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Factors Predicting Teacher Attitudes Toward Inclusive Education

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FACTORS PREDICTING TEACHER ATTITUDES TOWARD INCLUSIVE EDUCATION

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ABSTRACT

This study investigated factors that may predict teacher attitudes toward including students with special needs in the general education classroom. Factors examined in this study included experience working with children with disabilities, level of training, type of disability of the student, perceived administrative support, and perceived school climate. Past research suggested that these factors, with the exception of perceived school climate, influence teacher attitudes toward inclusive education. Goals of the present study included determining to what extent each factor may predict teacher attitudes toward inclusion with the addition of perceptions of school climate. 163 elementary and secondary general and special education teachers were surveyed to determine their attitudes toward inclusion, willingness to include students with various disabilities, perceived levels of administrative support, and perceived school climate within the school in which they work. Prior research was supported and all hypothesized variables predicted attitudes toward inclusion. A willingness to include students with emotional/behavioral concerns was correlated with the amount of training received relative to working with students with disabilities and was a robust predictor of attitudes toward inclusion. Perceptions of school climate were also a significant predictor of attitudes toward inclusion, with more positive perceptions of school climate being associated with more positive attitudes toward inclusion.

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CHAPTER 1

INTRODUCTION

School systems in the United States have experienced an increase of students with disabilities included in the general education classroom over the past four decades (U.S. Department of Education, 2001). The U.S. Department of Education (2016) reported that since the adoption of Public Law 94-142, the Education for All Handicapped Children Act (PL 94-142, 1975), the number and percentage of school-aged children receiving special education services has grown steadily.

The boundaries between general education and special education have become increasingly hard to define (Daniel & King, 1997). Prior to the passage of PL 94-142, most students with disabilities were segregated from their peers without disabilities. PL 94-142 was reauthorized in 1991 as the Individuals with Disabilities Education Act (IDEA), which mandated that children with disabilities be educated according to the principles of a free and appropriate public education (FAPE) in the least restrictive environment (LRE). FAPE emphasizes services that are designed to meet the unique needs of children with disabilities and prepare them for future educational and employment experiences. LRE refers to the principle that students with disabilities must be educated alongside their peers without disabilities unless their disability is so severe that satisfactory education cannot take place, even with supplementary aids and services (Smith, Dowdy, Polloway, & Blalock, 1997). The numbers of students with disabilities being

served in the general education classroom for large portions of the school day have been steadily increasing since the passage of PL 94-142. In 1991, the first year of IDEA, 3.7 million students were identified for special education services, or 8% of the total school enrollment (U.S. Department of Education, 2001). By the 2014-2015 school year, that number reached nearly 6 million students identified, or 8.7% of the total school enrollment (U.S. Department of Education, 2016). Prior to the passage of IDEA in 1991, Congress found that of an estimated 8 million children with disabilities in the United States, as many as 1 million were totally excluded from public education and at least 3 million were being underserved (Smith et al., 1997). In 2014, 94.7% of students served under IDEA were educated in general education classrooms for at least a portion of the school day (U.S. Department of Education, 2016). More than 60% of these students were educated inside the general education classroom for 80% or more of the day. Federal laws such as IDEA and the No Child Left Behind Act (NCLB, 2002) have required schools to become increasingly accountable for the achievement of students with diverse learning needs.

In addition to changes in federal laws pertaining to special education, several landmark court cases have had an impact on special education placement decisions and the meaning of inclusion. The *Daniel R.R. v. State Board of Education* decision in 1989 ruled that schools must provide an individual education that is specific to a child's needs and must also educate students with disabilities in the general education classroom to the maximum extent possible (as cited in Barnes & Weiner, 1994). In a similar court decision, the 1993 *Oberti v. Board of Education* decision placed the burden of proof on the school to justify excluding a student from the general education setting (as cited in Barnes & Weiner, 1994). Changes in federal laws, coupled with court decisions similar to these, has led to an increase of including students with special needs in

the general education setting (as cited in Barnes & Weiner, 1994).

The educational inclusion movement came into public attention in the 1980s as a result of the Regular Education Initiative (REI; Handler, 2003). REI called for a greater commitment to providing quality education for students of all abilities and sought a merging of special education and general education services. REI was based on the argument that students were more alike than different and that good teachers can teach all students. A driving principle of REI was that general education classrooms can manage all students without segregating students with special needs and that an educational system that utilized physically separate classrooms for such students was inherently discriminatory (Kavale, 2002). REI was a social movement that, along with legal educational reform, shaped the conversation on inclusion. The term *inclusion* has come to replace the older terms of *integration* and *mainstreaming* (Avramidis, Bayliss, & Burden, 2000). Although sometimes used interchangeably when referring to inclusive education, integration and mainstreaming often simply entailed the placement of children with disabilities in the general education setting and did not imply that children's education would be structured to meet their needs. Inclusion implies restructuring mainstream schools to accommodate every child, regardless of disability status. Swain, Nordness, and Leader-Janssen (2012) described three dimensions of inclusive educational practices. First, students with disabilities must be placed in the same classroom as their peers without disabilities and removed only when necessary. Second, peer and teacher relationships should be nurtured and promoted within the classroom setting. Third, students with disabilities should be taught with the same evidence-based curriculum used for students without disabilities, adjusting the curriculum as necessary to meet the needs of diverse learners. Definitions of inclusion can vary, but inclusion is typically achieved when

> special classes, separate schooling, or other removal of disabled children from the regular educational environment occurs only when the nature and severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (Fuchs & Fuchs, 1995, p. 22)

Individually designed instruction and support for students with special needs in inclusive classrooms allow each student to participate and benefit from opportunities within the general education classroom (Moore, Gilbreath, & Maiuri, 1998).

The demands of inclusive education may leave general education teachers overwhelmed with an increase of students with diverse learning needs placed in their classrooms (Swain, et al., 2012). Given that students with disabilities are being included in general education classrooms at increasingly greater levels, it is necessary to examine factors that contribute to the success of inclusive practices (Huber, Rosenfeld, & Fiorello, 2001; Moore et al., 1998; Winzer, 1998). Teachers' attitudes toward inclusion are a key component of its successful implementation, and positive attitudes are associated with professional conduct within inclusive classrooms and better quality teacher–student interactions (Cook, 2001). After completing a meta-analysis of the inclusion literature, Scruggs and Mastropieri (1996) found that teachers' self-reported attitudes toward inclusive education had demonstrated a trend toward becoming increasingly positive. More recent research supported the finding that teachers are generally positive toward the concept of inclusion (Carrington, Berthelsen, Nickerson, Walker, & Meldrum, 2016; Taylor & Ringlaben, 2012; Vaz et al., 2015). Moreover, several variables have been consistently linked to teachers' attitudes toward inclusion. The nature of a student's disability (Hwang & Evans, 2011), experience teaching students with disabilities (Carrington et al., 2016), amount of training and professional development (Taylor & Ringlaben, 2012), and administrative support

(Avramidis & Norwich, 2002) have been demonstrated to influence teachers' attitudes toward inclusion. Perceptions of school climate comprise a variable that has not been studied in relation to attitudes toward inclusion but is a potentially important factor.

This study examined the effects of the nature of a student's disability, teachers' experience and training, levels of administrative support, and school climate on educators' attitudes toward inclusion. The study extended prior research by seeking to identify the relative strength of several previously identified predictors, as well as examining the role of perceived school climate in predicting teachers' attitudes toward inclusion. Additionally, this study explored relationships among the five predictor variables.

CHAPTER 2

LITERATURE REVIEW

The purpose of this literature review is to examine the practice of inclusion and the factors which may contribute to positive attitudes toward inclusion. First, the literature related to the impact inclusion has on students with and without disabilities, as well as their teachers, will be examined. Next, research on factors influencing attitudes toward inclusion will be considered. Then, a summary of attitudinal research, including measurement and theory, will be discussed to provide a context for this study. Last, the importance of teacher attitudes to the effective adoption of inclusion will be examined, along with a discussion of the historical trends in teacher attitudes toward inclusion.

Inclusion Research

The inclusion movement sought to shift traditional special educational practices and restructure schools to accommodate the needs of all students and minimize the separation of regular and special education (Forlin, 1997). Proponents of the inclusion movement suggested that all learners benefited from an inclusive setting (Fulk & Hirth, 1994). As expected, research has suggested that students with disabilities educated in inclusive classrooms out-perform their peers in separate education classrooms (Daniel & King, 1997; Peetsma, Vergeer, Karsten, & Roelveld, 2001) and that students without disabilities can benefit from an inclusion setting (Huber et al., 2001; Sharpe, York, & Knight, 1994).

Impact of Inclusion

Research has demonstrated that inclusion can be very effective for both regular education students and students with disabilities (Banerji & Dailey, 1995; Dessemontet, Bless, & Morin, 2012; Huber et al., 2001; Katz, Mirenda, & Auerbach, 2002). The results of several studies suggested that students with disabilities in an inclusive setting outperform their peers who receive instruction outside of general education settings and also demonstrate improved self-esteem and social skills (Lindsay, 2007; Salend & Garrick Duhaney, 1999; Vaughn, Elbaum, Schumm, & Hughes, 1998). General education students have also benefited both academically and socially from inclusion practices (Sharpe et al., 1994; Vaughn et al., 1998). Additionally, inclusion has led to an increase in positive attitudes and empathy for individuals with disabilities on the part of teachers and general education students (Moore et al., 1998).

Academics. Students with disabilities in inclusive classrooms can thrive academically (Rea, McLaughlin, & Walther-Thomas, 2002). Banerji and Dailey (1995) defined effective inclusive classrooms as stigma-free environments that support engaged behavior and social interaction. An environment supporting engaged behavior is especially important considering that time spent academically engaged may be the single best predictor of achievement (Katz et al., 2002).

The relationship between inclusive practices and overall academic achievement suggests that greater academic achievement is related to a larger number of students with disabilities being served in the general education classroom. Schools with greater levels of inclusive practices have higher standardized test scores and have more students with disabilities earn a diploma than schools with lower levels of inclusive practices (Luster & Durrett, 2003). Students with disabilities in inclusive classrooms achieve higher course grades and standardized test

scores than students with disabilities served in traditional pull-out programs (Rea et al., 2002). In addition to improved grades, students with disabilities placed in inclusion programs demonstrate greater mastery of IEP goals, on-task behavior, and motivation to learn (Salend & Garrick Duhaney, 1999).

Students with specific learning disabilities (SLD) and intellectual disabilities (ID) have been the most frequently studied populations in the inclusion literature. Multiple studies suggesed that inclusive practices have a positive impact on the academic achievement of these populations (Banerji & Dailey, 1995; Katz et al., 2002; Rea et al., 2002). According to Rea et al. (2002), students with SLD who are served in inclusive classrooms achieve higher course grades in language arts, mathematics, science, and social studies than students in pull-out programs. Additionally, students with SLD served in inclusive classrooms did not experience more in-school or out-of-school suspensions and had better attendance than students served in pull-out programs. Banerji and Dailey (1995) found students with SLD in inclusive settings developed their reading skills at a pace comparable to their peers without disabilities and were often indistinguishable to an outside observer from students without disabilities.

Dessemontet et al. (2012) found that students with ID in inclusive classrooms did not differ significantly from children in special schools regarding their progress in mathematics and adaptive behavior. Moreover, the included children made slightly more progress in literacy skills than those attending special schools. Peetsma et al. (2001) tracked the development of matched pairs of primary-aged students with ID in inclusion classrooms and traditional self-contained special education classrooms. After two years, students in inclusion classrooms made more progress in mathematics than those in special education classrooms, and after four years they had made more progress in overall academic performance. The finding that global

academic benefits emerge across a period of several years may indicate that the effects of inclusion take time to develop, even in classrooms that are utilizing effective inclusive teaching practices.

Despite multiple studies documenting positive academic outcomes for students with disabilities, other researchers have reported mixed results (Salend & Garrick Duhaney, 1999). The inclusion research is undoubtedly mixed and some researchers argue that inclusion should not be implemented until a preponderance of data supports its practice (Kavale, 2002; Lindsay, 2007). Daniel and King (1997) suggested, however, that negative results for the effects of inclusion, such as increased behavioral problems, slow progress when compared to pull-out programs, and decreased self-esteem, may be the result of poor implementation of inclusive practices. Research reporting that inclusion is ineffective has often been based on situations in which students were placed in general education classrooms without proper supports, or in general education classrooms where the accommodations in their individualized education programs were not being implemented with fidelity (Moore et al., 1998). When evaluating research findings, the quality of inclusive programming and the level of training for those responsible for its administration should be considered.

