011), specifically knowledge of disabilities, curriculum development for students who need

academic accommodations, and coteaching strategies of instruction (Harvey, Yssel, Bauserman, & Merbler, 2010). However, teachers often report feeling unprepared to teach students with disabilities in the general education classroom (Fuchs, 2009; Glazzard, 2011). Lack of teacher preparation, either at the preservice stage or during inservice professional development, is problematic in the inclusive setting because it may increase levels of teacher stress (Forlin & Chambers, 2011) as well as impact the success of general education teachers in that setting (Kosco & Wilkins, 2009).

With regard to preservice preparation, researchers have cited both lack of quantity and quality of preparation for general education teachers as a barrier to effective teaching of students with disabilities in the inclusive setting. For example, 80% of general education teachers in Horne and Timmons's (2009) study reported that their lack of training in special education instructional strategies caused them to feel they lacked the capability to individualize instruction for students with disabilities.

General education teachers in Fuchs's (2009) study also indicated they lacked appropriate preparation. Those teachers unanimously agreed that the 'one required course' in special education for general educators was "worthless" and contained "mostly terminology." When asked if the teachers felt prepared to teach diverse learners, one teacher emphatically said, "College did not prepare me in any way, shape, or form" (Fuchs, 2009, p. 34). Consequently, the teachers believed they were unable to differentiate instruction, provide accommodations, and collaborate with special education service providers (Fuchs, 2009).

Similarly, in a study of general education teachers' from a suburban school district, Cipkin and Rizza (2010) found that 72% of teachers agreed that the level of training they received at the college level was inadequate for preparing them to teach in the inclusive setting. Allday, Neilsen-Gatti, and Hudson (2013) also found that general education teacher preparation programs were subpar with regard to preparing teachers to teach in inclusive settings. Although 39% of the preservice teachers in the study completed a course in special education, the programs did not provide information on how to differentiate instruction for students with disabilities or collaborate with special education teachers (Allday et al., 2013). In addition, 67% of the teacher candidates were not familiar with the characteristics of various types of disabilities or their roles and responsibilities as teachers in the inclusive setting with regard to the IEP process, referrals, and response to intervention strategies (Allday et al., 2013). Harvey et al. (2010) found that the majority (70%) of teachers in their study were not exposed to instruction in coteaching methods. Teachers who expressed a lack of preparation indicated conditions were exacerbated by students with emotional and behavioral problems and students with severe disabilities (Cipkin & Rizza, 2010; Forlin & Chambers, 2011; Harvey et al., 2010; Sosu, Mtika, & Colucci-Gray, 2010).

Although Kosco and Wilkins (2009) found that general education teachers' pre-service preparation was moderately but significantly correlated to teachers' beliefs in their capacity to adapt instruction, Forlin and Chambers (2011) posited that improved teacher preparation does not inherently assure that teachers will not have concerns about teaching in the inclusive setting. In the study, 67 pre-service teachers participated in a 39-

hour training on diversity in the inclusive setting to improve their knowledge about special education laws and policies and to improve their levels of confidence with regard to becoming special education teachers (Forlin & Chambers, 2011). However, after the training, the teachers still maintained the same level of stress and concern with regard to inclusive education in general.

Compared to pre-service training, researchers have also found that lack of in-service professional development can be a barrier to effective inclusive practices (Horne & Timmons, 2009). Of the general education, special education, and specialty area teachers in Shady, Luther, and Richman's (2013) study, 74% indicated they needed more professional development to improve their understanding of inclusion and the inclusive process. Teachers identified a variety of areas of interest including assessing student performance, planning and differentiating instruction for various ability levels, managing instructional responsibilities of support professionals in the classroom, interpreting and writing IEPs, providing accommodations, implementing instructional techniques for specific disabilities and learning styles, pacing the curriculum, motivating students, understanding various inclusion models, and selecting an inclusion model to fit the teaching and learning styles of students in their inclusive classrooms (Shady et al., 2013).

According to Allison (2011), both general and special education teachers have identified professional development as the most significant aspect of effective instruction by general education teachers in inclusive settings. This finding is important because the need for professional development for general education teachers was the only identified need about which both types of teachers in Allison's study agreed. Likewise, teachers in

Fuchs's (2009) study indicated a lack of inservice training as a barrier to effective inclusion, and Kosco and Wilkins (2009) found that participation in professional development was the best predictor of general education teachers' beliefs about their capacity to adapt instruction for students with disabilities in the inclusive setting. Cipkin and Rizza (2010) specifically called for professional development for general education teachers in the areas of planning and implementation of strategies designed to promote the success of students with special needs.

Levels of teacher experience may impact how successful special education teachers are in the inclusive classroom setting (Kosco & Wilkins, 2009). According to Oyler (2011), it is likely that as teachers become more familiar with the inclusive process over time, they may more effectively implement associated inclusive strategies. Similarly, in a study of pre-service teachers' attitudes toward students with disabilities, Sze (2009) found that as general education teachers became familiar with their students with disabilities, the teachers became more confident in their capacity to teach a diverse population of learners. As the teachers' confidence improved, so too did their actual ability to teach their students with disabilities (Sze, 2009). Sze concluded that confident teachers with good instructional capacity contribute to successful inclusion in the classroom.

Support for Teachers in the Educational Setting

Some researchers have found that general education teachers reported a lack of support in the educational setting as a barrier to effective instruction in the inclusive setting. General education teachers in Fuchs's (2009) study reported feeling a lack of

support from both administrators and special education staff. Specifically, the teachers identified two barriers to effective inclusion: (a) lack of time to plan for the use of inclusive strategies in the classroom and (b) unrealistic expectations with regard to class sizes (Fuchs, 2009) and the number of students with disabilities assigned to any one teacher (Horne & Timmons, 2009).

Teachers also have indicated that administrators do not provide them with the resources they need to implement inclusive practice successfully (Fuch, 2010; Leatherman, 2009; Orr, 2009). Shady et al. (2013) posited that in order for teachers to effectively implement inclusive strategies, they needed convenient access to instructional resources, such as assistive technology, tools, and instructional materials. In Shady et al.'s study of 34 elementary school teachers, only 15% of teachers reported having such resources, including teaching aids, information packets, and modified worksheets. As a result, the majority of teachers did not feel prepared to successfully implement inclusive practices in their classrooms (Shady et al., 2013).

Teacher Attitude and Personal Characteristics

According to Orr (2009), of barriers to inclusion identified by special education teachers, negative general education teacher attitude, which can range from hostility to tolerance, is the most common. In a review of literature on the attitudes of preservice teachers toward students with disabilities, Sze (2009) identified a pattern among the studies' results. Study results showed that teacher attitude is an important predictor of teachers' effectiveness with regard to teachers' capacity to facilitate the integration of students with disabilities into regular education classrooms (Sze, 2009). In particular,

teachers with negative attitudes are less effective than teachers with more positive attitudes (Sze, 2009). When teachers do not effectively facilitate the integration of students with disabilities into regular education classrooms, those students are unlikely to be successful.

Prather-Jones (2011) found that teachers' attitudes with regard to sense of commitment to teaching students with special needs was related to teacher attrition, a factor that negatively impacts the effective implementation of inclusion by decreasing the number of experienced teachers in the field. Specifically, the researcher found that teachers who stay in the field the longest have an appropriate fit between their life perspectives and their job function as an educator of students with special needs. Some teachers in Prather-Jones's study felt a sense of obligation to do something to make a difference in the world, one teacher felt driven by God, and another felt the need to give back to the world in some way. Prather-Jones characterized these personality traits as indicative of teachers who would remain dedicated to teaching students with disabilities and thus effectively implement inclusive strategies.

Summary

Teacher self-efficacy can be understood as either the belief in one's capacity to teach (personal self-efficacy) or any given teacher's capacity to teach (general self-efficacy). Personal teacher self-efficacy can be affected by a variety of factors, including both personal variables (teacher experience, gender, and education level) and organizational variables (institutional integrity, principal influence, consideration, resource support, morale, and academic emphasis).Typically, teachers with low levels of

personal self-efficacy are less confident, motivated, persistent, academically focused, and successful in the classroom regardless of the inclusive model being implemented.

Models of inclusion vary depending on the type of institutional setting in which they function and may represent a spectrum of teaching arrangements, student placements, and levels of student IEP implementation. The two main types of inclusive models in the public school setting are full inclusion and partial inclusion, termed for the amount of time the student with disabilities participates in the general education classroom. Coteaching is the most popular method of implementing inclusion in the general education setting and refers to a shared responsibility for instruction on the parts of both general and special education teachers.

Teacher attitudes toward inclusion vary and may range from fully supportive to hostile. A variety of factors can influence teacher attitudes toward inclusion, including expectations for teachers in inclusive settings, the type and amount of support they receive from administrators and their peers, and the levels of preservice preparation and inservice professional development they receive on inclusive practices. Expectations for teachers in inclusive settings also are varied. While special education teachers must understand the needs of students with disabilities and stay current with associated legislation and legal procedures, general education teachers must establish a community climate of learning, be able to implement instructional modifications and adaptations to the curriculum, and manage multiple teaching staff in the classroom.

There are both benefits and barriers to effective inclusion. Benefits of inclusion include opportunities for students to socialize and improve their academic and behavioral

outcomes in the classroom. Collaboration between general and special education teachers, although a benefit of inclusion, also may be a barrier to effective inclusion if not done well. Barriers to effective inclusion include poor relationships between general and special education teachers, poor teacher preparation and lack of experience, poor support for teachers in the educational setting, and negative teacher attitude and personal characteristics.

In the next section, I discuss the methodology for this study. In particular, I discuss the study design and approach, setting and sample, data collection procedures, instrumentation, and data analysis procedures. Also, I identify threats to quality research, my role as the researcher, and how I managed the protection of participants' rights.

Section 3: Research Method

Lack of training in inclusive practices for general education teachers may result in low levels of teacher self-efficacy and poor teacher perceptions about inclusion, which may ultimately affect teachers' attitudes toward inclusive education. Through cognitive, motivational, and affective processes, low levels of self-efficacy may hinder teachers' ability to master the skills necessary to properly implement inclusive strategies in the general education classroom. These same processes may affect teachers' willingness to try to learn to master those skills. When inclusive strategies are not implemented or are not implemented properly, students with disabilities in the general education classrooms do not receive the support they need to reach their fullest potential. Ultimately, lack of teacher training in inclusive practices can have a negative impact on the academic success of students with disabilities (Fuchs, 2009).

For this reason, I designed this nonexperimental, cross-sectional study so that I could (a) examine the difference between general education and special education teachers' attitudes toward inclusion and (b) determine the strength of the relationship between teacher self-efficacy and Teachers' Attitudes Toward Inclusion. In this design, Teachers' Attitudes Toward Inclusion was the dependent variable and teacher self-efficacy, gender, education level, teacher type, and grade level taught were the independent variables. This section includes an explanation of the research methodology, including a discussion of the study design and approach, setting and sample, data collection procedures, instrumentation, data analysis procedures, threats to quality research, the role of the researcher, and the protection of participants' rights.

Research Design and Approach

According to Creswell (2003), qualitative research is used to explore a particular subject in detail, often using participants' experiences. Typically, when analyzing qualitative data, researchers use methods that focus on determining common patterns, themes, or categories (Creswell, 2003). However, qualitative research does not allow researchers to quantify data from participants' responses, and results from qualitative studies are often considered biased (Creswell, 2003). Quantitative research, on the other hand, is numbers driven and, therefore, often considered more objective; results from quantitative studies also may be generalized to other populations (Creswell, 2003). Researchers use a quantitative design when they want to "employ strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistical data" (Creswell, 2003, p. 18). In addition, quantitative research is appropriate when researchers want to use specific measurements to examine particular variables and cause and effect relationships (Creswell, 2003). Because I sought to measure differences between teachers' attitudes using a predetermined instrument that will yield statistical data and because I planned to examine particular variables and predictive relationships between those variables, a quantitative research design was appropriate for this study.

In this study, I used a cross-sectional research design, which, according to Creswell (2003), allows for numeric descriptions of trends of a population by studying a sample of the population. In cross-sectional studies, researchers collect data once so that the results present a picture of conditions at only one point, and because they are not

ongoing, they also are easier to conduct (Fink, 2006). Because I collected data only once to explore conditions from a sample population at one point, a cross-sectional design was appropriate for my study.

I used a survey approach in this study. Surveys are data collection tools used to obtain information from and about people (Fink, 2006) and to quantify trends in a sample population (Creswell, 2003). They are important because they allow researchers to gather information about people's knowledge of a particular subject (Dana & Yendol-Hoppey, 2009). Because I collected data from a sample population in order to gather information about a particular subject in relation to that population (teachers' attitudes toward inclusion and the strength of the relationship between teacher self-efficacy and Teachers' Attitudes Toward Inclusion), a survey approach was appropriate for my study.

Setting and Sample

The setting for this study was a rural school district in South Carolina. The district included eight elementary schools, two middle schools, two middle/high schools, three traditional high schools, one alternative school, and one health professions charter school. Of the 6,869 students the district served during the 2013-2014 academic school year, 947 were students with disabilities (PK-Grade 5 = 532, Grades 6-8 = 185, Grades 9-12 = 230). Of the students, 88.7% were Black, 8.2% were White, 2.0% were Hispanic, 1.0% were Asian, and 0.1% were Native American. During that same school year, 77.5% received free lunch and 5.7% received reduced-price lunch. Among the 17 schools in the district, there were 452 teachers. This number represented 383 regular education teachers and 69 special education teachers. Of all the teachers in the district combined, (a) 89 are

male and 363 are female; (b) 73.0% have advanced degrees; and (c) 68.0% are Black, 28.0% are White, and 4.0% are Asian.

The sample included general and special education elementary and middle school teachers from the eight elementary schools, two middle schools, and two middle/high schools in the focus school district. I invited 296 elementary and middle school teachers (245 general education teachers and 51 special education teachers) from the 12 applicable district schools to participate in my study. The sample for this study was a convenience sample. According to Creswell (2003), a convenience sample does not represent a sample the researcher has randomly selected but rather a previously formed group the researcher has chosen because it is assessable or otherwise convenient for the researcher and appropriate for the study. Convenience samples are advantageous because they require little time and effort to access; however, convenience samples may not accurately represent a population (Creswell, 2003).

Sample size in research is important because the larger the sample, the more confidently researchers can conclude that a study's sample reflects the characteristics of the overall population (Creswell, 2005). Additionally, the larger the sample, the smaller the error (Creswell, 2005). One way to determine sample size is to conduct a power analysis. To determine the necessary sample size in this study, I used G*Power software Version 3.1.0 to conduct a power analysis for the two-way ANOVA for Research Question 1 and the multiple regression for Research Question 2. Results of the analysis for the two-way ANOVA for a medium effect size ($f^2 = .25$) with power = .80 and $\alpha = .05$ indicated that I would need 179 participants. Results of the analysis for the multiple

regression to detect a medium effect size ($f^2 = .25$) with power = .80 and $\alpha = .05$ with seven predictors indicated that I would need 103 participants.

In a study of 463 studies using questionnaires, Baruch and Holtom (2008) found a 54.7% response rate for surveys distributed electronically through e-mail and a 49% response rate for surveys conducted in the academic sector. Considering my potential population size of 296 teachers, based on the response rates indicated by Baruch and Holtom (54.7%), I might have expected to recruit 162 teachers. Although this number was more than I needed to determine significance for Research Question 2, it was slightly less than what I required to determine statistical significance for Research Question 1 using conservative values for the analysis. However, to increase the chances of receiving an adequate number of responses, I sent two reminders during the data collection period. In addition, because the response rate used in these calculations was an average, there was error (variance) within the estimate. Based on these two conditions, it was likely that I would achieve the number of participants needed to determine statistical significance in my study.

I determined that my study would still have value even if I did not achieve the needed number of participants to determine the statistical significance of the data because I would have generated descriptive data about the teachers in the focus schools. In particular, I would have generated data about the general condition of teachers' attitudes toward inclusion and the level of teacher efficacy at the elementary and middle school levels in my school district. Thus, regardless of whether I was able to achieve statistical significance in my study, I anticipated calling attention to teacher characteristics that may

be associated with positive attitudes towards inclusion. School administrators may use data on these teacher characteristics to consider further investigation of teachers' attitudes toward inclusion and teacher self-efficacy in the school district.

Data Collection

As a prerequisite to collecting data for this doctoral study, I sought permission from the district to conduct research at the elementary and middle school levels (see Appendix B). In addition, I sought approval to conduct this study from Walden University's Institutional Review Board (06-30-14-0065393). I did not collect any data until I procured these permissions. Once I procured the proper permissions, I collected data for 4 weeks. I collected data for this study using a survey hosted through Survey Monkey. The survey was a compilation of four demographic questions and questions from the STATIC (Cochran, 1997) and TSES (Tschannen-Moran &Woolfolk Hoy, 2001) instruments, both for which I requested and received permission to use in this study (see Appendix C and D). I describe the survey in more detail in the next subsection.

Because I had access to the e-mail addresses of teachers throughout the district, I distributed invitations to participate in my study via e-mail and followed up with teachers in the same fashion. I sent reminder e-mails at the beginning of the 3rd and 4th weeks of data collection. As a courtesy, I contacted school principals prior to contacting teachers. As I did for the teachers, I retrieved contact information for the principals from the school's website. In the e-mail to principals, I introduced myself and provided an overview of my study. As attachments, I provided the communications I planned to send to teachers as well a copy of the survey content.

I included in the e-mail invitation to teachers (a) a brief explanation of the topic of my study, (b) my need for teacher participation, and (c) the link to the survey. I indicated in the informed consent (a) the purpose of the study, (b) my role as the researcher, (c) that participation in the study was completely voluntary, (d) that all responses would remain anonymous, and (e) that there would be minimal risk for participating in the study. I also (a) identified the eligibility criteria and (b) indicated that no compensation of any kind would be given for participating in the study and that the survey would take about 10 to 15 minutes to complete. Finally, I indicated (a) that the letter of consent was for informational purposes only and (b) that I would assume participants who clicked on the survey link and navigated to and completed the survey have agreed to participate in the study according to the conditions described in the form.

Instrumentation

The instrument I used in this study was a survey that I distributed online. Therefore, to complete the study, participants needed to navigate to the study via the link in the study invitation and then click on appropriate response options. All raw data I collected using these instruments will be available upon request for 5 years, after which time it will be destroyed.

The Teacher Attitude and Self-Efficacy Survey used in this study was composed of three sections (see Appendix E). The first section of my instrument (Questions 1-4) was made up of demographic data on four independent variables: (a) gender, (b) education level, (c) teacher type, and (d) grade level taught. The second section of my instrument (Questions 5-24) was focused on attitudes toward inclusion of students with

disabilities (dependent variable) and was made up of the entire STATIC (Cochran, 1997) instrument. The third section of my instrument (Questions 25-36) was focused on self-efficacy (three independent variables: instructional strategies, classroom management, and student engagement) with regard to inclusion and was made up of the entire TSES (short form; Tschannen-Moran & Woolfolk Hoy, 2001) instrument. I chose to use the short version of the TSES to limit the total number of questions on my survey and increase the chances of teacher participation.

To determine the reliability of this instrument, I conducted scale reliability analysis. According to Multon and Coleman (2010), Cronbach's alpha coefficient is the most commonly used method to quantify the reliability of an instrument by determining scale reliability (internal consistency) of the instrument. Tavakol and Dennick (2011) asserted that "internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test" (p. 53). Alpha coefficients range from measures of 0 to 1 (Tavakol & Dennick, 2011). According to Bland and Altman (1997), Cronbach's alpha coefficients between .70 and .80 are considered satisfactory, while in clinical applications, acceptable Cronbach's alphas range between .90 and .95. Multon and Coleman described similar ranges, with .90 and above demonstrating high reliability, .80 to .89 demonstrating very good reliability, and .70 to .79 demonstrating good or adequate reliability. Because I was not determining Cronbach's alphas in a clinical application, I used a cut off of .70 to determine adequate reliability in my study.

The dependent variable, attitudes toward students with disabilities and inclusion, included four subscales: advantages and disadvantages of inclusion, professional issues regarding inclusion, philosophical issues regarding inclusion, and logistical concerns of inclusion. The independent variables and their categories were gender (male and female), teacher type (general education or special education), education level (bachelor's or master's), grade level taught (elementary or middle), and self-efficacy (instructional strategies, classroom management, and student engagement).

Scale of Teachers' Attitudes Toward Inclusive Classrooms. Cochran (1997) originally developed the Teachers' Attitudes Toward Inclusion (TATI) instrument in 1993 to measure teachers' attitudes toward students with disabilities and inclusion. The researcher piloted the TATI, a 30-item survey using a 6-point Likert-type scale ranging from 0 (*strongly disagree*) to 5 (*strongly agree*), with a population of 31 regular and special education teachers (Cochran, 1997). To test the reliability of the instrument, Cochran conducted scale reliability analysis. This analysis was conducted in two stages. First, in order to determine on which items to conduct the analysis, Cochran calculated item-to-total coefficients for the 30 items. Then, after dropping the seven items with the lowest item-to-total coefficients, Cochran conducted the scale reliability analysis on the remaining 23 items, which had item-to-total coefficients ranging from .29 to .82. The Cronbach's alpha coefficient for the 23 remaining items taken together was .91 (Cochran, 1997).