Social outcomes. Social outcomes for students with disabilities are another area of concern when considering placement of children with disabilities (Vaughn et al., 1998). Students with disabilities served in inclusion classrooms demonstrate improved self-esteem, greater friendship quality, and higher levels of peer acceptance (Banerji & Dailey, 1995). Students with disabilities in inclusive settings have increased opportunities for positive interactions and collaboration with students without disabilities (Vaughn et al., 1998). These opportunities lead to more social contacts and stronger friendship networks, which provide

stronger social support systems in comparison to students with disabilities who are educated in self-contained classrooms (Giangreco, Dennis, Cloninger, Edelman, & Schattman, 1993; Salend & Garrick Duhaney, 1999). Vaughn et al. (1998) suggested that students with disabilities who are served in inclusion classrooms experience improvements in their awareness and responsiveness to teachers, support staff, and classmates. The improvement in responsiveness manifests itself through more quality interactions and mutual exchanges with teachers and peers. Compared with peers in a more restrictive environment, students with disabilities receiving consultation or co-teaching services demonstrated more positive outcomes on friendship quality, peer acceptance, improved self-concept, and an increase in reciprocal friendships (Vaughn et al., 1998).

Classroom interventions, consultation, and co-teaching models of inclusive education can be utilized to increase the social benefits of inclusion (Salend & Garrick Duhaney, 1999; Vaughn et al., 1998). Social skills interventions, for example, can be used to provide information to classmates without disabilities regarding the ways the students with disabilities communicate. Teachers can also facilitate social interactions by employing interactive activities. In one intervention studied by Mikami et al. (2013), students without disabilities were encouraged to be more socially inclusive of students with attention-deficit/hyperactivity disorder (ADHD). Students with ADHD demonstrated more reciprocal friendships and received more positive messages from their peers than a control condition. Additionally, students with ADHD demonstrated fewer behavioral outbursts and received less disciplinary action than students in a control group. The findings that students with ADHD demonstrated improved behavior when social skills interventions were implemented suggest that the social benefits of inclusion can be enhanced with the addition of interventions.

Students without disabilities. The research on the effects of inclusion on the academic performance of students without disabilities suggests a range of outcomes, from no effect to positive effects (Huber et al., 2001). Sharpe et al. (1994), for example, found no significant difference between students without disabilities in an inclusion setting and those who were in classrooms that did not include students with disabilities. Huber et al. (2001) indicated that low achieving students without disabilities can benefit from inclusion practices. A large body of research suggested a positive correlation between higher academic performance and improved social outcomes for students with disabilities educated in inclusive settings, without a negative impact on their peers without disabilities (Daniel & King, 1997; Luster & Durrett, 2003; Peetsma et al., 2001).

Salend and Garrick Duhaney (1999) found that the placement of students with disabilities in inclusive classrooms did not significantly affect the achievement of peers without disabilities, and this effect remained when including students with severe disabilities. Included students with disabilities did not negatively impact the amount of allocated or engaged instructional time devoted to students without disabilities. Classroom environments and students are perhaps more resilient than might be expected in terms of their responses to the inclusion of students with disabilities in general education classrooms (Sharpe et al., 1994). Large numbers of students with disabilities in the classroom did not lead to lower achievement by general education students, and in some cases there was a positive effect on achievement (Huber et al., 2001). Madden, Slavin, Karweit, Dolan, and Wasik (1993) implemented inclusive reading interventions in four schools and found that students with disabilities, low achieving students, and high achieving students demonstrated gains.

In addition to potential academic benefits, students without disabilities can derive social and emotional benefits from participating in inclusive classrooms. Students without disabilities can develop greater awareness and acceptance of the special needs of students with disabilities in inclusion classrooms (Giangreco et al., 1993). Students without disabilities reported that inclusion programs helped them understand differences in physical appearance and behavior, as well as value differences among peers with disabilities (Salend & Garrick Duhaney, 1999). This increased acceptance, understanding, and tolerance of individual differences is in contrast to students attending non-inclusion schools, where general education students were more likely to engage in stereotyping and hold negative views of students with disabilities (Salend & Garrick Duhaney, 1999). Effectively run inclusive classrooms can become communities where students enjoy the opportunity to learn and work together (Banerji & Dailey, 1995).

Teachers. In addition to supporting the positive effects of inclusion on the academic and social skills of students with and without disabilities, research suggested that classroom teachers may benefit from teaching in an inclusive environment (Giangreco et al., 1993). Teachers have reported multiple personal and professional benefits of teaching within inclusive classrooms. Positive professional outcomes have included increased skill at meeting the needs of students with and without disabilities and increased confidence in their teaching ability (Salend & Garrick Duhaney, 1999). Personal outcomes have included being more aware of the impact of teachers as positive role models for all students and feeling good about the ability to grow both personally and professionally.

Factors Influencing Attitudes Toward Inclusion

The development of teachers' attitudes toward inclusion has been linked with several factors. Kavale (2002) identified three concerns that may underlie teacher attitudes toward

including students with disabilities in the regular education classroom: academic, administrative, and pedagogical. Teachers with favorable attitudes toward inclusion may have academic concerns for students with disabilities who are segregated from mainstream classrooms. Conversely, teachers may have concerns that the education of students without disabilities might suffer in inclusive classrooms. Administrative concerns are related to issues of support; teachers' attitudes toward inclusion are often related to the amount of support they receive from principals and special educators. The availability of financial and material resources is also a common administrative concern. Pedagogical concerns relate to teachers' perceptions that they lack the training and experience necessary to educate students with disabilities. Salend and Garrick Duhaney (1999) found that two-thirds of general education teachers supported the placement of students with disabilities in general education classrooms, but only one-third or fewer of teachers reported that they have the time, expertise, training, or resources to implement inclusion effectively. Academic, administrative, and pedagogical concerns that influence teachers' attitudes toward inclusion may also impact their subsequent teaching practices (Kavale, 2002).

Research has indicated that some factors commonly related to teacher attitudes in other areas are not related to attitudes about inclusion. For instance, factors that have not been associated with teacher attitudes toward inclusion include years of teaching experience, grade level taught, and the gender of the teacher (Hastings & Oakford, 2003; Monsen, Ewing, & Kwoka, 2014). After a review of the literature, four prominent factors appear to influence teachers' attitudes toward inclusion: the nature of a child's disability, level of training, experience working with students with disabilities, and administrative support.

Nature of the disability. Teachers may hold positive attitudes toward inclusion and yet be reluctant to teach students with certain disabilities (Hwang & Evans, 2011). The type and severity of disabilities affect teachers' willingness to accommodate certain students and their confidence that they will effectively manage their classroom (Cassady, 2011). Avramidis and Kalyva (2007) suggested that teachers may be positive toward the general concept of inclusion but feel that it would take away time and resources from other students. In a survey conducted by Heflin and Bullock (1999), none of the teaching professionals surveyed believed that full inclusion is the best alternative for all students. Students with emotional and behavioral disorders are often viewed as more concerning than students with other types of disabilities (Avramidis et al., 2000), and teachers are less willing to include them than children with physical disabilities or other milder disabilities like SLD (Monsen et al., 2014). Students with emotional or behavioral disorders are often excluded from inclusion and, when they are included, teachers hope for behavioral improvements rather than academic gains (Heflin & Bullock, 1999). A concern may be that teachers lack confidence that they will be able to manage classroom behaviors given that students with emotional and behavioral disorders typically lack social skills and are prone to behavioral outbursts (Cassady, 2011). Teachers may feel that they lack the proper training and experience necessary to implement inclusion effectively, especially for children with severe behavioral or emotional disorders (Winzer, 1998).

Hastings and Oakford (2003) found that pre-service educators may be particularly concerned about the negative impact of children with emotional and behavioral disorders on other children, teachers, and the school environment. Reported concerns were far greater for students with emotional and behavioral disorders than students with SLD and ID. This finding points to the need for greater pre-service training and experiences with students with disabilities

so teachers new to the profession can feel confident about their skills to educate students with a range of needs.

Experience. Experience in the context of this study can be defined as exposure to students with disabilities in the classroom. It may be related to overall years of teaching experience if teachers actively taught students with disabilities during that time and overlap with the variable of training is to be expected. Experience teaching children with disabilities has been identified as an important variable that can influence teacher attitudes toward inclusion (Avramidis et al., 2000). Carrington et al. (2016) surveyed teachers over a three-year period and found that the teachers' attitudes became more positive over the course of the study. Many of the teachers reported becoming more positive toward inclusion when they witnessed firsthand how the children benefited. Indeed, teachers actively teaching students with disabilities tend to hold significantly more positive attitudes than their counterparts with little or no experience (Avramidis & Kalyva, 2007). In a review of the literature, Avramidis and Norwich (2002) found that teachers with active experience with inclusion not only reported more favorable results in the classroom, but also reported increased feelings of mastery and confidence in their ability to teach children of all ability levels. Feelings of discomfort about relating to individuals with disabilities have been closely linked to negative attitudes and lowered expectations toward those individuals (Avramidis & Norwich, 2002).

Forlin (1997) suggested that contact with individuals with disabilities can reduce feelings of discomfort and, in turn, lead to more positive attitudes and higher expectations. Giangreco et al. (1993) found that teachers who were new to inclusive classrooms reported a negative initial experience while having limited involvement with students with disabilities. They further reported holding an expectation that someone else--such as an instructional assistant--was

responsible for the education of students with disabilities. Teachers whose attitudes changed over the course of a school year reported being more involved with their students.

A finding that runs counter to the data on teaching experience is that teachers who are less removed from pre-service training tend to be more positive toward inclusion (Monsen et al., 2014). One possible explanation is that the philosophy of inclusion is more heavily emphasized in contemporary pre-service teacher education programs (Hwang & Evans, 2011). Teachers with more experience overall but little experience teaching within inclusive classrooms might not like to teach challenging students because it could reflect negatively on their competency (Monsen et al., 2014).

Given that experience working with students with disabilities is an important influence on attitudes toward inclusion, Forlin (1997) recommended that pre-service courses for training teachers include experiences with individuals with disabilities. Undergraduate students enrolled in an introductory special education class completed a survey measuring attitudes toward inclusion once at the beginning of the semester and again at the end (Swain et al., 2012). The course included field experiences where students had direct contact with children with disabilities. Attitudes of undergraduate students that showed the most change were related to their beliefs in their expertise for working with students with disabilities and the feasibility of teaching students with disabilities in the general education classroom. Educational and practical experiences working with individuals with disabilities can lead to more positive attitudes toward inclusion, particularly when they are integrated throughout teacher education programs and not limited to the final year of study (Forlin, 1997).

Training. Training is differentiated from experience in that training implies explicit instruction to improve a teacher's skills for working with students with disabilities. Training

activities may include pre-service and graduate course work and in-service professional development opportunities relating to educating students with disabilities. Teachers' level of training and professional expertise has been identified as an important mediator of attitudes toward inclusion (Elhoweris & Alsheikh, 2004; Heflin & Bullock, 1999). Vaz et al. (2015) found that teachers with low levels of self-efficacy in their teaching skills were more likely to hold negative attitudes toward including students with disabilities in their classrooms. Conversely, teachers who reported having training in teaching students with disabilities held positive attitudes toward inclusion. Teachers may be resistant to the concept of inclusion because they feel that they do not possess the skills to meet the needs of students with and without disabilities in the general education classroom. According to Avramidis and Kalyva (2007), teachers who reported negative attitudes may actually be expressing a lack of competence or ability to meet the needs of children with disabilities. In support of this point is the finding that special education teachers were generally more supportive of inclusion than general educators (Elhoweris & Alsheikh, 2004). Special educators were also more willing to work with students with disabilities, possibly as a result of greater levels of training and experience with that population.

Beacham and Rouse (2012) surveyed student teachers at the beginning and end of a professional graduate diploma course. They found that teachers' attitudes toward inclusion remained positive throughout the course and were undiminished by school experience. Teachers reported initially positive attitudes that grew increasingly positive over the course of the semester in which they increased their level of training for working with students with disabilities.

Teacher education is crucial in helping to develop positive attitudes that are thought to promote inclusion. Taking courses that offer instruction in collaboration techniques, curricular

modifications, and behavior management techniques can lead to increased knowledge of special education practices and an increase in positive attitudes toward inclusion (Coombs-Richardson & Mead, 2001). Formal training and number of years involved with inclusion have been associated with reduced stress and an increased willingness to collaborate with other professionals (Forlin, 2001). Teachers who engaged in consultation and collaboration activities with special educators and other professionals reported increasingly positive attitudes toward inclusion (Hannah & Pliner, 1983).

Long-term training through professional development opportunities and in-service presentations is important in the formation of positive teacher attitudes toward inclusion (Avramidis & Kalyva, 2007). Teachers who attended a nine-week professional development program demonstrated an increase in their knowledge of best practices in inclusive classrooms (Royster, Reglin, & Losike-Sedimo, 2014). Additionally, the teachers who attended the professional development program reported a positive change in attitudes toward inclusion at the end of the program. Continued attendance at professional development sessions can improve the attitudes of teachers (Swain et al., 2012); teachers with more professional development experiences reported more positive attitudes toward inclusion (Avramidis et al., 2000). Teachers responding to a survey in a study by Fulk and Hirth (1994) were generally pleased with in-service education sessions and professional development opportunities. Teachers reported positive feelings between general and special educators when both groups were present for the trainings.