Because Cochran (1997) was concerned about having sacrificed content validity to achieve instrument reliability, he conducted factor analysis to determine the

distribution of the items loading on the factors. Results from the analysis indicated an eight factor solution, which Cochran described as a potentially valid method for measuring teaching attitudes toward students with disabilities and inclusion. Factor analysis is a statistical technique used to determine the shared variance among a set of variables and allocate this variance to a smaller number of variables called factors (Mertler & Vannatta, 2005). According to Mertler and Vannatta (2005), a factor is an unobservable variable comprised of a cluster of variables (e.g., survey items) measuring some common construct.

In 1996, Cochran (1997) conducted a second pilot study to test the capacity of the instrument to measure the construct with a larger sample (n = 188). Again Cochran conducted scale reliability analysis to test the instrument's reliability. After conducting the reliability analysis, Cochran found a Cronbach's alpha of .71 for the 30 items combined; subsequently, he recalculated the Cronbach's alphas without items with item-to-total coefficients below .39 (n = 10). Results of the reliability analysis using the remaining 20 items yielded a Cronbach's alpha coefficient of .88 (Cochran, 1997). Cochran then conducted a factor analysis on the remaining 20 items and found the most logical solution was a six-factor solution: professional, philosophical, educational benefits, educational problems, logistical, and behavioral problems. Based on analyses Cochran performed during the second pilot study, he again revised the instrument and renamed it the STATIC.

To further test the soundness of the revised STATIC instrument, Cochran (2000) again conducted scale reliability analysis on the 20 items in the scale. The item-to-total

coefficients for the 20 items ranged from .26 to .70. Results of the scales reliability analysis indicated a total alpha of .89 (Cochran, 2000). After Cochran performed a confirmatory factor analysis following the Kaiser rule, he dropped the final two factors and indicated a four-factor solution: (a) advantages and disadvantages of inclusion (Items 7, 11, 12, 13, 14, 15, and 20); (b) professional issues of inclusion (Items 1, 2, 3, 4, and 9); (c) philosophical issues of inclusion (Items 5, 6, 10, and 16); and (d) logistical issues of inclusion (Items 8, 17, 18, and 19). The Cronbach's alphas for each of the factors were .87, .83, .57, and .62, respectively.

The instrument includes six negatively worded items (3, 4, 7, 9, 13, and 15), which must be reverse scored prior to calculation of the scale value. For example, the item *I become easily frustrated when teaching students with disabilities* has a high negative value and is reverse coded for data analyses. The resulting scores, when summed, represent an attitudinal index ranging from 0 to 100. According to Cochran (2000), the higher the score, the more positive the attitude and the lower the score the more negative the attitude.

Teachers' Self-Efficacy Scale. Recognizing a lack of coherence and understanding with regard to the construct of teacher efficacy, Tschannen-Moran and Woolfolk Hoy (1998) conducted a study to compare various self-efficacy instruments. Based on that comparison, the researchers indicated "that a valid measure of teacher efficacy must assess both personal competence and an analysis of the task in terms of the resources and constraints in particular teaching contexts" (p. 795). In response to their own call for a new instrument that more accurately measured teacher self-efficacy,

Tschannen-Moran and Woolfolk Hoy (2001) conducted another study to compare various instruments for measuring teacher self-efficacy and used that information to develop a new instrument, the Ohio State Teacher Efficacy scale but which they later renamed the TSES.

Tschannen-Moran and Woolfolk Hoy (2001) used 23 of the 30 items from Bandura's self-efficacy scale and generated additional questions based on concepts from other instruments as well as input from eight graduate students participating in a self-efficacy seminar at the time the researchers were working on this study. The resulting instrument contained 52 items scored on a 9-point Likert-type rating scale: 1 (*nothing*), 3 (*very little*), 5 (*some influence*), 7 (*quite a bit*), and 9 (*a great deal*); scores were derived by calculating unweighted means of the items for each factor (Tschannen-Moran & Woolfolk Hoy, 2001).

Tschannen-Moran and Woolfolk Hoy (2001) then tested the instrument with a sample of 224 preservice and inservice teachers. Based on results of participant importance ratings, the researchers did not drop any items from the scale; however, after conducting factor analysis, the researchers dropped 20 items, resulting in a 32-item instrument. In a follow up study, Tschannen-Moran and Woolfolk Hoy tested the instrument with 217 preservice and inservice teachers. Results of factor analysis prompted the researchers to drop an additional 14 questions, resulting in an 18-item instrument with a three-factor solution: Efficacy for Student Engagement (eight items), Efficacy for Instructional Strategies (seven items), and Efficacy for Classroom Management (three items). Although scale reliability analysis indicated Cronbach's

alphas of .82, .81, and .72, respectively, the researchers conducted secondary factor analysis of the data from both this study and the previous study and determined the 18-item scale could be considered an effective measure of efficacy (reliability of .95).

Tschannen-Moran and Wookfolk Hoy (2001) also tested for construct validity by comparing their scale to four established scales. As the researchers expected, results of the comparisons indicated positive correlations with both personal teacher efficacy and general teacher efficacy but negative correlations with work alienation and pupil control ideology. To confirm the accuracy of the correlations, the researchers reran the correlations for inservice teacher alone and found similar results.

Although Tschannen-Moran and Wookfolk Hoy (2001) considered the 18-item scale to be valid and reliable, one weak factor score (management) prompted the researchers to test the instrument a third time. Hypothesizing that the weak score may be the result of too few items in the management subscale, the researchers added 18 questions, resulting in a 36-item scale. The researchers tested the instrument with 410 preservice and inservice teachers; results indicated the same three factor solution as the original study: Efficacy in Instructional Strategies (15 items), Efficacy for Classroom Management (nine items), and Efficacy for Student Engagement (12 items). After choosing the eight items with the highest loading for each factor, the researchers repeated the factor analysis on the remaining 24 items; factor loadings ranged from .50 to .78. The researchers indicated scale reliability scores of .91, .90, and .87 for instruction, management, and engagement, respectively, but also found similarly high scores (.86,

.86, and .81) when they calculated scores using only the highest four items in each of the factors.

Tschannen-Moran and Woolfolk Hoy (2001) then tested both a long (24 items) and short (12 items) version of the instrument using two separate factor analyses. Results from the analyses indicated scores ranging from .60 to .85. Second-order factor analysis results indicated a range of loadings from .49 to .76 for items on the long version and a range of loadings from .49 to .75 on the short version (Tschannen-Moran & Woolfolk Hoy, 2001). Scale reliability analysis results indicated a Cronbach's alpha coefficient of .94 for the long version and .90 for the short version (Tschannen-Moran & Woolfolk Hoy, 2001). Based on these results, the researchers determined that subscale scores could be calculated and both the long and short versions of the instrument could be used to assess teacher efficacy. However, the researchers did indicate that the most appropriate measurement for preservice teachers was the total scale score for efficacy.

Finally, Tschannen-Moran and Woolfolk Hoy (2001) tested the construct validity for the scale by comparing their scale to three established scales. As the researchers expected, for both the long and short versions, results of the comparisons indicated positive correlations with both personal teacher efficacy and general teacher efficacy. The final 24-item instrument includes the three scales (a) Efficacy in Instructional Strategies (Items 7, 10, 11, 17, 18, 20, 23, and 24); (b) Efficacy for Classroom Management (Items 3, 5, 8, 13, 15, 16, 19, and 21); and (c) Student Engagement (Items 1, 2, 4, 6, 9, 12, 14, and 22). The final 12-item instrument includes (a) Efficacy in Instructional Strategies (Items 5, 9, 10, and 12); (b) Efficacy for Classroom Management (Items 1, 3, 6, and 8);

and (c) Student Engagement (Items 2, 4, 7, and 11; Tschannen-Moran & Hoy, 2001). After their extensive testing of the TSES (both the long and the short version with both preservice and inservice teachers), Tschannen-Moran and Woolfolk Hoy suggested that their instrument was reasonably valid and reliable and that it could be a useful tool for those exploring teacher self-efficacy, inclusive of both personal teaching efficacy and general teacher efficacy.

Data Analysis

To conduct all statistical analyses, I used SPSS Version 20.0. I conducted both descriptive and inferential analyses and present the data both in narrative form and graphically as appropriate. I conducted descriptive statistics to analyze the participant demographics and report the results for frequency, mean, and standard deviation. I conducted inferential statistics to answer Research Questions 1 and 2. Specifically, to determine if there were significant differences in Attitude Toward Inclusion between teachers of differing teacher types and education level, I used a two-way ANOVA. To determine if teacher efficacy predicted teachers' attitudes toward inclusion of students with disabilities, I used a multiple regression statistical model to identify predictive patterns among variables.

The dependent variable, attitudes toward students with disabilities and inclusion (measured on a Likert-type scale ranging from 0 to 5), and the independent variable, self-efficacy (measured on a Likert-type scale ranging from 1 to 9), were interval data. The remaining four independent variables were nominal: gender, teacher type, education level, and grade level taught. By analyzing the data using two-way ANOVA and multiple

regression, I obtained data that I used to answer the research questions for this study based on my proposed hypotheses:

Research Question 1. Is there a significant difference in Attitude Toward Inclusion between teachers of differing teacher types and education levels?

$H_0$1: There is no significant difference in Attitude Toward Inclusion between teachers of differing teacher types and education levels.

$H_1$1: There is a significant difference in Attitude Toward Inclusion between teachers of differing teacher types and education levels.

Research Question 2. Does teacher efficacy (Efficacy for Student Engagement, Efficacy in Instructional Strategies, and Efficacy for Classroom Management) predict teachers' attitudes toward inclusion while controlling for gender, education level, teacher type, and grade level taught?

$H_0$2: Teacher efficacy (Efficacy for Student Engagement, Efficacy in Instructional Strategies, and Efficacy for Classroom Management) is not a predictor of teachers' attitudes toward inclusion while controlling for gender, education level, teacher type, and grade level taught.

$H_1$2: Teacher efficacy (Efficacy for Student Engagement, Efficacy in Instructional Strategies, and Efficacy for Classroom Management) is a predictor of teachers' attitudes toward inclusion while controlling for gender, education level, teacher type, and grade level taught.

Threats to Quality Research

According to Creswell (2009), threats to internal validity refer to procedures associated with data collection and participants in an experimental study, threats that may affect research outcomes. Maintaining internal validity is important because without internal validity, one is unable to draw conclusions about variable correlations and cause and effect relationships (Leedy & Ormrod, 2010). This study was non-experimental in nature. However, because I conducted analyses to determine the correlations between my variables, it was important that I ensured the internal validity of my study. In particular, poor instrumentation can result in inaccurate measurement of variables, and poor participant selection processes can result in the selection of participants whose characteristics inadvertently affect study outcomes (Creswell, 2003). To mitigate the effects of these threats to the internal validity in my study, I used preestablished data collection tools with demonstrated internal consistency, but I also conducted my own scale reliability analysis to confirm the appropriateness of the tools for my particular population. In addition, to decrease the chances of human error while handling my data during the collection and analysis processes, I used the online data collection tool SurveyMonkey, which allowed me to export my study data to an Excel spreadsheet for easy import to SPSS for further analysis. To mitigate threats to validity based on participant selection, I invited a diverse population to participate in my study, which should reduce the effect of participants' latent or underlying characteristics.

Threats to a study's external validity arise when a researcher draws inferences from the sample data and incorrectly applies them to other populations, other settings, or

past or future situations (Creswell, 2009). Incorrect inferences may result when a researcher generalizes beyond a group in the experiment to other groups not under study (Creswell, 2009). Maintaining external validity in a study is important because study results are most valuable when they are accurately applied to situations and populations (Leedy & Ormond, 2010). One threat to external validity in this study was that the perspectives of teachers may have been representative of the particular school culture within the district. Thus, teachers in other school districts with differing missions, values, and levels of support may have different perspectives with regard to inclusion.

Role of the Researcher and Participant's Rights

To ensure the protection of participant's rights, throughout my research activities, I maintained the highest level of ethical standards expected of researchers. For example, I sought and considered feedback from my committee and university reviewer concerning the ethical appropriateness of my research design and approach, and prior to beginning any research, I obtained permission from the district as well as from Walden University's Institutional Review Board. In addition, I also have completed the National Institutes of Health course Protecting Human Research Participants (#951123, 7/12/12).

Using an online survey to collect data also allowed me to protect participants' rights. According to Fink (2006), one benefit of a using a survey to collect data is that it allows a researcher to collect data anonymously. Moreover, in order to ensure respondent anonymity, Survey Monkey, the online tool I used to collect my data, removes all tracking devices from respondents' e-mails. In addition, I informed participants about the study and their rights by providing them with informed consent. The informed consent

form included a description of the study, the risks and benefits to the participants of participating in the study, the voluntary and confidential nature of the study, and the participant's right to withdraw from the study at any time. Participants demonstrated consent through their navigation to the survey site and completion of the online survey.

Because all data collected will be anonymous, there was no risk of disclosing identifying or personal participant information. In addition, at all times, I stored electronic data on a secure, password-protected computer in my home office and hard copy data in a locked cabinet in the same office in my home. Only I had access to the computer password and key for the cabinet. After 5 years, I will destroy all original data.

My role in the research was that of principal investigator. I have worked in the district for a total of 17 years—7 years as a regular education teacher and 10 years as a special education teacher. At the time of this study, I was a special education teacher at one of the research sites and worked directly with three of the special education teachers at the elementary level and 14 of the general education teachers in grades K-5. Occasionally, I had contact with other teachers in my school. Once a month I worked with other special education teachers in the district during district-wide professional development training, and periodically throughout the year, I worked with regular education teachers in the district during district-wide professional development training. However, as a teacher, I did not have any authority over the potential participants that might cause them to feel pressure to participate. Although participation in the study is completely voluntary and participant responses will be anonymous, teachers may have felt obligated to participate simply because they knew me. For this reason, I clearly stated

in the consent form the voluntary and anonymous nature of the study and stressed this condition in the e-mail invitation to teachers. Also, because teachers completed the surveys anonymously, there was be no potential for researcher bias during the data collection process.

Summary

The purpose of this study was to examine the difference between general education and special education teachers' attitudes toward inclusion in the general education classroom at the elementary and middle levels and if (a) levels of teacher self-efficacy in instructional strategies, classroom management, and student engagement; (b) gender; (c) education level; (d) teacher type; and (e) grade level taught are predictors of Teachers' Attitudes Toward Inclusion. To make these determinations, I conducted a quantitative study to collect data from elementary and middle school teachers in a rural school district in South Carolina. I invited 296 teachers to complete an online survey consisting of three parts: a demographic section, a section on teachers' attitudes toward inclusive classrooms, and a section on teacher self-efficacy. The teachers' attitudes section of the survey was made up of the entire STATIC (Cochran, 1997) instrument, and the teacher self-efficacy section of the survey was made up of the entire TSES (short form; Tschannen-Moran & Woolfolk Hoy, 2001).

After collecting the data, I conducted both descriptive and inferential statistics. I conducted descriptive statistics to describe the demographics of my sample: gender, education level, teacher type, and grade level taught. I conducted inferential statistics to

answer my two research questions. Specifically, I used two-way ANOVA to answer Research Question 1 and multiple regression to answer Research Question 2.

Threats to internal and external validity are concerns in any study. However, I took measures to mitigate threats to the internal validity of this study. In particular, I used preestablished data collection tools, conducted my own scale reliability analysis, used an online data collection tool, and invited a diverse population to participate in my study.

At all times during the course of this study, I conducted myself both professionally and ethically. I procured appropriate permissions to collect data and to use preestablished data collection tools. In addition, I used an online survey form that ensured anonymity of my participants as well as provided participants with a consent form to explain the study and their rights if they agreed to participate in the study. Also, I have stored all data securely and will destroy raw data after 5 years. Although at the time of the study, I did work in the school district, I did not have supervisory authority over the potential participants and did not influence them to participate in my study.

Section 4 includes a presentation of the findings related to the research questions and hypotheses, including tables and figures. Section 5 includes a thorough discussion of the findings, and overview of the research, implications for social change, recommendations for action, and recommendations for further study.

Section 4: Results

This section includes the results of data analyses relating to the two research questions posed for this study. For Research Question 1, results pertain to the differences in attitudes toward inclusion, the dependent measure, across teacher type and teacher educational level, the independent variables. For Research Question 2, results pertain to the degree to which each of the TSES scores are predictors of STATIC scores while controlling for gender, education level, teacher type, and grade level taught. Before presenting the results of the inferential statistics, however, I present the descriptive statistics.

Descriptive Statistics

A summary of the descriptive statistics is presented in Table 1. Of the 118 participants, one participant did not respond to the item about gender and one participant did not respond to the item about grade level taught. For these statistics, $N = 117$. The sample obtained was largely (96%) female. Reported by nearly half of the sample (45.8%), the modal education level response was master's degree + 30 units. Most of the remainder of the sample reported having either a master's degree (32.2%) or a bachelor's degree (16%). Only 5.9% of the sample reported having earned a doctoral degree. The majority of the teachers (75.2%) reported teaching at the elementary level, while the remaining teachers (24.8%) taught in middle school. A majority of the sample (72%) also were general education teachers, while the remaining teachers (28%) were special education teachers.

Table 1

Gender, Highest Education Level, Teacher Type, and Grade Level Taught as a Percentage of the Sample (N = 118)

Characteristic	*n*	%
Gender[a]		
Male	5	4.3
Female	112	95.7
Highest education level		
Bachelor's degree	19	16.1
Master's degree	38	32.2
Master's degree + 30	54	45.8
Doctoral degree	7	5.9
Grade level taught[a]		
Elementary	88	75.2
Middle school	29	24.8
Teacher type		
General education teacher	85	72.0
Special education teacher	33	28.0

[a]One participant reported neither gender nor grade level taught, so $N = 117$.

Prior to conducting the descriptive analyses on the scales and subsequent analyses required to address the two research questions, the internal consistency of the two scales and seven subscales was assessed using scale reliability analysis. A Cronbach's alpha, the outcome value of scale reliability analysis, is a measure of the degree to which all of the items in a scale (or subscale) relate to the same underlying variable (Knapp, 1991). Alpha scores between .70 and .79 are considered acceptable; scores of .80 or more are desirable (George & Mallery, 2003).

As reported in Table 2, a high Cronbach's alpha coefficient was obtained for the full STATIC scale. Acceptable values were obtained for the STATIC subscales Advantages and Disadvantage of Inclusion, Professional Issues of Inclusion, and Logistical Issues of Inclusion (after dropping two of the four survey items: Items 8 and 17). Because the Cronbach's alpha coefficient for the subscale Philosophical Issues of Inclusion was well below the cut off of .70, this subscale was not reliable and, therefore, not included in further analyses. High Cronbach's alpha coefficients were obtained for the full TSES scale as well as the three TSES subscales, Efficacy in Instructional Strategies, Efficacy for Classroom Management, and Efficacy for Student Engagement.

Table 2

Cronbach Alpha Coefficients Obtained for the STATIC and TSES Scales and Subscales

Scale	α
Full STATIC scale	.85
STATIC subscales	
Advantages and Disadvantages of Inclusion	.78
Professional Issues of Inclusion	.75
Philosophical Issues of Inclusion	.46
Logistical Issues of Inclusion	.70
Full TSES scale	.94
TSES subscales	
Efficacy in Instructional Strategies	.91
Efficacy for Classroom Management	.84
Efficacy for Student Engagement	.81

Based on the results of the scale reliability analysis, means, standard deviations, and ranges were calculated for the full STATIC scale, three STATIC subscales, the full TSES scale, and the TSES subscales. The results of these descriptive analyses are presented in Table 3. The mean score for the full STATIC scale indicated that overall, the participants held a largely positive attitude toward inclusion. Specifically, for the full STATIC scale for which scores can range from 0 (*entirely negative attitudes*) to 100

(*entirely positive attitudes*), the sample mean of 70.19 fell solidly on the positive side of the attitudinal spectrum.

Table 3

Means, Standard Deviations, and Ranges of the STATIC and TSES Scales and Subscales

Scale	*n*	*M*	*SD*	Range	
				Potential	Actual
Full STATIC scale	97	70.19	11.83	0-100	35-94
STATIC subscales					
Advantages and Disadvantages of Inclusion	102	22.24	5.42	0-35	10-35
Professional Issues of Inclusion	113	17.54	4.63	0-25	5-25
Logistical Issues of Inclusion[a]	116	6.22	2.37	0-20	0-10
Full TSES scale	107	90.76	12.00	12-108	57-108
TSES subscales					
Efficacy in Instructional Strategies	115	30.71	4.28	4-36	18-36
Efficacy for Classroom Management	110	30.45	4.51	4-36	17-36
Efficacy for Student Engagement	114	29.60	4.36	4-36	18-36

Note. Only responses from participants who answered all of the scale items were used to calculate descriptive statistics.
[a]Data presented for this subscale represent analyses based on two of the four original survey items. Two items were dropped to achieve internal consistency for the subscale.

The mean scores for the Advantages and Disadvantages of Inclusion and Professional Issues of Inclusion subscales also indicated that the participants held largely positive attitudes toward inclusion with regard to these particular aspects of inclusion.