Administrative support. In addition to teachers' level of experience and training, more resources, support, and training opportunities are needed for teachers to feel comfortable within inclusive classrooms (Avramidis & Norwich, 2002). Teachers acknowledged that the positives

of inclusion outweighed the negatives but felt that they lacked the training and support necessary to meet the needs of included students with disabilities (Royster et al., 2014). Teachers reported they would be more willing to include students with disabilities if they had access to adequate administrative support and added resources. Although it has not been explicitly addressed, there may be a relationship between a teachers' lack of training and perceived need for administrative support, such that teachers who feel unprepared to work in inclusive classrooms may feel that they need more administrative support (Heflin & Bullock, 1999).

According to Idol and Griffith (1998), teacher perception of lack of principal support is a primary reason why change in relation to inclusion does not take place. Students with disabilities made greater academic gains in schools with administrators that supported and worked closely with teachers (Idol & Griffith, 1998). A majority of teachers in schools with high levels of administrative support expressed positive attitudes toward including students with disabilities. Teacher attitudes toward inclusion tended to increase with greater perceived adequacy of both internal and external support (Monsen et al., 2014). Internal support in this case referred to support from colleagues and classroom assistants; external support referred to consultation with school psychologists and speech-language pathologists.

School climate. School climate, also known as organizational health, refers to the atmosphere, culture, and resources of a school (Collie, Shapka, & Perry, 2011). According to Thapa, Cohen, Guffey, and Higgins-D'Alesandro (2013), school climate is "based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" (p. 358). Additionally, school climate refers to a social system of shared experiences and norms that may be associated with the level at which teachers feel empowered to perform their duties (Johnson, Stevens, & Zvoch,

2007). Berg and Cornell (2016) recognized school climate as an essential component of school improvement policies and practices. Carrington et al. (2016) proposed that a positive school climate would be associated with a school community that is supportive of inclusive environments; therefore, teachers' perceptions of school climate may be an important factor to consider in evaluating their attitudes toward inclusion.

Thapa et al. (2013) identified school climate as being an important component of schools. Having an overall positive school climate can affect the attitudes, behaviors, and achievement of teachers, students, and community members. Areas essential to an effective school climate include a caring atmosphere that permeates the school, respect for individual differences among staff, a high level of trust between the principal and staff, high morale, an emphasis on social development, and the school placing academic development as the primary concern. Attitudes toward discipline, including the perceived fairness of rules and the effectiveness of school discipline, contribute to school safety conditions, which in turn influence perceptions of school climate (Berg & Cornell, 2016).

Johnson et al. (2007), while developing their Revised School Level Environment Questionnaire (R-SLEQ), identified five areas critical to the assessment of school climate which correspond to subscales on the R-SLEQ: (a) good working relationships between teachers (Collaboration), (b) positive teacher perceptions of student behavior (Student Relations), (c) availability of resources (School Resources), (d) teachers' level of input in decision making (Decision Making), and (e) openness to change and professional growth among teachers (Instructional Innovation). Many of these variables, especially teachers' level of input in decision making, could be related to attitudes toward inclusive education. Teachers' level of input can be conceptualized as their level of empowerment in the school. Empowerment refers

to opportunities teachers have for autonomy, choice, responsibility, and participation in decision making in the school (Short & Rinehart, 1992). Short and Rinehart (1992) surveyed 257 teachers in six states concerning their perceptions of school climate and empowerment. Teachers with greater perceptions of empowerment had more negative views of school climate, suggesting that greater empowerment may lead teachers to evaluate openly their schools in both negative and positive ways.

In a survey of 664 public school teachers, Collie et al. (2011) found that a positive school climate predicted teacher commitment. Commitment to teaching refers to a psychological bond between the teacher and the school and can include commitment to the general teaching profession, commitment to the individual school, and commitment to professional development. Teachers with a positive perception of school climate were more likely to be committed to their profession. This commitment to teaching and to professional development could lead to more positive attitudes toward inclusion.

Research concerning the relationship between teachers' perceptions of school climate and attitudes toward inclusion is sparse. Phelps (1993) surveyed 30 teachers and 10 aides after "reverse integration" efforts in a school for children with cognitive disabilities. These efforts involved integrating general education students into a school that had been exclusively for special education students. Most faculty and staff had negative opinions about the climate following program implementation. Many of the problems involved the manner in which the program was implemented; staff felt that the plan was implemented without staff input and without consideration of student needs. Similarly, teacher attitudes toward inclusion in traditional school settings may be impacted by negative perceptions of school climate that are related to the manner in which inclusive programs are implemented. Teachers with high levels

of involvement or empowerment, who feel they have an impact on the inclusive initiatives, may have more positive perceptions of the school climate and inclusion in general or, in keeping with Short and Rinehart (1992), may feel more negatively about the school climate if they feel the programs are not implemented well.

Attitudinal Research

Attitudes can be broadly defined as favorable or unfavorable dispositions toward social objects, such as people, places, and policies (Greenwald & Banaji, 1995). Attitudes have three components: a cognitive component, an affective component, and a behavioral component (Hannah & Pliner, 1983). The cognitive component refers to beliefs about a subject, the affective component refers to feelings of liking or disliking about a subject, and the behavioral component refers to a predisposition toward a particular action in regard to a subject. When the three components cluster around a single object and are relatively enduring, the phenomenon is described as attitude. If a teacher holds a negative attitude toward inclusion, the teacher may believe children are unable to learn in inclusive classrooms (cognitive), dislike inclusion (affective), and refuse to teach children with disabilities in inclusive settings (behavioral). The following sections will highlight relevant attitudinal theory and research, which may help explain teachers' attitude formation toward inclusive education.

Predicting Behavior from Attitudes

Early attempts to predict behavior from attitudes were not uniformly successful (Ajzen, 1982). The low attitude–behavior relationship can be attributed to the moderating effects of other factors such as values, habits, experience, norms, and expectations. LaPiere (1934) conducted what has become one of the most frequently cited studies of attitude–behavior relations. LaPiere traveled across the western United States with a Chinese couple. The group

stopped at some 200 hotels and restaurants and the Chinese couple was refused service at only one establishment. Six months later, LaPiere wrote the owner of each establishment and asked whether or not they served Chinese guests. Ninety-two percent of respondents indicated that they did not accommodate Chinese guests. Experimental control issues notwithstanding, LaPiere's findings indicated an inconsistency between attitudes and behavior.

While attitude–behavior correlations can exceed .30, the relationship between attitudes and behavior has historically been inconsistent and generally weak (Fazio & Roskos-Ewoldsen, 1994). Common factors that affect the relationship between behaviors and attitudes are the number of behavioral samples and the nature of the attitude measure. Similar to LaPiere's (1934) findings, any single action will typically be a poor representation and an imperfect indicator of general behavioral trends (Ajzen, 1982). In addition, global measures of attitude, although appropriate for the prediction of global behavioral tendencies, do not predict single-act criteria. Single actions can best be predicted from measures of attitude that represent an evaluative predisposition to perform the specific behavior under consideration (Ajzen, 1982).

Greenwald and Banaji (1995) suggested that certain individual, attitudinal, and situational factors can also influence the attitude–behavior relationship. For example, individuals who display more self-awareness display greater attitude–behavior consistency than people who rely on situational cues. In addition, attitudes may predict behavior when the actor is aware of his or her attitude while acting. Attitudes that have been formed as a result of direct experiences are more predictive of behavior because these attitudes are more accessible or easily brought to memory. With respect to situational factors, societal norms can constrain individuals' behavior so they are unlikely to behave in a way consistent with their attitudes. Conversely, when

individuals are under time pressure to act, they often use attitudes as a heuristic, making their behavior more consistent with their attitudes (Greenwald & Banaji, 1995).

Fishbein and Ajzen's (1975) theory of reasoned action assumes that people deliberate about the wisdom of a given course of action. An individual considers, weighs, and combines his or her attitude toward the behavior in question with subjective norms regarding the behavior. Subjective norms in this case involve both the individual's beliefs about what important others think he or she should do and the person's motivation to comply with the wishes of others. Using this model, an individual's behavioral intention is the single best predictor of his or her eventual behavior (Fishbein & Ajzen, 1975). According to the theory of reasoned action, a teacher may hold a negative attitude toward inclusion yet respond in a positive manner if the subjective norms of the school indicate such behavior. When teachers are under pressure to act, however, such as responding to the behavioral outburst of a student with an emotional disability, their true attitude will be demonstrated, making their behavior more consistent with their attitudes.

Attitudes of which the actor (i.e., performer of a given behavior) is not conscious at the moment of action (i.e., implicit attitudes) are strongly predictive of behavior as well (Hornstra, Denessen, Bakker, van den Bergh, & Voeten, 2010). According to Fazio and Roskos-Ewoldsen's (1994) attitude-to-behavior process model, attitudes can guide a person's behavior even when the person does not actively reflect and deliberate about the attitude. An individual's definition and interpretation of an event is assumed to determine how the individual responds. Defining an event consists of two components, including an individual's perceptions of the attitude object in the immediate situation and the individual's interpretation of the situation. Interpreting the situation involves using an individual's storehouse of knowledge concerning

behaviors that are expected and that are appropriate in a given situation. The influence of attitudes on behaviors within this model is related to the attitude's influence on the individual's perception of objects and situations that, in turn, affects the individual's response. Concerning a teacher's attitude toward inclusion, the attitude-to-behavior process model predicts that a teacher will define inclusion based on his or her individual perceptions of inclusion, which includes past experiences. A positive or negative attitude will influence these perceptions, which, in turn, will affect how the teacher works within an inclusive classroom.

Cooper and Fazio's (1984) reformulation of cognitive dissonance theory, referred to as attributional reformulation theory, asserts that attitudes formed through learning may change when exposed to new paradigms. Cognitive dissonance refers to inconsistencies between cognitions or elements of knowledge that people have about themselves, their behavior, or the environment. A key component of cognitive dissonance theory is that individuals are motivated to reduce cognitive dissonance when there is a discrepancy between their attributions for their behavior and the situation in which it occurs. That is, when an individual encounters a situation that does not confirm a pre-existing attitude, he or she then may exhibit changes in attitude and subsequent behavior (Cooper & Fazio, 1984). Attributional reformulation theory provides a possible mechanism for changing attitudes through the reformulation of attributions. A teacher with a previously negative attitude toward inclusion may be motivated to change if he or she encounters students with disabilities who experience success in the inclusive environment. The success of these students would, theoretically, lead to cognitive dissonance and drive the teacher to change his or her attitude.

Theories of attitude have been developed that allow for explanations of attitude formation in educational settings. Weiner's (1979) attributional theory of motivation is based upon

teachers' attributions of causality for success or failure in the classroom. Weiner identified three causal dimensions of teacher attributions: stability, locus of control, and controllability. When forming an attribution toward a behavior, the observer will consider how stable the behavior is, the degree to which the observer can influence the behavior, and the degree of control the actor has over the behavior. For example, a teacher may observe the behavior of a student (the actor) and determine if the behavior is a stable and controllable trait as well as whether the teacher has the power to influence the behavior. This theory posits that when teachers believe that students make an intentional choice, particularly regarding defiant and hostile behavior, they blame students for the behavior and tend to reject them. Viewing Weiner's theory within the context of attitudes toward inclusion, teachers with generally positive attitudes may make generally positive attributions of a student's behavior. Extending Weiner's theory with elements of locus of control theory (Borden & Clyde, 1973) strengthens the argument. Teachers with an external locus of control and little experience or training may feel that they are not responsible for or cannot control the student's behavior. Teachers with an internal locus of control would be more likely to view the behavior as intentional and within the control of the student and thus hold negative attitudes. Weiner's theory offers a possible explanation for why teachers report negative attitudes toward including students with emotional and behavioral disorders.

Gerber's (1988) theory of instructional tolerance provides a context for considering the effect of students' academic performance on teacher attitudes. According to instructional tolerance theory, the low performance of many students with disabilities in response to inclusive teachers' instruction places them outside of the teachers' instructional tolerance boundaries. That is, a teacher is likely to reject students who do not respond to instruction that is conducted within the teacher's domain of competence. Rejection of students by teachers can also be

explained by Cook's (2001) model of differential expectations. Cook's model proposes that teachers form differential and lower expectations regarding the performance and behavior of students with severe disabilities due to the obvious and significant nature of the disabilities. According to this model, teachers will expect less from students with severe disabilities but more from students with less obvious disabilities, such as SLD. The differential expectations of teachers can influence the interaction styles between teachers and students with disabilities, as well as the amount of time spent in individual instruction (Cook, 2001).

The Influence of Attitudes on the Successful Adoption of Inclusion

Prior research has focused on the elements of successfully implementing inclusive educational practices, including the attitudes of general education teachers (Forlin, 1997; Hastings & Oakford, 2003; Hwang & Evans, 2011). Identified factors that may affect teachers' attitudes toward including students with special needs include the following: training (Avramidis & Kalyva, 2007; Beacham & Rouse, 2012); experience working with students with disabilities (Giangreco et al., 1993; Swain et al., 2012); and administrative support (Idol & Griffith, 1998; Monsen et al., 2014). Some evidence indicated that the nature of the disability can influence teacher attitudes as well (Cassady, 2011; Heflin & Bullock, 1999).

An assumption surrounding the implementation of inclusive policies is that its success is largely dependent on educators being positive (Avramidis & Kalyva, 2007; Winzer, 1998). The principle of inclusion calls for students of all ability levels to be provided quality educational experiences in the general education classroom. Therefore, for inclusion--rather than integration--to be effective, general education teachers must endorse it with professional attitudes (Avramidis et al., 2000). Inclusion is more likely to be successful when the classroom teacher takes a central role in the management, support, and organization of all students' daily

educational experiences (Fox, Farrell, & Davis, 2004). Monsen et al. (2014) found that teachers with positive attitudes toward inclusion implemented inclusive practices more effectively, held significantly greater levels of perceived satisfaction, and had less friction and competitiveness in their classroom settings compared to teachers with negative attitudes toward inclusion.

Teacher attitudes may affect the quality of teacher-student interactions and influence teacher expectations toward students with disabilities (Cook, 2001; Hornstra et al., 2010). According to Cook (2004), overall, students with disabilities are overrepresented among teachers' nominations relating to categories of concern, indifference, and rejection. Teacher attitudes may underlie teacher expectations and behaviors, as posited by a number of previously described theories. Teacher expectations can be defined as judgments about individual students regarding their academic potential (Hornstra et al., 2010). Expectations can interact with behavior, which can lead to an indirect effect on achievement through a confirmation bias. That is, if teachers expect less from students with disabilities, they may behave in such a way as to confirm those expectations. For example, students with mild or hidden disabilities (e.g., SLD) often received higher levels of criticism from teachers and experienced fewer interactions that were focused solely on instruction (Cook, 2001). Teachers interacted less with students with obvious disabilities such as orthopedic impairments, but the interactions were more positive in nature. These attitudes and expectations toward students with disabilities may result from a deficit orientation, which is viewing a student's disability as a problem or additional burden on the educator (Barnard, Stevens, Siwatu, & Lan, 2008).

Changes in Attitudes Toward Inclusion

Past research has indicated that teachers have demonstrated a trend toward increasingly positive attitudes toward inclusion (Scruggs & Mastropieri, 1996), and recent studies supported

this trend (Carrington et al., 2016; Vaz et al., 2015). Early studies of teacher attitudes indicated that teachers held negative feelings about inclusion (Avramidis & Norwich, 2002) with reported concerns including class size, inadequate resources, and the extent to which all students might benefit from inclusion. In addition to holding negative attitudes toward inclusion, teachers may have been reluctant to enter into teaching relationships with students with disabilities (Hannah & Pliner, 1983). Teachers may have felt that inclusion was being forced on them by lawmakers and administrators (Fulk & Hirth, 1994). According to Avramidis et al. (2000), teachers were generally positive toward the concept of inclusion, and Ross-Hill (2009) found no reported differences between elementary and secondary teachers.

While teachers may be generally positive toward the concept of inclusion, they may hold variable views on the difficulty of accommodating different types of disabilities in general education classrooms (Avramidis & Kalyva, 2007). In addition, teachers may view inclusion as desirable but not feasible given the amount of resources and training necessary to accommodate all children with disabilities (Cook, Semmel, & Gerber, 1999). While full inclusion is not endorsed, many teachers have reported that the positives of inclusion outweigh the negatives (Fox et al., 2004).

Conclusion

According to research, successful inclusion can be effective both academically and socially for students with and without disabilities as well as their educators (Luster & Durrett, 2003; Peetsma et al., 2001; Sharpe et al., 1994). Positive teacher attitudes are needed to create an effective inclusion environment (Forlin, 2001; Hwang & Evans, 2011). Several factors have been identified as influencing teachers' attitudes toward inclusion, including the nature of a student's disability (Cassady, 2011), experience working with students with disabilities (Swain et

al., 2012), training to work with students with disabilities (Beacham & Rouse, 2012), and administrative support (Monsen et al., 2014). What is unclear is the potential relationship among these factors and to what extent each variable influences attitudes toward inclusion. High levels of administrative support may lead to more training opportunities for teachers, which could lead to increased competence when working with students with emotional and behavioral disorders. Additionally, school climate is a potentially relevant factor that may predict teacher attitudes toward inclusion. A positive school climate may be related to high levels of administrative support, which in turn may influence the other variables.

Further research is needed to determine if there is a relationship between the nature of a student's disability, teacher experience and training, perceptions of administrative support, and perceptions of school climate as influences on teachers' attitudes toward inclusion as well as to what extent each variable influences those attitudes. Understanding contributions to teacher attitudes can provide a basis for intervention, such as improved in-service opportunities, and instructional and administrative strategies, which is desirable for changing teachers' attitudes and behaviors in inclusive settings. This study sought to determine if a relationship exists among these variables and to what extent they predict teachers' attitudes toward inclusion. The following questions were addressed through analysis of survey data.

1. Is there a relationship among the variables of years taught teaching students with disabilities, severity of disability, amount of training, perceived levels of administrative support, and perceptions of school climate? Significant correlations were hypothesized to exist among the five variables, with stronger correlations expected between training and experience and between administrative support and school climate.
2. To what extent do control variables, including population taught (i.e., general or special

education), grade level taught (i.e., primary or secondary), and total years of teaching experience predict educators' attitudes toward inclusion? In an effort to confirm the existing literature, it was hypothesized that grade level taught and total years teaching will not significantly predict attitudes toward inclusion. Population taught is predicted to have an effect, with special educators having more positive attitudes than general educators.

3. To what extent do the variables of years taught teaching students with disabilities, severity of disability, amount of training, and perceived administrative support predict educators' attitudes toward inclusive education, after control variables are taken into consideration? In an effort to confirm the existing literature, it was hypothesized that these variables will be statistically significant predictors of educators' attitudes toward inclusive education.
4. To what extent does school climate improve the prediction of educators' attitudes toward inclusive education, after years taught teaching students with disabilities, severity of disability, amount of training, perceived levels of administrative support, and control variables are considered? Given the important role of school climate, it was hypothesized to contribute significantly toward predicting educators' attitudes toward inclusive education.

CHAPTER 3

METHODOLOGY

Participants

The sample consisted of regular and special education teachers at the elementary and secondary levels. Studies have demonstrated that grade level taught does not significantly influence attitudes toward inclusion (Hastings & Oakford, 2003; Monsen et al., 2014). Therefore, teachers ranging from the elementary to high school level were considered appropriate for inclusion in the study. For participants to be included in the proposed study they must have been currently teaching in a public school. A power analysis was conducted using the *G*Power* software designed by Faul, Erdfelder, Lang, and Buchner (2007). Based on the planned hierarchical multiple regression with three control variables and nine predictor variables, a sample of 57 would be required to detect a large effect size, 116 would be required to detect a medium effect size, and 791 would be required to detect a small effect size. The remaining planned analyses yielded smaller required sample sizes to detect a medium effect; therefore, to balance statistical and practical considerations, 116 was used as the minimum acceptable sample size.

Participants were recruited via email by first contacting superintendents in the state of Indiana. A total of 418 superintendents were sent an email requesting that the link to the study be passed on to educators in their districts. After two weeks, a follow-up request was sent.

Recruitment ended after the second wave of emails because over the minimum number of respondents had been recruited. A total of 182 participants initiated a response to the survey and 19 surveys were discarded due to incomplete or questionable data (e.g., having a completion time of less than 2 minutes and responses with no variability). A total of 163 surveys were considered suitable for analysis in the study.

Participants were asked to report their occupation (i.e., regular education or special education teacher), number of years spent working/teaching in a school environment, level of school currently taught (i.e., primary or secondary), level of education, and gender. Answers to a question asking years of experience teaching children with disabilities provided the variable "years including." Answers to a question asking the number of professional development seminars attended specific to working with children with disabilities provided the variable "training."

Table 1 presents demographic variables of the participants such as gender, grade level taught, whether they identified as general education or special education teachers, and education level. The sample consisted of 41 male respondents (25.2%) and 122 female respondents (74.8%). Sixty-eight teachers taught at the elementary level (i.e., kindergarten through sixth grade), comprising 41.7% of the sample. Ninety-five respondents were secondary level teachers (i.e., seventh grade through 12th grade), comprising 58.3% of the sample. General education teachers (n = 121) constituted a majority of the sample, totaling 74.2%. Special education teachers (n = 42) accounted for 25.8% of the total sample. Regarding education level, 75 respondents held a bachelor's degree (46.0%), 79 held a master's degree (48.5%), 1 held a doctorate degree (0.6%), and eight held special certifications (4.9%).

Table 1

Frequency and Percentage of Participant Gender, Employment Setting, and Level of Education

Variables	Frequency	Percentage
Gender		
Male	41	25.2
Female	122	74.8
Grade Level Taught		
K-6	68	41.7
7-12	95	58.3
Gen. Ed/Special Ed.		
General Education	121	74.2
Special Education	42	25.8
Education Level		
Bachelor's Degree	75	46.0
Master's Degree	79	48.5
Doctorate Degree	1	0.6
Special Certification	8	4.9

Note. $N = 163$.

Table 2 presents the frequencies and percentages of the teaching experience of the respondents and the number of college level courses the respondents took that addressed teaching students with disabilities in their classrooms. Respondents also indicated the number of professional development workshops they had attended that addressed the same topic. The sample was relatively experienced in teaching for both total years teaching and experience including students with disabilities. Over half the sample had more than 10 years of experience in both categories and only about 20% had three years or less experience in either category. Around half of the respondents had taken between one and three courses. Thirty-six percent of the sample had taken four or more courses and 14% had no college courses that addressed teaching students with disabilities in their classrooms. About a third of the sample had attended

between one and three professional development workshops, 22% attended no workshops, and about 40% of the sample had attended four or more workshops.

Table 2

Frequency and Percentage of Participants' Years of Experience and Professional Development

Variables	Frequency	Percentage
Total Years Teaching		
0-1 Years	15	9.2
2-3 Years	16	9.8
4-5 Years	17	10.4
6-10 Years	27	16.6
More than 10 Years	88	54.0
Years Including Students with Disabilities		
0-1 Years	15	9.2
2-3 Years	21	12.9
4-5 Years	20	12.3
6-10 Years	24	14.7
More than 10 Years	83	50.9
Courses Taken		
0	23	14.1
1-3	81	49.7
4-6	28	17.2
7-9	8	4.9
10 or more	23	14.1
Workshops Attended		
0	37	22.7
1-3	54	33.1
4-6	35	21.5
7-9	8	4.9
10 or more	29	17.8

Note. $N = 163$.

Measures

Scale of Teacher's Attitudes Toward Inclusion

Cochran's (1997) Scale of Teachers' Attitudes Toward Inclusive Classrooms (STATIC) was used to assess teachers' attitudes toward inclusion. The measure consists of a 20-item

survey that was originally validated in 32 schools across five school districts in a southeastern state, with a return rate of 36%. The 516 respondents consisted of both elementary and secondary teachers, as well as regular and special education teachers from urban, suburban, and rural schools (Cochran, 1997).

The survey questions are divided into four factor groups: (a) advantages and disadvantages of inclusive education, (b) professional issues regarding inclusive education, (c) philosophical issues regarding inclusive education, and (d) logistical concerns of inclusive education. Respondents indicate their agreement level for each statement using a six-point Likert scale with a range of responses: 0 = strongly disagree, 1 = disagree, 2= not sure, but tend to disagree, 3 = not sure, but tend to agree, 4 = agree, and 5 = strongly agree. When scoring the STATIC, the examiner must first reverse code items 3, 4, 7, 9, 13 and 15. Once these items are reverse coded, the sum of the 20 items for each respondent can then be considered an index of overall attitude toward inclusion. Individuals with higher scores are considered to have a more positive attitude toward inclusion, while those with lower scores are considered to have less positive attitudes toward inclusion. Overall scores can range from 0-100; for this study, the overall score was entered into the regression equation to provide a measure of teacher attitudes toward inclusion. A Cronbach's alpha coefficient of .89 was reported for all participants, as well as the specific groups (i.e., elementary/secondary, regular/special education; Cochran, 1997). Cronbach's alpha reliability for factor one was found to be .87, for factor two it was .83, for factor three it was .57, and for factor four it was .62.

Adapted Willingness to Include Questionnaire

Monsen et al.'s (2014) Willingness to Include questionnaire was adapted for this study to measure the variable "type of disability." The original Willingness to Include questionnaire

comprised nine social-emotional difficulties divided into mild (visual, hearing, physical), moderate (learning disability, speech, language) and severe (behavioral, emotional, multiple disabilities) needs. For the purposes of this study, the "speech" and "language" items were combined based on current terminology. "Autism Spectrum Disorder" (ASD) was added to the questionnaire, as Cassady (2011) identified differences in the willingness of teachers to include students with ASD compared to students with other disabilities. The original Willingness to Include questionnaire used an eight-point Likert-type scale, which was modified to a six-point Likert-type scale for this study. Respondents were asked to rate their willingness to include students with these disabilities in their classroom on a six-point Likert scale: 0 = very unwilling, 1 = unwilling, 2 = somewhat unwilling, 3 = somewhat willing, 4 = willing, and 5 = very willing. Responses were summed and averaged for each disability category. The original questionnaire had a split-half reliability of 0.92. According to Joshi, Kale, Chandel, and Pal (2015), a survey with a scale between five and seven points provides sufficient variability, even when compared to scales with a higher number of responses. Additionally, the Adapted Willingness to Include questionnaire contains the same number of responses as the STATIC to maintain consistency between the two measures. Preliminary correlation analyses were conducted with the scores from the Willingness to Include questionnaire to determine if it was appropriate to separate the mild/moderate/severe categories for this study or whether a different classification system was indicated. Additionally, because ASD was added to the measure and because children with ASD can present with varying degrees of challenges and ranges of functioning, the most appropriate classification for ASD was empirically determined by the correlation analyses. Table 3 presents the strength of relationships among the variables.