Specifically, for the Advantages and Disadvantages of Inclusion subscale for which scores can range from 0 (*entirely negative attitude*) to 35 (*entirely positive attitude*), the sample mean of 22.24 fell solidly on the positive side of the attitudinal spectrum. Similar results were demonstrated for the Professional Issues of Inclusion subscale for which scores can range from 0 (*entirely negative attitude*) to 25 (*entirely positive attitude*). The sample mean of 17.54 fell solidly on the positive side of the attitudinal spectrum. The mean score for the Logistical Issues of Inclusion scale, however, indicated that participants held largely negative attitudes toward inclusion with regard to this particular aspect of inclusion. For this subscale, scores can range from 0 (*entirely negative attitude*) to 20 (*entirely positive attitude*). That the sample mean of 6.22 fell in the lower third of the range was suggestive of negative teachers' attitudes towards logistical issues of inclusion.

The mean score obtained for the full TSES scale indicated that the sample had high overall self-efficacy. Specifically, for the full TSES scale for which scores can range from 12 (*no self-efficacy*) to 108 (*a great deal of self-efficacy*), the sample mean of 90.76 fell solidly on the positive side of the self-efficacy spectrum. In addition, the data indicated that the sample had high levels of Efficacy in Instructional Strategies, Efficacy for Classroom Management, and Efficacy for Student Engagement. Scores for each of the three scales could range from 4 (*very low self-efficacy*) to 36 (*very high self-efficacy*), and means of approximately 30 were obtained for all three measures.

Inferential Statistics

In this section, I present the results of the inferential statistics. For each research question, first I present the results of analyses for the full STATIC scale. Then I present the results of analyses for the STATIC subscales.

Research Question 1

Research Question 1 was, "Is there a significant difference in Teachers' Attitudes Toward Inclusion between teachers of differing teacher types and education levels?" A two-way analysis of variance (ANOVA) test was conducted to assess the main effects and any interactions of teacher type (general or special education) and level of education (bachelor's degree, master's degree, master's plus 30 units) on Teachers' Attitudes Toward Inclusion as measured by STATIC scale scores. ANOVAs also were conducted for the three STATIC subscales. Because few participants reported holding doctoral degrees, this level of education was excluded from this analysis. The results of the two-way ANOVAs are presented in Table 4.

For the full STATIC scale, there was a significant main effect for teacher type, $F(1, 84) = 19.13$, $p < .001$. Special education teachers held significantly higher attitudes on inclusion ($M = 79.74$, $SD = 7.27$) than general education teachers ($M = 66.90$, $SD = 11.32$). Teacher type had a large effect (Hanna & Dempster, 2012) on attitudes, partial $\eta^2 = .19$, and explained 19% of the variance.

Table 4

ANOVA Tests for the Full STATIC Scale and the Three STATIC Subscales

Source	*df*	*MS*	*F*	*p*	η^2
	Teachers' Attitudes Toward Inclusive Classrooms scale				
Teacher type	1	2,041.97	19.13	< .001	.19
Education level	2	153.77	1.44	.243	.03
Teacher type x education level	2	45.65	.43	.653	.01
Error	84	106.74			
	Advantages and Disadvantages of Inclusion subscale				
Teacher type	1	264.65	10.79	.001	.11
Education level	1	20.76	.85	.432	.02
Teacher type x education level	2	23.78	.97	.383	.02
Error	89	24.53			
	Professional Issues of Inclusion subscale				
Teacher type	1	575.55	44.10	< .001	.31
Education level	2	42.32	3.24	.043	.06
Teacher type x education level	2	8.56	.66	.521	.01
Error	100	13.05			
	Logistical Issues of Inclusion subscale				
Teacher type	1	3.56	.64	.426	.06
Education level	2	23.76	4.27	.017	.08
Teacher type x education level	2	3.61	.65	.525	.01
Error	103	5.57			

For the Advantages and Disadvantages of Inclusion subscale, there was a significant main effect for teacher type, $F(1, 89) = 10.79$, $p = .001$. Special education teachers held significantly higher attitudes towards the advantages and disadvantages of inclusion ($M = 25.15$, $SD = 4.12$) than general education teachers ($M = 20.96$, $SD = 5.32$). Teacher type had a medium effect (Hanna & Dempster, 2012) on attitudes towards the advantages and disadvantages of inclusion, partial $\eta^2 = .11$, and explained 11% of the variance.

For the Professional Issues of Inclusion subscale, there was a significant main effect for teacher type, $F(1, 100) = 44.10$, $p < .001$. Special education teachers held significantly higher attitudes towards the professional issues of inclusion ($M = 22.21$, $SD = 2.42$) than general education teachers ($M = 15.87$, $SD = 4.09$). Teacher type had a large effect on attitudes towards professional issues of inclusion, partial $\eta^2 = .31$, and explained 30.6% of the variance. Moreover, there was also a significant main effect for education level, $F(2, 100) = 3.24$, $p < .05$. Teachers who held bachelor's degrees ($M = 19.63$, $SD = 3.22$) and master's degrees plus 30 units ($M = 17.91$, $SD = 4.80$) had significantly higher attitudes toward professional issues on inclusion than teachers holding a master's degree ($M = 15.82$, $SD = 4.61$). Teacher education level had a moderate effect on attitudes toward professional issues on inclusion, partial $\eta^2 = .06$, and explained 6% of the variance.

For the Logistical Issues of Inclusion subscale, there was a significant main effect for education level, $F(2, 103) = 4.27$, $p < .05$. Teachers who held master's degrees ($M = 6.57$, $SD = 2.21$) and master's plus 30 units ($M = 6.49$, $SD = 2.45$) had significantly

higher attitudes toward logistical issues of inclusion than teachers with bachelor's degrees (M = 4.89, SD = 2.40). Teacher education level had a moderate effect on attitudes toward logistical issues of inclusion, partial η^2 = .08, and explained 8% of the variance.

Research Question 2

Research Question 2 was, "Does teacher efficacy (Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management) predict Teachers' Attitudes Toward Inclusion while controlling for gender, education level, teacher type, and grade level taught?" To assess the capacity of the TSES total scale and subscale scores in predicting the STATIC total scale score while controlling for education level, grade level, and teacher type, two separate multiple regression analyses were conducted. Once again, participants with doctoral degrees were excluded from analyses because there were few participants in that category. Furthermore, because there were only five male participants in the sample, this was too few to form a representative group. The variable gender, therefore, was excluded from the analysis.

In the first model (see Table 5), both the TSES total scale and teacher type variables were significant predictors of the STATIC total scale score—$F(6,82) = 7.41$, $p < .001$. The higher the teachers' total self-efficacy, the more favorable attitude toward inclusion the teachers had. Additionally, special education teachers had more favorable attitudes toward inclusion than general education teachers. Combined, these two variables explained 30% (adjusted R^2 = .30) of the variance in teachers' attitudes towards inclusion.

Table 5

Multiple Regression Analysis: *Effect of TSES Total Scale in Predicting the STATIC Total Scale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
TSES scale	.313	.087	.32	3.58	.001
Teacher type (general or special education)	11.88	2.38	.45	5.00	< .001
Education level					
Bachelor's	1.10	4.44	.04	.25	.805
Master's	-4.93	4.16	-.19	-1.19	.239
Master's plus 30 units	-2.24	3.98	-.10	-.56	.576
Grade level taught	2.29	2.45	.09	.93	.354

Note. $R = .59$, $R^2 = .35$, adjusted $R^2 = .30$, $F(6, 82) = 7.41$, $p < .001$.

In the second model, the TSES total scale was replaced with the TSES subscales. The variance inflation factor (VIF) of the subscale Efficacy of Student Engagement was 4.09, which indicated there was multicollinearity (Fox, 1991). Subsequently, the second model was rerun without the Efficacy of Student Engagement variable, and two variables, Efficacy in Instructional Strategies and teacher type, were statistically significant predictors on STATIC total score—$F(7,82) = 6.90$, $p < .001$ (see Table 6). The higher the teachers' Self-efficacy in Instructional Strategies, the more favorable attitude toward inclusion the teachers had. Additionally, special education teachers had more favorable attitudes toward inclusion than general education teachers. Combined, these two variables explained 32% (adjusted $R^2 = .32$) of the variance in teachers' attitudes towards inclusion.

Table 6

Multiple Regression Analysis: *Effect of TSES Subscale Scores in Predicting the STATIC Total Scale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
Efficacy in instructional strategies	.90	.33	.33	2.78	.007
Efficacy for classroom management	.09	.30	.04	.32	.753
Teacher type (general or special education)	11.73	2.34	.45	5.01	< .001
Education level					
Bachelor's	1.77	4.41	.06	.40	.689
Master's	-3.98	4.16	-.15	-.96	.341
Master's plus 30 units	-1.87	3.92	-.08	-.48	.635
Grade level taught	2.13	2.42	.08	.88	.382

Note. $R = .61$, $R^2 = .37$, adjusted $R^2 = .32$, $F(7, 82) = 6.90$, $p < .001$.

To assess the capacity of the TSES total scale and subscale scores in predicting the Advantages and Disadvantages of Inclusion subscale scores while controlling for education level, grade level, and teacher type, two separate multiple regression analysis were conducted. In the first model (see Table 7), only teacher type was a significant predictor of the Advantages and Disadvantages of Inclusion subscale score—$F(6, 87) = 2.87$, $p = .013$. Special education teachers had more favorable attitudes toward the advantages and disadvantages of inclusion than general education teachers had. This variable explained 11% (adjusted $R^2 = .11$) of the variance in teachers' attitudes towards advantages and disadvantages of inclusion.

Table 7

Multiple Regression Analysis: *Effect of TSES Total Scale in Predicting the Advantages and Disadvantages of Inclusion Subscale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
TSES scale	.08	.05	.18	1.84	.069
Teacher type (general or special education)	3.69	1.18	.31	3.12	.002
Education level					
Bachelor's	-.28	2.33	-.02	-.12	.904
Master's	-3.04	2.19	-.25	-1.39	.168
Master's plus 30 units	-2.12	2.11	-.20	-1.01	.316
Grade level taught	-.06	1.25	-.01	-.05	.964

Note. $R = .41$, $R^2 = .17$, adjusted $R^2 = .11$, $F(6, 87) = 2.87$, $p < .013$.

In the second model (see Table 8), the TSES total scale was replaced with the TSES subscales. The VIF of the subscale Efficacy of Student Engagement was 4.19, which indicated there was multicollinearity (Fox, 1991). Subsequently, the second model was rerun without the Efficacy of Student Engagement subscale. This time, the VIF of the variable master's plus 30 units was 4.02. After running the second model a third time without the Efficacy of Student Engagement and master's plus 30 units variables, two variables, Efficacy in Instructional Strategies and teacher type, were statistically significant predictors of the Advantages and Disadvantages of Inclusion subscale score—$F(6, 88) = 3.30$, $p = .006$. The higher the teacher's Self-efficacy in Instructional Strategies, the more favorable attitude toward advantages and disadvantages of inclusion

the teachers had. Additionally, special education teachers had more favorable attitudes toward the advantages and disadvantages of inclusion than general education teachers. Combined, these two variables explained 13% (adjusted $R^2 = .13$) of the variance in teachers' attitudes towards advantages and disadvantages of inclusion.

Table 8

Multiple Regression Analysis: *Effect of TSES Subscale Scores in Predicting the Advantages and Disadvantages of Inclusion Subscale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
Efficacy in Instructional Strategies	.40	.17	.31	2.35	.021
Efficacy for Classroom Management	-.15	.16	-.13	-.94	.348
Teacher type (general or special education)	3.57	1.16	.30	3.08	.003
Education level					
Bachelor's	1.81	1.46	.13	1.24	.218
Master's	-.79	1.24	-.07	-.64	.525
Grade level taught	-.25	1.22	-.02	-.21	.836

Note. $R = .43$, $R^2 = .18$, adjusted $R^2 = .13$, $F(6, 88) = 3.30$, $p = .006$.

To assess the capacity of the TSES total scale and subscale scores in predicting the Professional Issues of Inclusion subscale scores while controlling for education level, grade level, and teacher type, two separate multiple regression analysis were conducted. In the first model (see Table 9), the VIF of the variable master's plus 30 units was 4.28, which indicated there was multicollinearity. Subsequently, the first model was rerun

without the master's plus 30 units variable, and both the TSES total scale and teacher type variables were significant predictors of the Professional Issues of Inclusion subscale scores—$F(5, 97) = 19.93$, $p < .001$. The higher the teachers' total self-efficacy, the more favorable attitude toward professional issues of inclusion the teachers had. Additionally, special education teachers had more favorable attitudes toward professional issues of inclusion than general education teachers. Combined, these two variables explained 48% (adjusted $R^2 = .48$) of the variance in teachers' attitudes towards professional issues of inclusion.

Table 9

Multiple Regression Analysis: *Effect of TSES Total Scale in Predicting the Professional Issues of Inclusion Subscale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
TSES scale	.08	.03	.21	2.92	.004
Teacher type (general or special education)	6.15	.73	.61	8.41	< .001
Education level					
Bachelor's	1.61	.88	.14	1.83	.071
Master's	-1.17	.74	-.12	-1.58	.117
Grade level taught	.93	.73	.09	1.26	.210

Note. $R = .71$, $R^2 = .51$, adjusted $R^2 = .48$, $F(5, 97) = 19.93$, $p < .001$.

In the second model (see Table 10), the TSES total scale was replaced with the TSES subscales. The VIF of the subscale Efficacy of Student Engagement was 4.30 and the VIF of the variable master's plus 30 units was 4.29, which indicated there was

multicollinearity. Subsequently, the second model was rerun without the Efficacy of Student Engagement subscale and the master's plus 30 units variable. Efficacy in Instructional Strategies and teacher type were statistically significant predictors of the Professional Issues of Inclusion subscale score— $F(6, 97) = 18.05$, $p < .001$. The higher the teacher's Self-efficacy in Instructional Strategies, the more favorable attitude toward professional issues of inclusion the teachers had. Additionally, special education teachers had more favorable attitudes toward professional issues of inclusion than general education teachers. Combined, these two variables explained 50% (adjusted $R^2 = .50$) of the variance in teachers' attitudes towards professional issues of inclusion.

Table 10

Multiple Regression Analysis: *Effect of TSES Subscale Scores in Predicting the Professional Issues of Inclusion Subscale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
Efficacy in Instructional Strategies	.35	.11	.33	3.32	.001
Efficacy for Classroom Management	-.06	.10	-.07	-.66	.509
Teacher type (general or special education)	6.09	.72	.60	8.45	< .001
Education level					
Bachelor's	1.78	.88	.15	2.03	.045
Master's	-.85	.75	-.09	-1.13	.262
Grade level taught	.83	.72	.08	1.15	.253

Note. $R = .73$, $R^2 = .53$, adjusted $R^2 = .50 F(6, 97) = 18.05$, $p < .001$.

To assess the capacity of the TSES total scale and subscale scores in predicting the Logistical Issues of Inclusion subscale scores while controlling for education level, grade level, and teacher type, two separate multiple regression analysis were conducted. In the first model (see Table 11), the VIF of the variable master's plus 30 units was 4.40, which indicated there was multicollinearity. Subsequently, the first model was rerun without the master's plus 30 units variable, and the variable bachelor's degree was the only significant predictor of the Logistical Issues of Inclusion subscale scores—$F(5, 100) = 3.51$, $p = .006$. The negative beta value for this variable indicated that teachers with a bachelor's degree had poorer attitudes toward logistical issues of inclusion. This variable explained 11% (adjusted $R^2 = .11$) of the variance in teachers' attitudes towards logistical issues of inclusion.

Table 11

Multiple Regression Analysis: *Effect of TSES Total Scale in Predicting the Logistical Issues of Inclusion Subscale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
TSES scale	.03	.02	.17	1.85	.067
Teacher type (general or special education)	.68	.48	.13	1.43	.157
Education level					
Bachelor's	-1.61	.60	-.26	-2.69	.008
Master's	.57	.49	.11	1.17	.246
Grade level taught	.24	.49	.05	.49	.629

Note. $R = .39$, $R^2 = .15$, adjusted $R^2 = .11$, $F(5, 100) = 3.51$, $p = .006$.

In the second model (see Table 12), the TSES total scale was replaced with the TSES subscales. The VIF of the subscale Efficacy of Student Engagement was 4.41, the VIF of the variable master's plus 30 units was 4.41, and the VIF for master's degree was 4.02, which indicated there was multicollinearity. However, because it was likely that the variables master's degree and master's plus 30 units were interacting, only the subscale Efficacy of Student Engagement and the variable master's plus 30 units were removed for further analysis. When the second model was rerun without the subscale Efficacy of Student Engagement and the variable master's plus 30 units, the VIF for the variable master's degree fell below 4.0, in the acceptable range. As with the first model, only the variable bachelor's degree was a statistically significant predictor of the Logistical Issues of Inclusion subscale score— $F(6, 100) = 2.81$, $p < .014$. The negative beta value for this variable indicated that teachers with a bachelor's degree had poorer attitudes toward logistical issues of inclusion. This variable explained 9% (adjusted $R^2 = .09$) of the variance in teachers' attitudes towards logistical issues of inclusion.

Table 12

Multiple Regression Analysis: *Effect of TSES Subscale Scores in Predicting the Logistical Issues of Inclusion Subscale Score While Controlling for Teacher Demographics*

Variable	*B*	*SE B*	ß	*t*	*p*
Efficacy in Instructional Strategies	.03	.07	.05	.35	.73
Efficacy for Classroom Management	.06	.07	.12	.94	.35
Teacher type (general or special education)	.71	.48	.14	1.47	.15
Education level					
Bachelor's	-1.60	.60	-.26	-2.66	.01
Master's	.58	.50	.11	1.14	.26
Grade level taught	.26	.49	.05	.54	.59

Note. $R = .38$, $R^2 = .14$, adjusted $R^2 = .09$, $F(6, 100) = 2.81$, $p < .014$.

Summary

Although the entire sample had largely positive attitudes toward inclusion as measured by scores on the full STATIC measure (Research Question 1), special education teachers' attitudes toward inclusion were more positive than those of general education teachers. With regard to the STATIC subscales, when compared to general education teachers, special education teachers also had more positive attitudes towards the advantages and disadvantages of inclusion and professional issues of inclusion. Also, teachers who held bachelor's degrees and master's degrees plus 30 units had significantly higher attitudes toward professional issues on inclusion than teachers holding a master's degree, and teachers who held master's degrees and master's plus 30 units had

significantly higher attitudes toward logistical issues of inclusion than teachers with bachelor's degrees. No main effect or interactions were discovered for grade level taught.

The full TSES scale, the TSES subscale Efficacy in Instructional Strategies, and teacher type were significant predictors of overall teachers' attitudes toward inclusion (Research Question 2). The TSES subscale Efficacy in Instructional Strategies and teacher type were significant predictors of teachers' attitudes toward the advantages and disadvantages of inclusion as well as teachers' attitudes toward professional issues of inclusion. The full TSES scale and teacher type were significant predictors of teachers' attitudes toward professional issues of inclusion. Level of education was the only significant predictor of teachers' attitudes toward logistical issues of inclusion. In the next section, I discus these results in more detail as well as their implications in the educational setting.

Section 5: Discussion, Conclusions, and Recommendations

The purpose of this non-experimental, cross-sectional quantitative study was (a) to determine if there were differences in Teachers' Attitudes Toward Inclusion of students with disabilities in the general education classroom between teachers of varying types (general education and special education) and education levels (bachelor's and master's) and if (b) levels of teacher efficacy in instructional strategies, classroom management, and student engagement; (c) gender; (d) education level; (e) teacher type; and (f) grade level taught (elementary and middle) are predictors of Teachers' Attitudes Toward Inclusion. To collect data, I used an online instrument composed of demographic questions and questions from the STATIC and the TSES. I analyzed the data collected from the participants using descriptive and inferential statistics.

To answer Research Question1, I used a two-way ANOVA to analyze data collected using the STATIC instrument. Results indicated that the entire sample had a largely positive attitudes toward inclusion (M = 70.19, SD = 11.83) although, when compared to the positive attitudes of general education teachers (M = 66.90, SD =11.32), the special education teachers had a more positive attitude (M = 79.74, SD = 7.27). This condition was true with regard to two of the three Attitudes Toward Inclusion subscales as well. When compared to general education teachers, special education teachers had more positive attitudes toward advantages and disadvantages of inclusion (M = 20.96, SD = 5.32 vs. M = 25.15, SD = 4.12) and professional issues of inclusion (M = 15.87, SD = 4.09 vs. M = 22.21, SD = 2.42). With regard to education level, teachers who held bachelor's degrees (M = 19.63, SD = 3.22) and master's degrees plus 30 units (M =

17.91, *SD* = 4.80) had significantly higher attitudes toward professional issues on inclusion than teachers holding a master's degree (*M* = 15.82, *SD* = 4.61).

To answer Research Question 2, I used multiple regression to analyze data collected using both the STATIC instrument and the TSES. Results indicated that the TSES total scale (Efficacy for Student Engagement, Efficacy in Instructional Strategies, and Efficacy for Classroom Management), the subscale Efficacy in Instructional Strategies, and teacher type were significant predictors of teachers' overall attitudes toward inclusion. Efficacy in Instructional Strategies and teacher type also were predictors of Advantages and Disadvantages of Inclusion subscale scores. In addition, the TSES total scale, the subscale Efficacy in Instructional Strategies, and teacher type were predictors of Professional Issues of Inclusion subscale scores. Furthermore, teacher education level (bachelor's degree) was the only significant predictor of the Logistical Issues of Inclusion subscale scores. In the remainder of this section, I present an interpretation of the findings, implications for social change, and recommendations for action and further research.