Table 3

Intercorrelations Among Willingness to Include Variables

Variables	1	2	3	4	5	6	7	8
1. Hearing	--							
2. Behavioral	.40**	--						
3. Emotional	.44**	.86**	--					
4. Physical	.72**	.48**	.49**	--				
5. Visual	.77**	.38**	.42**	.71**	--			
6. Learning	.65**	.59**	.67**	.69**	.64**	--		
7. Speech/Language	.67**	.48**	.53**	.71**	.70**	.79**	--	
8. Multiple Disabilities	.53**	.65**	.72**	.59**	.59**	.80**	.71**	--
9. Autism Spectrum Disorder	.53**	.61**	.67**	.60**	.57**	.67**	.63**	.69**

Note. $N = 163$.
$^{**}p < .01$.

All correlations were moderate to strong in strength and significant at the .01 level. Physical, Visual, and Hearing were highly correlated with Pearson correlations ranging from .71 to .77. For this reason, the Visual/Hearing/Physical responses were averaged for inclusion in the regression analysis, consistent with Monsen et al.'s (2014) original categorization of mild needs. Learning Disability and Speech/Language were strongly correlated with each other ($r = .79$) and were averaged for inclusion in the regression analysis, similar to the original scale's moderate classification. Multiple Disabilities, which was included in the moderate category on the original questionnaire, was strongly correlated with several other categories in this analysis and did not clearly align with any specific group of disorders. Therefore, it was entered separately in the regression analysis. Consistent with Monsen et al.'s original categorization of severe needs, Emotional and Behavioral disabilities were strongly correlated ($r = .86$); they were averaged and entered together in the regression analysis. ASD, which was added to the questionnaire for the purposes of this study, did not clearly relate to any of the other identified groups of disabilities and was therefore entered separately into the regression equation.

Methner Administrative Support Survey

The Methner Administrative Support Survey (MASS) is a survey instrument designed to measure teachers' perceptions of administrative support (Methner, 2013) . The original MASS includes three parts: administrative support, follower readiness, and demographic and school variables. For the purpose of this study, only the items concerning administrative support were utilized. Teachers responded to 22 items on a five-point Likert Scale: 1 = strongly disagree, 2 = disagree somewhat, 3 = no opinion, 4 = agree somewhat, and 5 = strongly agree. Higher scores indicate greater levels of perceived administrative support. The construct of administrative support is divided into five subscales: (a) Instructional Improvement (items 1-5); (b) Feedback (items 6-9); (c) Discourse (items 10-12); (d) Reflection and Growth (items 13-17); and (e) Anxiety (items 18-22). Concerning reliability, Methner (2013) reported Cronbach's alpha of 0.8 for overall administrative support and feedback and above 0.7 for instructional improvement and reflection and growth. Reported Cronbach alpha levels for discourse and anxiety scored below 0.5, suggesting a lack of adequate internal consistency for some subscales. Overall scores can range from 22-105; for this study, the overall score was entered into the regression equation to provide a measure of administrative support.

Revised School Level Environment Questionnaire

Teachers' perceptions of school climate were measured with the Revised School Level Environment Questionnaire (R-SLEQ) developed by Johnson et al. (2007). The R-SLEQ is a 21-item survey measure that has demonstrated reliability and validity when measuring teachers' perceptions of school climate. The R-SLEQ provides a score for perceptions of overall school climate with a Cronbach alpha of .90. Five factors are spread among the 21 items and each has acceptable reliability: (a) Collaboration ($\alpha = .81$), (b) Student Relations ($\alpha = .86$), (c) School

Resources (α = .75), (d) Decision Making (α = .77), and (e) Instructional Innovation (α = .73). Respondents completed Likert-scale items ranging from 1-5: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. After scoring each item, the total is summed and divided by 21 to achieve a mean total score. Higher overall scores indicate positive perceptions of school climate. Overall scores can range from 1-5 and they were entered into the regression equation to provide a measure of perceptions of school climate.

Procedure

After Institutional Review Board approval was obtained, permission to solicit involvement in the study was sought from school district superintendents in the state of Indiana. A recruitment email with a link to the study's Qualtrics webpage was sent to superintendents with instructions to forward the email to potentially interested teachers. Due to the nature of the online administration of the study, participants were only limited by access to a computer and internet service. Participants clicked on the link and completed the informed consent page before continuing. Participants then completed the demographic survey and survey measures. Upon completion of the survey, participants had the option to enter a drawing for one of four $25 Amazon gift cards. Participants were also given the option to receive a summary of the findings of the study.

Statistical Analysis

Pearson correlations were used to examine relationships among predictor variables. The distribution of data was inspected to determine whether the data needed to be transformed prior to conducting the multiple regressions. A hierarchical multiple regression was conducted to answer the remaining research questions. Demographic variables such as occupation, grade level, and gender were coded as 0 or 1 in the regression model. The control variables of

general/special educator, grade level taught (primary/secondary), and total years teaching were entered in the first block. General/special educator was included as a control variable because special educators generally report more positive attitudes toward inclusion than general educators, which may be a factor of their training and experience working with students with disabilities (Avramidis et al., 2000; Elhoweris & Alsheikh, 2004). Additionally, grade level taught and total years teaching have not been demonstrated to influence attitudes toward inclusion (Hastings & Oakford, 2003; Monsen et al., 2014); however, they may be related to other variables in the planned analysis. For example, grade level may be related to certain elements of administrative support and school climate, and total years teaching is likely to be systematically related to variables that measure training and experience. In the second block, additional predictors were added to the equation to determine to what extent the variables of experience teaching students with disabilities, training, severity of disability, and administrative support predict teacher attitudes toward inclusive education. This test was hypothesized to confirm and extend the present body of research, which suggests these variables are predictive of teacher attitudes. Finally, the experimental variable school climate was added in the third block to determine if it contributes any predictive value after the other variables have been considered. Because school climate was a significant predictor, a follow-up regression was conducted using the subscales of the R-SLEQ. The goal of this proposed analysis was to identify the various components of school climate that may predict attitudes toward inclusion.

CHAPTER 4

RESULTS

The following section will include the results of the analysis. First, descriptive analyses will be summarized. Next, analyses for each research question will be presented.

Descriptive Analyses

Table 4 presents the ranges, means, and standard deviations for the Willingness to Include variables, perceptions of administrative support, attitudes toward inclusion as measured by the STATIC, and perceptions of school climate and subscales within the R-SLEQ. Respondents reported being generally willing to include students with all disability categories, with the lowest ratings being for students with behavioral and emotional disabilities. Perceptions of administrative support were somewhat positive, but there was variability among scores. Attitudes toward inclusion were somewhat positive overall, with some variability within the sample. Perceptions of school climate were generally positive, with the highest subscale score being Instructional Innovation.

Table 4

Ranges, Means, and Standard Deviations for Continuous Variables

Variable	Range	Mean	Standard Deviation
Willingness to Include			
Hearing	1 - 6	5.60	0.69
Behavioral	1 - 6	4.74	1.17
Emotional	1 - 6	4.87	1.15
Physical	1 - 6	5.52	0.74
Visual	1 - 6	5.47	0.79
Learning	1 - 6	5.44	0.84
Speech/Language	1 - 6	5.45	0.86
Multiple Disabilities	1 - 6	5.05	1.01
Autism Spectrum Disorder	1 - 6	5.23	0.99
Emotional/Behavioral Composite	1 - 6	4.80	1.12
Learning/Speech/Language Composite	1 - 6	5.45	0.81
Hearing/Physical/Visual Composite	1 - 6	5.53	0.68
Administrative Support	37 - 110	87.27	16.16
School Climate (Total)	2.19 - 4.95	3.63	0.53
Collaboration	1.33 - 5.00	3.67	0.75
Student Relations	1.75 - 5.00	3.81	0.70
School Resources	1.00 - 5.00	3.59	0.79
Decision Making	1.33 - 5.00	3.07	0.77
Instructional Innovation	1.75 - 5.00	3.94	0.66
STATIC	44 - 97	72.79	11.67

Note. School Climate ranges are reported as the average scores calculated for each scale; STATIC = Scale of Teachers Attitudes Toward Inclusion.

Relationship between Demographic and School Climate Variables

To answer the first research question, Pearson correlations were conducted for the variables of years spent including students with disabilities, type of disability, amount of training, perceived levels of administrative support, and perceptions of school climate. Table 5 presents the strength of the relationships and level of statistical significance for each correlation.

Table 5

Intercorrelations Among Variables Predicting Attitudes Toward Inclusion

Variables	1	2	3	4	5	6	7	8
1. Years Including	--							
2. Training	.37**	--						
3. Administrative Support	-.08	.09	--					
4. School Climate	-.05	.02	.55**	--				
5. Behavioral/Emotional	-.08	.21**	.33**	.31**	--			
6. Hearing/Physical/Visual	.02	.12	.14	.13	.49**	--		
7. Learning/Speech/Language	.01	.15	.28**	.22**	.63**	.79**	--	
8. Multiple Disabilities	-.04	.14	.34**	.29**	.71**	.63**	.80**	--
9. Autism Spectrum Disorder	-.04	.18*	.23**	.21**	.66**	.62**	.69**	.69**

Note. $N = 163$.
*$p < .05$, **$p < .01$.

There was a positive significant correlation between the number of professional development workshops attended (training) and years spent teaching students with disabilities ($r = .37$, $p < .01$). Training was also significantly, but weakly, correlated with teachers' willingness to include students with behavioral and emotional disabilities ($r = .21$, $p < .01$) and a willingness to include students with ASD ($r = .18$, $p < .05$). Perceptions of administrative support had significant, positive correlations with perceptions of school climate ($r = .55$, $p < .01$) and a willingness to include students with all types of disabilities (rs = .23-.34, all $p < .01$), with the exception of hearing, physical, and visual disabilities ($r = .14$, $p = .09$). Perceptions of school climate had significant, positive correlations with a willingness to include students with behavioral and emotional disabilities ($r = .31$, $p < .01$), a willingness to include students with speech, language, and learning disabilities ($r = .22$, $p < .01$), a willingness to include students with multiple disabilities ($r = .29$, $p < .01$), and a willingness to include students with ASD ($r = .21$, $p < .01$). All of the Willingness to Include composites were moderately to strongly correlated with each other (rs = .49-.79, all $p < 01$).

Some of the hypotheses of the first research question were supported. Significant correlations were predicted for all predictor variables. Teachers' years of experience including students with disabilities was only significantly correlated with training. Training was weakly correlated with a willingness to include students with behavioral and emotional disabilities and ASD. Administrative support and school climate were correlated with one another and were correlated with a willingness to include in several areas. Overall, years including and training were not as highly correlated with the other variables as was predicted.

Variables Predicting Attitudes Toward Inclusion

To answer the remaining research questions, a three-stage hierarchical multiple regression was conducted with attitudes toward inclusion as the dependent variable. Total years teaching and grade level taught were entered in the first block of the regression; although prior research has demonstrated no or weak links between those variables and attitudes toward inclusion (Monsen et al., 2014), there are logical reasons to hypothesize a relationship. general/special educator was also added as a control variable in block one because prior research has demonstrated that special educators have more positive attitudes toward inclusion than general educators (Hastings & Oakford, 2003). The identified Willingness to Include composites, perceptions of administrative support, training, and years including children with disabilities, were entered in block two. Finally, perceptions of school Climate was entered in block three. The regression statistics are presented in Table 6.

Table 6

Summary of Hierarchical Multiple Regression Analysis for Variables Predicting Attitudes Toward Inclusion

Variables	β	*t*	*F*	*Adjusted* R^2	ΔR^2
Block 1			4.59**	.06	
Level Taught	.000	.001			
Gen Ed/Special Ed	-2.80	-3.67***			
Total Years Teaching	-.06	-.86			
Block 2			16.44***	.51	.45
Level Taught	.02	.40			
Gen Ed/Special Ed	-.08	-1.29			
Total Years Teaching	-.19	-1.23			
Years Including	.19	1.20			
Training	.05	.76			
Behavioral/Emotional Composite	.36	4.15***			
Hearing/Physical/Visual Composite	.04	.37			
Learning/Speech/Language Composite	-.02	-.13			
Multiple Disabilities	.28	2.59**			
Autism Spectrum Disorder	.05	.61			
Administrative Support	.14	2.36*			
Block 3			15.98***	.52	.01
Level Taught	.02	.28			
Gen Ed/Special Ed	-.08	-1.31			
Total Years Teaching	-.14	-.89			
Years Including	.14	.86			
Training	.06	.98			
Behavioral/Emotional Composite	.34	3.94***			
Hearing/Physical/Visual Composite	.04	.39			
Learning/Speech/Language Composite	-.01	-.09			
Multiple Disabilities	.27	2.54*			
Autism Spectrum Disorder	.05	.59			
Administrative Support	.07	.98			
School Climate	.16	2.40*			

Note. $N = 163$. Level Taught was either Elementary or Secondary. Total Years Teaching is the number of years in the profession and Years Including is time working with students with disabilities. Training is the number of professional development workshops attended. Administrative Support is the total score from the MASS. School Climate is the total score from the R-SLEQ.

*$p < .05$, **$p < .01$, ***$p < .001$.

The hierarchical multiple regression analysis revealed that the variables included in the first block did significantly contribute to the regression model, $F(3, 159) = 4.59$, $p < .01$ and accounted for 6.0% of the variation in Attitudes Toward Inclusion. General educator/special educator was statistically significant at this stage, $t(159) = -3.67$, $p < .001$. The remaining variables, total years teaching and grade level taught, were non-significant.

Introducing the variables in block two explained 51% of the total variation in attitudes toward inclusion, $F(11, 151) = 16.44$, $p < .001$. The .45 increase in R-squared was significant. The Behavioral/Emotional Composite was statistically significant at this stage, $t(151) = 4.15$, $p < .001$. Administrative support was also statistically significant, $t(162) = 2.36$, $p < .05$. Finally, Multiple Disabilities was statistically significant, $t(162) = 2.59$, $p < .01$. The general/special education variable was no longer significant in this block.

With the introduction of the final variable in block 3, perceptions of school climate, the model explained 52% of variation in attitudes toward inclusion, $F(12, 150) = 15.98$, $p < .001$. This .01 increase in R^2 was significant. The Behavioral/Emotional Composite was statistically significant in this block, $t(150) = 3.94$, $p < .001$. Multiple Disabilities was also statistically significant in this block, $t(150) = 2.54$, $p < .05$. School climate was significant in this block, $t(150) = 2.40$, $p < .05$.

The second research hypothesis predicted that grade level taught and total years teaching would not significantly predict attitudes toward inclusion. Population taught was predicted to have an effect, with special educators having more positive attitudes toward inclusion than general educators. The hypothesis was supported, as the only significant predictor in the first block was general/special education. An independent samples *t* test was conducted to determine the difference between attitudes toward inclusion of the general and special educators. Special

educators' scores on the STATIC (M = 78.21, SD = 10.78) were significantly higher than the scores of general education teachers (M= 70.91, SD = 11.41), $t(161) = 3.63$, $p < .001$, which confirms the hypothesis and is consistent with prior research.

The third research hypothesis predicted that the variables of total years teaching students with disabilities, a willingness to include certain disabilities, amount of training, and perceptions of administrative support would predict attitudes toward inclusion. The combination of variables was statistically significant, which supports the hypothesis. Within the second block of the regression analysis, a willingness to include students with behavioral and emotional disabilities, perceptions of administrative support, and a willingness to include students with multiple disabilities were significant predictors. General/special educator was no longer a significant predictor with the addition of the predictor variables.

The fourth research hypothesis predicted that perceptions of school climate would contribute to the predictive quality of the model. School climate was a significant predictor in the third block of the regression analysis, confirming the hypothesis. A willingness to include students with behavioral and emotional disabilities and multiple disabilities was also significant in the final block of the regression. Administrative support was no longer significant after the addition of school climate.

Subscale level analysis of the MASS and R-SLEQ was conducted to examine why the administrative support variable was no longer significant after the introduction of the school climate variable. The global scores of the MASS and R-SLEQ were moderately correlated with each other ($r = .55$, $p < .01$). Table 7 presents the strength of correlation within and between the subscales of the MASS (Instructional Improvement, Feedback, Discourse, Reflection and Growth, and Anxiety) and R-SLEQ (Collaboration, Student Relations, School Resources,

Decision Making, and Instructional Innovation). As was expected, there were moderate to strong relationships among the subscales of the MASS, with the exception of Anxiety and Instructional Improvement. There were weak to moderate relationships among the subscales of the R-SLEQ. The correlations between the subscales of the MASS and R-SLEQ were all statistically significant ($p < .01$), with relationships ranging from weak to moderate.

Table 7

Intercorrelations Among Administrative Support and School Climate Subscales

Variables	1	2	3	4	5	6	7	8	9
1. Instructional Improvement	--								
2. Feedback	.75**	--							
3. Discourse	.69**	.79**	--						
4. Reflection and Growth	.77**	.84**	.85**	--					
5. Anxiety	.29**	.44**	.49**	.47**	--				
6. Collaboration	.39**	.44**	.43**	.45**	.33**	--			
7. Student Relations	.31**	.29**	.33**	.37**	.29**	.46**	--		
8. School Resources	.26**	.30**	.27**	.37**	.25**	.40**	.39**	--	
9. Decision Making	.22**	.29**	.33**	.32**	.27**	.39**	.32**	.29**	--
10. Instructional Innovation	.44**	.38**	.41**	.47**	.34**	.51**	.46**	.44**	.33**

**$p < .01$.

Planned Follow-up Analyses

Follow-up analyses involving the school climate variable were planned should it be a significant predictor of attitudes toward inclusion. Given that it was a significant predictor within the model, a multiple regression with forced entry was conducted to explore further the extent to which the five school climate subscales predicted attitudes toward inclusion. Table 8 presents intercorrelations among the five subscales for school climate. Correlations were significant at the .001 level, mostly in the moderate range (rs = .29-.51).

Table 8

Intercorrelations Among School Climate Variables Predicting Attitudes Toward Inclusion

Variables	1	2	3	4
1. Collaboration				
2. Student Relations	.46**			
3. School Resources	.40**	.39**		
4. Decision Making	.39**	.32**	.29**	
5. Instructional Innovation	.51**	.46**	.44**	.33**

***p* < .001.

Table 9 presents the regression analysis, with attitudes toward inclusion as the dependent variable and the five subscales of perceptions of school climate as the independent variables. The model significantly predicted attitudes toward inclusion, explaining 16% of the variability, $F(5, 157) = 7.37$, $p < .001$. Collaboration was the only statistically significant predictor, $t(162) = 2.05$, $p < .05$.

Table 9

Regression Analysis for School Climate Variables Predicting Attitudes Toward Inclusion

Variable	*β*	*t*
Collaboration	*.19*	*2.05**
Student Relations	*.08*	*.95*
School Resources	*.12*	*1.48*
Decision Making	*.01*	*.16*
Instructional Innovation	*.16*	*1.79*

Note. Adjusted $R^2 = .16$. $N = 163$.
**p* < .05.

CHAPTER 5

DISCUSSION

The number of school-aged children receiving special education services has grown over the past four decades and continues to grow. Federal and state laws require schools to be accountable for the achievement of students with diverse learning needs in the LRE. The trend to include students with disabilities in general education classrooms at increasingly greater levels necessitates an examination of factors that contribute to successful inclusive practices.

Major Findings

Teachers' attitudes toward inclusion have been identified as a key component of successfully implementing inclusion. Teachers' attitudes toward inclusion have become increasingly positive since the adoption of inclusive practices. This study sought to examine factors that predict teachers' attitudes toward inclusion using previously identified variables and a newly hypothesized variable (i.e., perceptions of school climate).

General Educators vs. Special Educators

Concerning the primary analysis for this study, three of the research questions were answered using a hierarchical multiple regression and planned follow-up analyses. The combination of grade level taught, total years teaching, and general education vs. special education did significantly contribute to the model. Within those variables, only general education vs. special education was significant, which replicated prior research (Hastings &

Oakford, 2003). Being a special educator was predictive of more positive attitudes toward inclusion. This finding was consistent with those of Elhoweris and Alsheikh (2004). The positive attitudes of special education teachers may be explained by their increased training and experience in working with students with disabilities. It is worth noting that not all special education teachers may be positive about inclusion. Depending on the inclusion model their school district employs, they may not be any more experienced than their general educator colleagues in inclusive classrooms. They may also feel that students with disabilities are best served within self-contained classrooms or with pull-out services.

The general educator vs. special educator variable was no longer significant with the addition of the attitudinal predictor variables, indicating that other factors in the model more strongly predicted teacher attitudes. The final combination of the predictor variables was statistically significant, explaining about half the variance in teacher attitudes toward inclusion. This finding supported the research hypotheses while confirming prior research.

Intersection of Training and Experience

The hypothesized relationships among the predictor variables were largely supported with the data. As predicted, training and experience were significantly related; it makes logical sense that teachers who have more years in the profession would have more opportunities to attend professional development workshops. Teachers are also required to obtain a certain number of continuing education credit hours to maintain their licenses. Training and experience, however, were not as highly correlated with the other variables as might be expected. Because they were correlated with each other, it is possible that the two variables contain so much overlap that a single measure of training and experience would be more correlated with the other predictor variables. Training, as measured by the number of professional development

workshops attended, was significantly correlated with years spent teaching students with disabilities, and significantly but less strongly correlated with a willingness to include students with emotional/behavioral disabilities and ASD. Training was an important variable to consider, given that teachers may hesitate to include some children due to a perceived lack of training to educate students with particular types of educational needs (Winzer, 1998). Although the findings are only correlational, training may be specifically helpful to increase teachers' willingness to include students with more significant behavioral challenges. Furthermore, training had little impact on participants' attitudes toward including students with fewer behavioral problems.

Positive attitudes tend to follow both exposure to and experience with teaching students with disabilities (Forlin, 1997); however, the nature of the relationship is likely complex and non-linear. As Monsen et al. (2014) noted, newer teachers may be more positive about inclusion than veteran teachers. Teachers with more experience overall but little experience teaching within inclusive classrooms might not like to teach challenging students because it could reflect negatively on their competency. Perhaps where experience and training overlap in equal proportions, they contribute to more positive attitudes toward inclusion. Teachers who have experience working with students with disabilities may want to keep their skills current by attending relevant professional development workshops. On the other hand, some experienced teachers may not feel it is necessary to attend professional development opportunities related to including students with disabilities if they feel they have sufficient skills and knowledge. Follow-up research would be needed to examine the exact nature and content of these professional development workshops and their effects on teacher attitudes. The correlation between training and a willingness to include students with emotional/behavioral disabilities

suggests that the trainings may be focused on behavior management strategies or interventions. Perhaps experience and training cannot be adequately parsed, especially when the training includes experiential components.

Willingness to Include Variables

The disability categories fit roughly into the severity levels identified by Monsen et al. (2014). Multiple Disabilities and ASD did not fit into a severity category, as they did not correlated as strongly or consistently with other categories. This could be due to the varying degree of severity among students with multiple disabilities and ASD.

A willingness to include students with emotional/behavioral disabilities was correlated with perceptions of administrative support and school climate and with all of the other disability categories. It constituted the most stable of the Willingness to Include predictors and may be the most salient and concerning for general education teachers. Students with emotional and behavioral disorders are often viewed as more concerning than students with other types of disabilities (Avramidis et al., 2007), and teachers tend to be less willing to include these students than children with physical or learning disabilities. Students who present with disruptive behavior may challenge the skills of general education teachers beyond requiring a modification to instructional practices. Cassady (2011) found that the greatest concern of teachers was that of appropriate classroom management when working with children with emotional or behavioral concerns. With administrative support in the form of training and resources and a positive school climate, teachers may be more willing to include students with such disabilities and have a more positive attitude toward inclusion. Furthermore, it is likely that teachers who are willing to include students with more severe disabilities will have more favorable perceptions of inclusive practices overall.

Administrative Support and School Climate

Perceptions of administrative support were correlated with perceptions of school climate, and a willingness to include students with emotional/behavioral disabilities, learning disabilities, speech/language impairments, multiple disabilities, and ASD. There was considerable overlap between perceptions of administrative support and perceptions of school climate. It is possible that positive administrative practices contribute to a positive school climate, which in turn leads teachers to be more willing to include students with various disabilities. Royster et al. (2014) found that teachers were more willing to include students with disabilities if they had access to adequate administrative support and resources. Types of support could include both internal and external forms of support (Monsen et al., 2014). Internal support, in this case, may refer to support from colleagues and classroom assistants, and external support may refer to consultation with school psychologists or speech-language pathologists. Administrative support would be a critical factor that enables both internal and external support in the form of training, allocation of staff, and resource availability.

It is interesting that physical, hearing, and vision impairments were not correlated with perceptions of administrative support and school climate. It is possible that these are such low incidence disability cases that they are not factored into teachers' decisions about including students with disabilities. Also, students with these impairments may require only minor accommodations and no modifications to instruction. A student with a hearing disability, for example, may wear a hearing amplification device and require some technology in the classroom but otherwise not need anything in the way of instructional modifications from the teacher. Teachers may therefore consider the special needs of students with these disabilities so minor

that even teachers with low overall attitudes toward inclusion do not have concerns about including them, even in the absence of administrative support or a positive school climate.