Interpretation of Findings

In this section, I present my findings organized by research question. For each question, I briefly review results of my data analysis. In addition, as applicable, I relate my findings to the literature and the study's theoretical framework.

Research Question 1

Results of data analysis for Research Question 1 showed a significant difference in Teachers' Attitude Toward Inclusion between general education teachers (*M* = 66.90,

SD = 11.32) and special education teachers (*M* = 79.74, *SD* = 7.27). The difference between the means scores is 12.84, with special education teachers having the higher mean score.

These results are supported by the literature. For example, Parker (2009) found that special education teachers had a more positive attitude toward inclusion when compared to general education teachers. Of the special education teachers in the study, 58% agreed that all students benefit from inclusive practices, compared to 42% of general education teachers who perceived that all students benefit from inclusive practices (Parker, 2009). Parker concluded that when compared to general education teachers, special education teachers may have a more positive attitude because of the amount and specialization of their training. This training, Parker posited, leads special education teachers to become more familiar and comfortable with not only the concept of inclusion but with inclusive strategies and the proper way to implement them in the inclusive setting. Tsakiridou and Polyzopoulou (2014) also concluded that Greek teachers who had experience in special education training had more positive attitudes toward inclusion, and Malinen, Savolainen, and Xu (2012) claimed that among teachers in Beijing, teachers with more experience teaching in the inclusive setting had more positive attitudes toward inclusion.

In a qualitative study of 15 special education teachers, the teachers perceived themselves to have more positive attitudes toward inclusion than their peers who taught general education (Orr, 2009). In particular, the special education teachers perceived that general education teachers tended to have a more negative attitude toward teaching

students who require modifications to instruction, such as students with vision, hearing, behavioral, and emotional disorders (Orr, 2009). The special education teachers cited lack of knowledge and preparation for the perceived differences in attitudes toward inclusion (Orr, 2009). Similarly, Cassady (2011) discovered that general education teachers had negative attitudes toward students with disabilities, in particular, students with autism and both emotional and behavioral disorders. Although these general education teachers expressed confidence in their ability to implement IEPs, adapt lessons, and provide accommodations, their negative attitudes toward students with disabilities had an impact on their willingness to have any special education students in their general education classrooms (Cassady, 2011).

Results of this study also showed that special education teachers had more positive attitudes toward advantages and disadvantages of inclusion ($M = 25.15$, $SD = 4.12$) and professional issues of inclusion ($M = 22.21$, $SD = 2.42$) than general education teachers had ($M = 20.96$, $SD = 5.32$ and $M = 15.87$, $SD = 4.09$, respectively). These results also are supported in the literature. Results of studies have shown that teachers found teaching students with disabilities in the regular education classroom to be a disadvantage and professionally challenging.

In O'Rourke and Houghton's (2009) study of teacher perceptions of inclusive models, general education teachers reported that specialized instruction in the general education setting is challenging because it interferes with the instructional routine of the general education classroom. In particular, teachers cited the need for changes to the curriculum, instruction, and grading methods (O'Rourke & Houghton, 2009). Horne and

Timmons (2009) also found that general education teachers had negative attitudes toward inclusive practices. Like the teachers in O'Rourke and Houghton's study, the teachers in Horne and Timmons's study were concerned with issues related to instruction. In particular, teachers perceived that making modifications and accommodations to meet the students' individual needs was time consuming (Horne & Timmons, 2009).

Results of this current study also showed that with regard to education level, teachers who held bachelor's degrees (M = 19.63, SD = 3.22) and master's degrees plus 30 units (M = 17.91, SD = 4.80) had significantly higher attitudes toward professional issues on inclusion than teachers holding a master's degree (M = 15.82, SD = 4.61). Results reported in the literature are mixed and do not directly support these results. While Johnson and Fullwood (2006) found a relationship between education level and teacher perspectives, Parasuram (2006) did not.

In a study of secondary general education teachers' (N = 84) perceptions of students with behavioral disorders (measured using the Disturbing Behavior Checklist I), Johnson and Fullwood (2006) found that highest degree earned was significantly and negatively correlated with teacher perceptions of socially deviant behavior. When compared to teachers with master's degrees or master's degree plus additional units, teachers with bachelor's degrees perceived behaviors characterized as socially defiant to be more disturbing (p = .05; Johnson & Fullwood, 2006). In general, tolerance for socially defiant behavior increased with level of education, with teachers who held master's degrees plus additional units being the most tolerant of the three teacher groups (Johnson & Fullwood, 2006). Johnson and Fullwood suggested that this pattern was the

result of increased exposure to teaching techniques and strategies for managing defiant behavior that would likely be found in course work associated with advanced degrees. In a similarly designed study, Parasuram (2006) measured regular education teachers' (N = 300) perspectives regarding students with disabilities and inclusive education in Mumbai. Although teachers with the highest level of education (master's degree) had more positive attitudes towards students with disabilities in general when compared to teachers with lower levels of education, there was no significant relationship between teachers' levels of education and their attitudes toward inclusive education (Parasuram, 2006).

Research Question 2

Results of data analysis for Research Question 2 indicated that the TSES total scale (which includes the Efficacy for Student Engagement, Efficacy in Instructional Strategies, and Efficacy for Classroom Management subscales), the subscale Efficacy in Instructional Strategies, and teacher type were significant predictors of overall teachers' attitudes toward inclusion. With regard to both overall self-efficacy and efficacy for classroom management, higher levels of self-efficacy predicted more positive attitudes toward overall inclusion. The teacher type special education also predicted more positive attitudes toward overall inclusion.

These results, in general, are supported by related results in the literature. Sokal and Sharma (2014) examined in-service teachers' concerns, efficacy, and attitudes toward inclusion. The researchers analyzed data from 131 kindergarten through Grade 8 teachers in Canada. Initial correlations indicated that knowledge of local educational policies and acts, confidence level, and training in special education were all correlated with teachers'

attitudes toward inclusion. Of those three variables, however, only training in special education and level of confidence in teaching students with disabilities predicted teachers' attitudes toward inclusion. Confidence in teaching students with disabilities can be considered similar in nature to overall self-efficacy measured by the TSES scale in this study, and training in special education can be considered representative of the teacher type special education. Thus, the results from Sokal and Sharma support the results in this study.

Furthermore, in a study of 451 in-service teachers in Beijing, Malinen et al. (2012) found that teachers' attitudes were predicted by teacher self-efficacy. However, of three types of self-efficacy explored in the study, efficacy in using inclusive instructions, efficacy in collaboration, and efficacy in managing behavior, only self-efficacy in collaboration was a significant predictor of teachers' attitudes toward inclusion. Savolainen, Engelbrecth, Nel, and Malinen (2011) discovered these same results among 1,141 primary and secondary level teachers from South Africa (n = 319) and Finland (n = 822).

Results of data analysis for Research Question 2 also indicated that Efficacy in Instructional Strategies and teacher type were predictors of Advantages and Disadvantages of Inclusion subscale scores and the TSES total scale, the subscale Efficacy in Instructional Strategies, and teacher type were predictors of Professional Issues of Inclusion subscale scores. Although results of studies presented in the literature generally support the concept that levels of general teacher self-efficacy and teacher type are predictors of teachers' overall attitude toward inclusion, no research specifically

supports the connection between specific types of efficacy and teacher type and specific aspects of attitudes toward inclusion identified in this study. Likewise, although teacher education level (bachelor's degree) was found to be a significant predictor of the Logistical Issues of Inclusion subscale scores in this study, this result is not supported in the literature.

Implications for Social Change

The results of this study have practical application in the educational setting. Sze (2009) asserted that teacher attitude is an important predictor of teacher effectiveness with regard to the capacity to facilitate the integration of students with disabilities into the general education setting. Specifically, teachers with negative attitudes are less effective than those with positive attitudes (Sze, 2009). Ultimately then, a teacher's attitude toward inclusion can be an integral part of the successful implementation of inclusive practices, which can contribute to student achievement (Hwang & Evans, 2011). Results of this study demonstrated that general education teachers in the focus school have less positive attitudes than special education teachers have. Based on Sze's assertions, these teachers presumably are less effective than they could be with regard to inclusive practices in educational setting. This means that special education students may not be receiving the level of support they need to be successful in the general education classroom. School administrators, however, have the potential to initiate change. By helping teachers improve their attitudes toward inclusion, administrators can help teachers become more effective with regard to implementing inclusive strategies and, ultimately, improving student outcomes.

Results of this study also indicated that overall teacher efficacy, Efficacy in Instructional Strategies, and teacher type were predictors of Teachers' Attitudes Toward Inclusion and that higher levels of self-efficacy were associated with more positive attitudes toward inclusion. More specifically, Efficacy in Instructional Strategies and teacher type also were predictors of Advantages and Disadvantages of Inclusion subscale scores and the TSES total scale, the subscale Efficacy in Instructional Strategies, and teacher type were predictors of Professional Issues of Inclusion subscale scores. Based on these results, potentially, teachers' attitudes toward inclusion could be improved by improving teacher levels of self-efficacy. School administrators could do this by implement training not only in instructional strategies but in inclusive practices as well. By doing so, teachers' levels of self-efficacy could be improved, which could help improve teachers' attitudes toward inclusion, again with the potential to improve student outcomes.

Recommendations for Action

It is important that teachers are prepared to teach students with disabilities in the general education setting (Oyler, 2011). Based on the results of this study, I have four recommendations for action. First, I recommend training for general education teachers. Results of this study indicated that special education teachers had more positive attitudes toward inclusion than general education teachers. Researchers have suggested that differences in attitudes toward inclusion may be due to differing levels of college training with regard to methods for teaching students with learning disabilities (see Holdheide & Reschly, 2008; Hsien et al., 2009). Thus, I suggest that school administrators in the focus

school provide general education teachers with opportunities to participate in professional development and other training programs focused on better understanding the needs of students with disabilities.

Second, results of this study indicated that teachers with higher levels of self-efficacy had more positive attitudes toward inclusion. Therefore, I suggest that general education teachers, those with less positive attitudes toward inclusion and thus also lower levels of self-efficacy, be provided with training that promotes self-efficacy. One way to accomplish this would be to help teachers implement simple activities/strategies that would promote immediate success for students with disabilities, which would serve as mastery experiences for teachers and help to develop their sense of self-efficacy. In addition, part of the training process could include teacher observation so that teachers with low levels of self-efficacy and poor experiences implementing inclusive practices could observe teachers with high levels of self-efficacy and positive experiences with implementing inclusive strategies. In this way, the teachers with low levels of self-efficacy could benefit from improved levels of self-efficacy through vicarious experiences.