The final research question was concerned with impact of perceived school climate on teacher attitudes toward inclusion. This variable had not been previously explored within this context but it was hypothesized to predict attitudes toward inclusion positively where more positive perceptions of school climate would predict more positive attitudes toward inclusion. The planned follow-up analysis revealed that perceptions of school climate, and the subscale of Collaboration in particular, significantly predicted attitudes toward inclusion. Perceptions of administrative support was no longer a significant predictor with the addition of school climate. Hannah and Pliner (1983) noted that teachers who engage in consultation and collaboration activities with special educators and other professionals reported increasingly positive attitudes toward inclusion. A positive school climate may contribute to these collaborative practices while promoting a school community that is supportive of inclusive environments (Carrington et al., 2016).

Considering collaboration was the only significant predictor of attitudes toward inclusion when school climate was used as the lone predictor, and administrative support was highly correlated with school climate, it is important to consider the administrative support subscales that were correlated with collaboration. The subscales of the MASS that had the strongest relationship to Collaboration on the R-SLEQ were Feedback, Discourse, and Reflection and Growth. The Feedback subscale asked questions pertaining to positive relationships and prompt and useful feedback from administrators. Discourse asked questions relating to facilitating open dialogue, collegial relationships, and teacher development. Reflection and Growth asked

questions pertaining to the extent that administrative practices promoted reflective instructional practices, personal and professional growth, and teacher-parent communication.

These findings suggest that principals and administrators who foster collaboration to promote positive school climates may also promote positive attitudes toward inclusion. Administrative practices that involve useful feedback to teachers, facilitate open dialogue and collegial relationships, and promote reflective instructional practices and professional growth may help achieve the goal of positive, collaborative school climates. Collaborative school teams would coordinate instruction, have opportunities to work together, emphasize good communication, and discuss the needs of students while designing instructional programs together. It is clear that these practices would foster a positive school climate complete with instructional practices that would meet the needs of diverse learners. Future studies may further examine the relationship between perceptions of administrative support and school climate.

Limitations

This study has several limitations. The findings of the study rely on self-report data, which assumes that respondents are accurate and truthful reporters of their subjective experience. There is the possibility of inaccurate reporting through poor memory of events or fleeting attitudes. Teacher self-report measures have been shown, however, to be generally reliable and valid when the reports are retrospective and focused on specific behaviors during brief time periods (Reddy, Dudek, Fabiano, & Peters, 2015). Furthermore, the STATIC is a previously validated measure which examines both attitudinal and behavioral elements which strengthens the attitude to behavior prediction.

The recruitment procedure presents several potential limitations to the generalizability of findings, such as a potentially narrow sample. First, distribution of the survey relied on

superintendents as gatekeepers for access to general and special education teachers. The number of potential respondents was certainly reduced by superintendents denying access to their teaching staff and by district policies that prohibited or excessively complicated teacher recruitment. Participants were also self-selected, which leads to another potential source of bias in the sample. Specifically, teachers who were already passionate about or interested in the topic of inclusion may have been more inclined to respond to the survey, thus skewing the findings in a direction that reflects an overly favorable view of inclusive practices. Finally, due to the geographically restricted region from which participants were recruited, the generalizability of results is likely limited to teachers with similar demographics and teaching conditions as those who responded to the survey in Indiana.

A final limitation in the study is the use of labels or categories of disability. Labels such as "Autism Spectrum Disorder" or "Learning Disability" raise the issue that the respondents may have multiple interpretations for the same label, or have had different experiences with those students, leading to different attitudes. Respondents may not have been consistent in their understanding of what constitutes "Multiple Disabilities;" the term could refer to a student with a learning disability and language impairment, or a student with an emotional disability and a physical disability. Similarly, ASD remained a distinct category, as it was not highly correlated with any of the other clusters. This may be due to the heterogeneous nature of students with ASD, who may present with a variety of academic, behavioral, language, and social-emotional abilities. Teachers may, therefore, have different attitudes of the same disability category, depending on their unique experiences and the perceived severity of disability within that category. Additionally, not all general education teachers have knowledge of the disability categories beyond the label on the individualized education program they are provided for their

students who are eligible for special education services. These potential multiple interpretations of disabilities could have affected the results of the Willingness to Include Questionnaire.

Future Directions

The data in this study were limited to quantitative data, which has correlational or predictive value. The addition of qualitative data would enrich the findings. Utilizing a mixed-methods approach, researchers may observe teachers' behavior within the inclusive setting and then survey attitudes to determine continuity between attitudes and behaviors. Direct observations could record the quantity and quality of teacher interactions with students in an effort to determine any disproportionate interaction styles. Teacher interviews could then be employed to learn about the quality of teachers' experiences with different groups of students with disabilities. The goal would be to learn what led to positive experiences for these teachers, so schools can promote positive experiences going forward.

The variables "years Including" and "training" within this study had substantial overlap. Future studies may attempt to tease out this relationship. Concerning experiences working with students with disabilities, it may be valuable to explore various class compositions for general educators. Teachers responsible for a higher percentage of students with emotional and behavioral disabilities may have had different experiences than teachers with higher percentages of students with learning disabilities or vision impairment, for example. Questions on the survey could be more targeted and ask for more detail concerning classroom composition, availability of assistance, co-teachers, and positive and negative experiences working within the inclusive classroom. Similarly, because professional development opportunities could vary in their scope and depth, survey questions could be designed to gain specific information about the duration, content, and intensity of these training experiences. Future studies may explore potential

combinations of experience and training, as well as potential interaction effects between the two variables.

An identified limitation of the study was that teachers might have multiple interpretations or experiences with different students who have the same disability. The problem of multiple interpretations could be alleviated by providing specific descriptions (in the form of vignettes, for example) of the behaviors, characteristics, or instructional needs of students with various types and severities of disability. Rather than referring to a group of students by a general disability category, teachers could then reflect on their interactions with students who have similar characteristics as those in the vignettes. Researchers could also control for the severity of disability categories by coding the vignettes and providing a range of behaviors for teachers to consider.

One avenue of future research would be to explore the relationship between explicit and implicit attitudes toward inclusion, because attitudes, self-esteem, and stereotypes have important implicit modes of operation (Greenwald & Banaji, 1995). Explicit attitudes are those freely reported on instruments such as traditional questionnaires. Implicit attitudes are manifest as actions or judgments that are under the control of automatic evaluation, without the performer's awareness of that causation (Greenwald, McGhee, & Schwartz, 1998). The identifying feature of implicit cognition is that past experience influences judgment in a manner that is not introspectively known by the actor. Essentially, individuals may not be explicitly aware of the attitude they hold, as has been supported by findings of discrimination by people who explicitly disavow prejudice (Greenwald et al., 1998). Low correlations have repeatedly been found between explicit and implicit attitude measures, especially when they involve controversial topics such as race or discrimination (Nosek, Greenwald, & Banaji, 2005). Given

this frequent discrepancy, it is important to assess implicit attitudes when discussing controversial topics, especially given that implicit attitudes have been found to be predictive of subsequent behavior. Future directions might include the use of implicit measures of attitude, such as the Implicit Association Test (IAT; Greenwald et al., 1998). Teacher IAT responses have been found to predict the academic achievement of students with dyslexia (Hornstra et al., 2010). While teachers did not explicitly state negative attitudes toward students with dyslexia, those who held negative implicit attitudes had students with lower reading, spelling, and writing achievement. It is not the case that implicit measures always detect greater negativity than explicit measures; however, such results are common in cases of attitudes toward social groups (Lane, Banaji, Nosek, & Greenwald, 2007).

Future studies could examine additional predictor variables, such as different educational service delivery models with inclusive practices and traditional practices. Various inclusion and special education service delivery models may be correlated with attitudes toward inclusion. School districts with more traditional special education models that include self-contained classrooms or pull-out-only services may have teachers with different attitudes toward inclusion than those who work in more inclusive districts. The two most prominent strategies within inclusive classrooms are itinerant (consultative) and co-taught classrooms (Kilanowski-Press, Foote, & Rinaldo, 2010). The itinerant inclusion strategy involves a specialist providing consultation services and support as needed to classroom teachers. Co-teaching typically involves a classroom where a general education and special education teacher teach together, allowing the special education teacher to provide instruction to students with disabilities and support the general education teacher while reducing the stigma of special education. It is likely that teachers working in the two environments would have had different experiences, which may

help shape their attitudes toward inclusion. A similar approach might include the comparison of teachers' attitudes who work in primarily inclusive classrooms (co-taught or itinerant) and those of teachers who primarily work in traditional special education models using pull-out models or self-contained classrooms.

Because collaboration is important to teachers holding positive attitudes toward inclusion, it would be useful to interview teachers to determine what they feel are the most helpful approaches and sources of collaboration, whether it be with consultant specialists, building level teams, or other approaches. Understanding how and with whom teachers prefer to collaborate may help us better understand how collaborative relationships positively influence attitudes toward inclusion.

Conclusion

Inclusive educational practices lead to positive academic and social outcomes for students with disabilities. Students without disabilities may also benefit from inclusion in the form of increased acceptance and greater awareness of special needs, all without a negative impact to their academics. Teachers report personal and professional benefits from teaching in inclusive classrooms, and teachers with positive attitudes toward inclusion are more likely to implement it successfully. Academic, administrative, and pedagogical concerns that influence teachers' attitudes toward inclusion may also impact their subsequent teaching practices. This study supported previous research into the examination of teachers' attitudes toward inclusion while attempting to extend the knowledge base of factors that can predict those attitudes. The hypothesized variables of training, experience, willingness to include students with various types of disabilities, perceptions of administrative support, and perceptions of school climate were able to predict attitudes toward inclusion. In general, the findings of this study support the need for

ongoing training in working with students who present the most challenging behaviors in the classroom, as well as administrative leadership that encourages collaboration, to maximize the potential for inclusive practices to be implemented with success.

A willingness to include students with emotional/behavioral concerns was also a robust predictor of attitudes toward inclusion, suggesting that teachers who are willing to include students with more severe disabilities have more positive attitudes overall. Additionally, a willingness to include students with emotional/behavioral concerns was one of the few willingness to include categories that was significantly correlated with level of training. This may suggest an avenue for intervention in which increased training in working with students with severe disabilities leads to a willingness to include students with more significant challenges, which subsequently leads to more positive overall attitudes toward inclusion.

Perceptions of school climate was a significant predictor of attitudes toward inclusion, with more positive perceptions of school climate being associated with more positive attitudes toward inclusion. Within the school climate variable, collaborative practice was the most significant factor that predicted attitudes toward inclusion. Some aspects of administrative support (i.e., providing opportunities for teachers to seek, receive, and implement feedback from administrators and colleagues) may be particularly related to the development of collaborative working environments in schools, which may subsequently support practices that encourage positive attitudes toward inclusion.

REFERENCES

Ajzen, I. (1982). On behaving in accordance with one's attitudes. In M. P. Zanna, E. T. Higgins, & C. P. Herman. (Eds.), *Consistency in social behavior: The Ontario Symposium, 2* (pp. 3-15). Hillsdale, NJ: Lawrence Erlbaum Associates.

Avramidis, E., Bayliss, P., & Burden, R. (2000). A survey into mainstream teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school in one local education authority. *Educational Psychology, 20,* 191-211. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ642095&site=ehost-live&scope=site

Avramidis, E., & Kalyva, E. (2007). The influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion. *European Journal of Special Needs Education, 22,* 367-389. doi:10.1080/08856250701649989

Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education, 17,* 129-147. doi:10.1080/08856250210129056

Banerji, M., & Dailey, R. A. (1995). A study of the effects of an inclusion model on students with specific learning disabilities. *Journal of Learning Disabilities, 28,* 511-522.

Barnard, L., Stevens, T., Siwatu, K. O., & Lan, W. (2008). Diversity beliefs as a mediator to faculty attitudes toward students with disabilities. *Journal of Diversity in Higher Education, 1,* 169-175. doi:10.1037/a0012707.

Barnes, S., & Weiner, C. (1994, April). *Reflections on reform: Inclusion from Congress to courts to classrooms.* Paper presented at the meetings of the International Convention of the Council for Exceptional Children, Denver, CO.

Beacham, N., & Rouse, M. (2012). Student teachers' attitudes and beliefs about inclusion and inclusive practice. *Journal of Research in Special Educational Needs, 12*(1), 3-11. doi:10.1111/j.1471-3802.2010.01194.x

Berg, J. K., & Cornell, D. (2016). Authoritative school climate, aggression toward teachers, and teacher distress in middle school. *School Psychology Quarterly, 31*, 122-139. doi:10.1037/spq0000132

Borden, R., & Clyde, H. (1973). Internal-external locus of control and self-perception theory. *Journal of Personality, 41*(1), 32-41.

Carrington, S., Berthelsen, D., Nickerson, J. M., Walker, S., & Meldrum, K. (2016). Teachers' experiences of inclusion of children with developmental disabililites across the early years of school. *Journal of Psychologists and Counsellors in Schools, 26*, 139-154. doi:10.1017/jgc.2016.19

Cassady, J. M. (2011). Teachers' attitudes toward the inclusion of students with autism and emotional behavioral disorder. *Electronic Journal for Inclusive Education, 2*(7), 1-23. Retrieved from https://corescholar.libraries.wright.edu/ejie/vol2/iss7/5/

Cochran, H. K. (1997, November). *The development and psychometric analysis of the Scale of Teachers' Attitudes Toward Inclusion (STATIC).* Paper presented at the annual meeting of the Mid-South Educational Research Association, Memphis, TN.

Collie, R. J., Shapka, J. D., & Perry, N. E. (2011). Predicting teaching commitment: The impact of school climate and social-emotional learning. *Psychology in the Schools, 48,* 1034-1048. doi:10.1002/pits.20611

Cook, B. G. (2001). A comparison of teachers' attitudes toward their included students with mild and severe disabilities. *Journal of Special Education, 34,* 203-213. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ623078&site=ehost-live&scope=site

Cook, B. G. (2004). Inclusive teachers' attitude toward their students with disabilities: A replication and extension. *The Elementary School Journal, 104,* 307-320. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ696177&site=ehost-live&scope=site

Cook, B. G., Semmel, M. I., & Gerber, M. M. (1999). Attitudes of principals and special education teachers toward the inclusion of students with mild disabilities. *Remedial and Special Education, 20,* 199-207. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ591197&site=ehost live&scope=site

Coombs-Richardson, R., & Mead, J. (2001). Supporting general educators' inclusive practices. *Teacher Education and Special Education, 24,* 383-390. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ639123&site=ehost-live&scope=site

Cooper, J., & Fazio, R. (1984). A new look at dissonance theory. *Advances in Experimental Social Psychology, 17,* 229-266. Retrieved fromhttps://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=psyh&AN=1980-25620-001&site=ehost-live&scope=site

Daniel, L. G., & King, D. A. (1997). Impact of inclusion education on academic achievement, student behavior and self-esteem, and parental attitudes. *The Journal of Educational Research, 91,* 67-80. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ574501&site=ehostlive&scope=site

Dessemontet, R. S., Bless, G., & Morin, D. (2012). Effects of inclusion on the academic achievement and adaptive behavior of children with intellectual disabilities. *Journal of Intellectual Disability Research, 56,* 579-587. doi:10.1111/j.1365-2788.2011.01497.x

Education for All Handicapped Children Act of 1975, Pub. L., 94-142, § 1 (1975).

Elhoweris, H., & Alsheikh, N. (2004, April). *Teachers' attitudes toward inclusion.* Paper presented at the New York State Federation of the Council for Exceptional Children, Albany, NY.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39,* 175-191. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=psyh&AN=2007-11814-002&site=ehost-live&scope=site

Fazio, R. H., & Roskos-Ewoldsen, D. R. (1994). Acting as we feel: When and how attitudes guide behavior. In S. Shavitt & T. C. Brock (Eds.), *Persuasion: Psychological insights and perspectives* (pp. 71-93). Boston, MA: Allyn & Bacon.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research.* Reading, MA: Addison-Wesley.

Forlin, C. (1997, November). *Re-designing pre-service teacher education courses: An inclusive curriculum in new times.* Paper presented at the conference of the Australian Association of Research in Education, Brisbane, Australia.

Forlin, C. (2001). Inclusion: Identifying potential stressors for regular class teachers. *Educational Research, 43,* 235-245. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=psyh&AN=2001-09307001&site=ehost-live&scope=site

Fox, S., Farrell, P., & Davis, P. (2004). Factors associated with the effective inclusion of primary-aged pupils with Down's syndrome. *British Journal of Special Education, 31,* 184-190. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ685445&site=ehost-live&scope=site

Fuchs, D., & Fuchs, L. S. (1995). Sometimes separate is better. *Educational Leadership, 52,* 22-26. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=ED379816&site=ehost-live&scope=site

Fulk, B. J. M., & Hirth, M. A. (1994, April). *Perceptions of special education program effectiveness and attitudes toward inclusion.* Paper presented at the meeting of the American Educational Research Association, New Orleans, LA.

Gerber, M. M. (1988). Tolerance and technology of instruction: Implications for special education reform. *Exceptional Children, 54,* 309-314. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&A=EJ364841&site=ehost-live&scope=site

Giangreco, M. F., Dennis, R., Cloninger, C., Edelman, S., & Schattman, R. (1993). "I've counted Jon": Transformational experiences of teachers educating students with disabilities. *Exceptional Children, 59,* 359-372. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=1993-23616-001&site=ehost-live&scope=site

Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102,* 4-27. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ50266&site=ehost-live&scope=site

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74,* 1464-1480. doi:10.1037/00223514.74.6.1464.

Handler, B. R. (2003, April). *Special education practices: An evaluation of educational environmental placement trends since the regular education initiative.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Hannah, M. E., & Pliner, S. (1983). Teacher attitudes toward handicapped children: A review and synthesis. *School Psychology Review, 12,* 12-25. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&A=EJ282139&site=ehost-live&scope=site

Hastings, R. P., & Oakford, S. (2003). Student teachers' attitudes towards the inclusion of children with special needs. *Educational Psychology, 23,* 87-94. doi:10.1080/0144341022000022951.

Heflin, L. J., & Bullock, L. M. (1999). Inclusion of students with emotional/behavioral disorders: A survey of teachers in general and special education. *Preventing School Failure, 43,* 103-111. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ589582&site=ehost-live&scope=site

Hornstra, L., Denessen, E., Bakker, J., van den Bergh, L., & Voeten, M. (2010). Teacher attitudes toward dyslexia: Effects on teacher expectations and the academic achievement of students with dyslexia. *Journal of Learning Disabilities, 43,* 515-529. doi:10.1177/0022219409355479.

Huber, K. D., Rosenfeld, J. G., & Fiorello, C. A. (2001). The differential impact of inclusion and inclusive practices on high, average, and low achieving general education students. *Psychology in the Schools, 38,* 497-504. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ63783&site=ehost-live&scope=site

Hwang, Y., & Evans, D. (2011). Attitudes towards inclusion: Gaps between belief and practice. *International Journal of Special Education, 26,* 136-146. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&A=EJ921198&site=ehost-live&scope=site

Idol, L., & Griffith, J. (1998). A study of four schools: Moving toward inclusion of special education students in general education. *Remedial and Special Education, 27*(2), 77-94. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED432083&site=ehost-live&scope=site

Individuals with Disabilities Education Act Amendments, Pub. L., No. 105-17, § 1 (1991).

Johnson, B., Stevens, J. J., & Zvoch, K. (2007). Teachers' perceptions of school climate: A validity study of scores from the revised school level environment questionnaire. *Educational and Psychological Measurement, 67,* 833-844. doi:10.1177/0013164406299102

Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science and Technology, 7,* 396-403. doi:10.9734/BJAST/2015/14975

Katz, J., Mirenda, P., & Auerbach, S. (2002). Instructional strategies and educational outcomes for students with developmental disabilities in inclusive “multiple intelligences” and typical inclusive classrooms. *Research & Practice for Persons with Severe Disabilities, 27*, 227-238. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ662787&site=ehost live&scope=site

Kavale, K. A. (2002). Mainstreaming to full inclusion: From orthogenesis to pathogenesis of an idea. *International Journal of Disability, Development and Education, 49,* 201-214. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ650505&site=ehost-live&scope=site

Kilanowski-Press, L., Foote, C. J., and Rinaldo, V. J. (2010). Inclusion classrooms and teachers: A survey of current practices. *International Journal of Special Education, 25*(3), 43-56. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ909035&site=ehost-live&scope=site

Lane, K. A., Banaji, M. R., Nosek, B. A., & Greenwald, A. G. (2007). Understanding and using the Implicit Association Test IV: What we know (so far) about the method. In B. Wittenbrink & N. Schwartz (Eds.), *Implicit measures of attitudes* (pp. 59-102). New York, NY: The Guilford Press.

LaPiere, R. T. (1934). Attitudes vs. actions. *Social Forces, 13,* 230-237. Retrieved from https://www.scribd.com/document/92626432/LaPiere-R-T-1934-Attitude-versus-action Social-Forces-13-230-237

Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education/mainstreaming. *British Journal of Educational Psychology, 77,* 1-24. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ757586&site=ehost-live&scope=site

Luster, J. N., & Durrett, J. (2003, November). *Does educational placement matter in the performance of students with disabilities?* Paper presented at the meeting of the Mid-South Educational Research Association, Biloxi, MS.

Madden, N., Slavin, R., Karweit, N., Dolan, L., & Wasik, B. (1993). Success for all: Longitudinal effects of a restructuring program for inner-city elementary schools. *American Educational Research Journal, 30,* 123-148. Retrieved from https://www2.ed.gov/programs/sif/sigevidencebased/successevidence.pdf

Methner, G. V. (2013). *Perceptions of administrative support and follower readiness in middle school teachers* (Doctoral dissertation). Retrieved from https://www.bgsu.edu/education-and-human-development/school-of-educational foundations-leadership-policy /leadership-studies/dissertations.html

Mikami, A. Y., Griggs, M. S., Lerner, M. D., Emeh, C. C., Reuland, M. M., Jack, A., & Anthony, M. R. (2013). A randomized trial of a classroom intervention to increase peers' social inclusion of children with attention-deficit/hyperactivity disorder. *Journal of Consulting and Clinical Psychology, 81,* 100-112. doi:10.1037/a0029654

Monsen, J. J., Ewing, D. L., & Kwoka, M. (2014). Teachers' attitudes towards inclusion, perceived adequacy of support and classroom learning environment. *Learning Environments Research, 17,* 113-126. doi:10.1007/s10984-013-9144-8.

Moore, C., Gilbreath, D., & Maiuri, F. (1998). *Educating students with disabilities in general education classrooms: A summary of the research.* Juneau, AK: Alaska State Department. Retrieved from https://eric-ed-gov.ezproxy.indstate.edu/?id=ED419329

No Child Left Behind Act of 2001, P. L. 107-110, 20 U.S.C § 6319 (2002).

Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2005). Understanding and using the Implicit Association Test: II. Method variables and construct validity. *Personality and Social Psychology Bulletin, 31,* 166-180. doi:10.1177/0146167204271418

Peetsma, T., Vergeer, M., Karsten, S., & Roelveld, J. (2001). Inclusion in education: Comparing pupils' development in special and regular education. *Educational Review, 53,* 125-135. Retrieved from https://ezproxy.indstate.edu/login?url=http://search .ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ627553&site=ehost live&scope=site

Phelps, M. A. (1993). *Inclusion and integration of school climate*. Washington, DC: U.S. Department of Education. Retrieved from https://files.eric.ed.gov/fulltext /ED372574.pdf

Rea, P. J., McLaughlin, V. L., & Walther-Thomas, C. (2002). Outcomes for students with learning disabilities in inclusive and pullout programs. *Council for Exceptional Children, 8,* 203-222. Retrieved from https://ezproxy.indstate.edu/login?url= http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ641009&site=ehost-live&scope=site

Reddy, L. A., Dudek, C. M. Fabiano, G. A., & Peters, S. (2015). Measuring teacher self-report on classroom practices: Construct validity and reliability of the Classroom Strategies Scale–Teacher Form. *School Psychology Quarterly, 30,* 513-533. doi:10.1037/spq0000110

Ross-Hill, R. (2009). Teacher attitude towards inclusion practices and special needs students. *Journal of Research in Special Educational Needs, 9*(3), 188-198. doi:10.1111/j.1471-3802.2009.01135.x

Royster, O., Reglin, G. L., & Losike-Sedimo, N. (2014). Inclusion professional development model and regular middle school educators. *Journal of At-Risk Issues, 18*(1), 1-10. Retrieved from https://eric-ed-gov.ezproxy.indstate.edu/contentdelivery/servlet /ERICServlet?accno=EJ1029754

Salend, S. J., & Garrick Duhaney, L. M. (1999). The impact of inclusion on students with and without disabilities and their educators. *Remedial and Special Education, 20*(2), 114-126. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com /login.aspx?direct=true&db=eric&AN=EJ585702&site=ehost-live&scope=site

Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63,* 59-74. Retrieved from https://ezproxy.indstate.edu/login?url=http://search.ebscohost.com/login.aspx?direct=tr&db=eric&AN=EJ529423&site=ehost-live&scope=site

Sharpe, M. N., York, J. L., & Knight, J. (1994). Effects of inclusion on the academic performance of classmates without disabilities. *Remedial and Special Education, 15*(5), 281-287. doi:10.1177/074193259401500503.

Short, P. M., & Rinehart, J. S. (1992, April). *Teacher empowerment and school climate.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Smith, T., Dowdy, C., Polloway, E. A., & Blalock, G. E. (1997). *Children and adults with learning disabilities*. Boston, MA: Allyn & Bacon.

Swain, K. D., Nordness, P. D., & Leader-Janssen, E. M. (2012). Changes in preservice teacher attitudes toward inclusion. *Preventing School Failure, 56*(2), 75-81. doi:10.1080/1045988X.2011.565386

Taylor, R. W., & Ringlaben, R. P. (2012). Impacting pre-service teachers' attitudes toward inclusion. *Higher Education Studies, 2*(3), 16-23. doi:10.5539/hes.v2n3p16

Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alesandro, A. (2013). A review of school climate research. *Review of Educational Research, 83*(3), 357-385. doi:10.3102/0034654313483907

U.S. Department of Education. (2001). *Twenty-third annual report to Congress on the implementation of the Individuals with Disabilities Education Act.* Washington, DC: Author.