The benefits of training are well-supported in the literature. Jenkins and Yoshimura (2010) stressed the importance of keeping general education teachers abreast of teaching strategies and professional development activities to increase professional growth. During these professional development sessions, teachers can share ideas and their expertise (Blair et al., 2010; Eccleston, 2010; Jenkins & Yoshimura, 2010; Hepner

& Newman, 2010, Naraian, 2010; Sayeski, 2009). Professional development activities also can provide opportunities for teachers to collaborate.

The third suggestion is related to collaboration. Ongoing collaboration can improve the quality of instruction in a classroom (Conderman, 2011) and contributes to high levels of teacher efficacy (Viel-Ruma et al., 2010). Collaboration between general education and special education teachers in particular is an essential element to the successful implementation of inclusive practices (Allison, 2011; Catkin & Rizza, 2009; Hepner & Newman, 2012; Murawski, 2012; Worrell, 2008). Through collaboration, teachers' confidence level and apprehension toward inclusion may decrease. Therefore, my third recommendation is that general education and regular education teachers be provided time to collaborate to meet the needs of students included in the general education setting.

Finally, I also recommend that a mentorship program be developed. A simple program that pairs teachers who self-report themselves as efficacious with regard to teaching students with disabilities in inclusive settings and who self-report themselves as having positive attitudes toward inclusion could serve as mentors to teachers who do not recognize themselves as efficacious in these capacities. Mentor teachers could provide mentee teachers with personal anecdotes as well as opportunities to be observed, which would provide mentee teachers with vicarious experiences, which then could contribute to higher levels of self-efficacy for the mentee teachers. In addition, the mentor teachers could serve as sources of positive and encouraging praise, which would allow mentee

teachers to experience verbal persuasion, which then also could contribute to higher levels of self-efficacy for the mentee teachers.

Recommendations for Further Study

Reflecting on this study, I recognized that it would be beneficial to explore differences in teachers' attitudes towards inclusion at various grade levels. This study was delimited to teachers at the elementary and middle school levels. It is possible that the duties associated with inclusive practices and/or the unique needs of students with disabilities as various age levels impact teachers' attitudes differently. Therefore, I recommend exploring differences in teachers' attitudes towards inclusion at the elementary, middle, and high school levels.

Additional research should be conducted to explore other variables that may be related to teachers' attitudes toward inclusion. For example, researchers could consider the impact of collective teacher efficacy and efficacy for implementing inclusive strategies in the classroom (as opposed to general Efficacy for Student Engagement, Efficacy in Instructional Strategies, and Efficacy for Classroom Management) on teachers' attitudes toward inclusion. Researchers also could consider the impact of personal teacher characteristics such as age and years of teaching experience on teachers' attitudes toward inclusion. Because there were too few teacher responses to analyze the data for gender and the educational level doctoral degree, I also recommend these personal teacher characteristics be considered in future research.

Finally, I recommend that future research be conducted using a mixed method study design. By using qualitative methods to collect data from teachers, researchers may

gain more personal insight into teachers' experiences with regard to inclusive practices. An understanding of teacher perspectives in this regard could provide insight into teachers' level of efficacy with regard to teaching students with disabilities in the inclusive setting in particular and their attitudes toward inclusion in general.

Conclusion

Inclusion is a result of the requirement of both IDEA (2004) and NCLB (2002); therefore, administrators, general education teachers, special education teachers, and all involved in educating students with disabilities are mandated to modify instruction and provide instructional strategies to accommodate students with disabilities. As a result, students with disabilities are given opportunities to interact and be educated with their peers without learning disabilities. However, considering Bandura's (1977) theory of self-efficacy and social cognitive theory (1986) with regard to teachers and inclusive practices in the general education classroom, teachers who are not knowledgeable about inclusive strategies may not feel self-efficacious with regard to implementing such strategies. When teachers have low levels of self-efficacy with regard to inclusive practices, they are not likely to actively put forth effort to implement these strategies. In addition, low levels of teacher self-efficacy can affect teachers' attitudes toward inclusion, which further may deter teachers from actively putting forth effort to implement inclusive strategies in the classroom. When teachers do not actively implement strategies to ensure that students with disabilities receive the proper support they need to be successful, they are not likely to be successful. This condition is problematic and warrants attention. That general education teachers in this study were

found to have less positive attitudes than special education teachers, and this can be interpreted to mean that they likely also have lower levels of self-efficacy. Again, these characteristics in teachers are undesirable because they ultimately can impact the success of students with disabilities in the general education classrooms.

Results of this study are not generalizable to the larger population. However, they still have value at the local level. Insight from this study may prompt school district administrators to provide teachers with the necessary training, support, and resources they need to educate students with disabilities. In particular, school administrators can implement professional development in inclusive practices to help improve levels of self-efficacy and attitudes toward inclusion among not only general education teachers but all teachers in the focus district's schools. By improving teacher self-efficacy and attitudes toward inclusion among the teachers, the amount and quality of inclusive practices implemented in the classroom may be improved. As a result of improved teacher self-efficacy and attitudes toward inclusion, student outcomes may be improved.

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Appendix A: Permission to Reprint Bandura's Model of Self-Efficacy

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Appendix B: Permission from School District to Conduct Study

May 27, 2014

Ms. Carmen Y. Charley

Dear Ms. Charley:

This letter is to inform you that you are being granted written permission to engage in research for your dissertation study on "General Education and Special Education Teachers' Attitude Toward Inclusion." From your request, it is our understanding that you would like to collect data from general and special education teachers at the elementary and middle school levels via scales and a demographic data sheet. In addition, you also would like to do research and collect data from the district level.

In order to further assist you, a copy of this approval letter will be sent to elementary and middle school principals and to Please communicate and coordinate your research activity with them before taking any action.

In closing, we wish you much success in completing your research and would be very interested in your findings. If we can be of further assistance, please do not hesitate to call on us.

Sincerely yours,

Appendix C: Permission to Use the Scale of Teachers' Attitudes Toward Inclusive Classrooms

Original E-mail

From : Keith Cochran [kcochran1976@yahoo.com]
Date : 02/25/2011 07:36 AM
To : Carmen Charley [carmen.charley@waldenu.edu]
Subject : Re: Survey Request

Dear Carmen,

Thank you for your interest in the STATIC instrument. I am overwhelmed at the interest it generated after having created it. It has been used in scores of studies, in more than 19 countries and translated into at least seven languages. Hopefully, you will find it helpful as well.

I am happy for you to use the STATIC in your dissertation research. I wish you the very best with your research and glad to be a small part of it. If I may be of further assistance to you, please do not hesitate to contact me.

Sincerely,

H. Keith Cochran, Ph.D.
Associate Professor
107 E Walnut ST
Gadsden, AL 35903

Appendix D: Permission to Use the Teachers' Self-Efficacy Scale

Original E-mail

From : Anita Hoy [anitahoy@mac.com]
Date : 02/08/2011 06:03 PM
To : Carmen Charley [carmen.charley@waldenu.edu]
Subject : Re: Survey Request

Sorry, I have been traveling.

You are welcome to use the TSES in your research.

Anita

Anita Woolfolk Hoy, Professor
Educational Psychology & Philosophy
School of Educational Policy and Leadership
The Ohio State University
Columbus, OH 43210

phone: 614-488-5064
fax: 614-292-7900
e-mail anitahoy@mac.com

http://ehe.osu.edu/epl/directory/anita-hoy/

On Feb 8, 2011, at 12:46 PM, Carmen Charley wrote:

Dear Dr. Woolfolk-Hoy,
I am writing you in reference to a letter that I mailed about two weeks ago. I wrote the letter to request permission to use the Teacher's Sense of Efficacy Scale in my study on General Education and Special Education Teachers' Attitudes Towards the Inclusion of Students with Disabilities in the Regular Ed. Setting. Attached is a copy of the letter. You may respond by email or letter.

I look forward to hearing from you soon. If you have any questions, please contact me at 803-707-1434 or 803-535-0978.

Thank you,

Carmen Y. Charley
Walden University Doctoral Candidate

Appendix E: Teacher Attitude and Self-Efficacy Survey

Teacher Attitude and Self-Efficacy Survey

Directions: For each section, please select one answer for each question.

Section 1: Demographic Information

1. Gender

_____ Male

_____ Female

2. Highest level of education completed.

_____ Bachelor's degree

_____ Master's degree

_____ Master's degree + 30

_____ Doctorate degree

3. Capacity in which you have taught for the majority of the last 5 years of your teaching career.

_____ General education teacher

_____ Special education teacher

4. Grade level at which you've taught for the majority of the last 5 years of your teaching career.

_____ Elementary

_____ Middle

Section 2: Attitudes Toward Inclusive Classrooms

5. I am confident in my ability to teach children with special needs.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

6. I have been adequately trained to meet the needs of children with disabilities.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

7. I become easily frustrated when teaching students with special needs.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

8. I become anxious when I learn that a student with special needs will be in my classroom.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

9. Although children differ intellectually, physically, and psychologically, I believe that all children can learn in most environments.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

10. I believe that academic progress is possible in children with special needs.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

11. I believe that children with special needs should be placed in special education classes.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

12. I am comfortable teaching a child that is moderately physically disabled.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

13. I have problems teaching a student with cognitive deficits.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

14. I can adequately handle students with mild to moderate behavioral problems.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

15. Students with special needs learn social skills that are modeled by general education students.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

16. Students with special needs have higher academic achievements when included in the general education classroom.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

17. It is difficult for children with special needs to make strides in academic education in the general education classroom.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

18. Self-esteem of children with special needs is increased when included in the general education classroom.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

19. Students with special needs in the regular education classroom hinder the academic progress of the general education student.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

20. Special in-service training in teaching special needs students should be required for all general education teachers.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

21. I don't mind making special physical arrangements in my room to meet the needs of students with special needs.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

22. Adaptive materials and equipment are easily acquired for meeting the needs of students with special needs.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

23. My principal is supportive in making needed accommodations for teaching children with special needs.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

24. Students with special needs should be included in the general education classroom.

0	1	2	3	4	5
Strongly disagree	Disagree	Not sure but tend to disagree	Not sure but tend to agree	Agree	Strongly agree

Section 3: Self-Efficacy

25. How much can you do to control disruptive behavior in the classroom?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

26. How much can you do to motivate students who show low interest in school work?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

27. 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
Nothing		Very little		Some influence		Quite a bit		A great deal

28. How much can you do to help your students value learning?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

29. To what extent can you craft good questions for your students?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

30. How much can you do to get children to follow classroom rules?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

31. How much can you do to calm a student who is disruptive or noisy?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

32. How well can you establish a classroom management system with each group of students?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

33. How much can you use a variety of assessment strategies?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

34. To what extent can you provide an alternative explanation or example when students are confused?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

35. How much can you assist families in helping their children do well in school?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

36. How well can you implement alternative strategies in your classroom?

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some influence		Quite a bit		A great deal

Thank you for taking the time to complete this survey.