PARKER, JUSTIN MICHAEL. Training as a Moderator in the Relationship Between Teachers’ Perceived Available Time and Their Support of Inclusive Practices. (Under the direction of Ann Schulte).

This study examined the relationships between teachers’ perceptions of current school practices and their support for moving toward more inclusive practices at their school. An inclusion support scale was used to determine teachers’ support for inclusion. It was predicted that teachers’ perceptions of their school staff’s training would moderate the relationship between teachers’ perceptions of staff’s available time and their support for moving toward more inclusive practices at their school. Although teachers’ perceptions of their school staff’s available time were related to their perceptions of inclusion, the relationship was not moderated by teachers’ perceptions of their school staff’s training. The current study also examined teachers’ ratings of the helpfulness of 21 inclusion strategies. A reduction of class size based on the needs of the classroom was rated most often as a helpful inclusion strategy, and an exploratory factor analysis revealed support for a three-factor model. Results are discussed in terms of implications for effective strategies to support teachers in inclusive classrooms and future research on teachers’ perceptions of inclusion.
TRAINING AS A MODERATOR IN THE RELATIONSHIP BETWEEN TEACHERS’ PERCEIVED AVAILABLE TIME AND THEIR SUPPORT OF INCLUSIVE PRACTICES

by

Justin M Parker

A thesis submitted to the Graduate Faculty of North Carolina State University In partial fulfillment of the Requirements for the degree of Masters of Science Psychology

Raleigh, NC

November 9th, 2006

Approved by:
Ann Schulte, Ph.D.

William Erchul, Ph.D. Patricia Collins, Ph.D.
BIOGRAPHY

Justin Michael Parker was born in Oneonta, NY. He graduated from Edmeston Central School in 1997. In 2001, he graduated from the State University of New York, College at Cortland with a Bachelor of Science in Psychology (with honors). He enrolled in the graduate program in School Psychology at North Carolina State University in 2002. He is a member of the National Association of School Psychologists and of the North Carolina School Psychology Association.
ACKNOWLEDGEMENTS

First and foremost, I would like to thank my advisor, Dr. Ann Schulte. I greatly appreciated the support, guidance and good humor throughout this process.

In addition, I would like to thank my committee members: Dr. William Erchul and Dr. Patricia Collins. I appreciated their willingness to provide me with constructive feedback and support when needed. And, I am very grateful for the help to make my study the best it could be.

Finally, I would like to thank my family, especially my parents, John and Sue Parker, and my wife Alison Parker, for their unwavering support, love and encouragement through the years.
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CHAPTER 1

Introduction

Over a century ago, special education was developed to improve outcomes for students who were not benefiting from the instruction provided to typical students (Stainback & Stainback, 1984). In 1975, special education became a right with the passage of PL 94-142. This legislation guaranteed that all students in the United States, regardless of disability, were entitled to receive a free and appropriate education (IDEA, 2004) in the least restrictive environment that met their educational needs. Since that time, how to balance the dual mandates of an appropriate education, and an education that takes place in the least restrictive environment, has been a focus of considerable debate in education.

For the most part, this debate has focused on the extent to which children with disabilities should be placed in general education settings. Although there are strong arguments for retaining placements that remove some children with disabilities from general education (Scruggs & Mastropieri, 1996), research, court decisions, the growing number of children considered disabled, and educational policy have all led to an increased press for more inclusion of children with disabilities in general education classrooms whenever possible (Fuchs & Fuchs, 1998).

Although present educational policy favors inclusive placements, the technology for inclusion remains undeveloped. Many teachers report being unprepared for inclusion of students with disabilities in their classrooms (Vaughn, Schumm, Jallad, Slusher, & Samuel, 1996), with little time to dedicate to accommodating these children’s unique needs given the already demanding environment of the general education classroom.
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(Forlin, 2001). As a result, teacher perceptions of inclusion tend to be negative (Scruggs & Mastropieri, 1996). Given that successful inclusion often depends on the willingness of the teacher to adjust his or her classroom to meet the needs of the students with disabilities (Fullan, 1991), these negative perceptions are of concern.

The present study examined teacher views of inclusion and factors that influence these views. It also examined what supports and strategies teachers viewed as useful when schools include students with disabilities in general education settings. Previous research has often only assessed the valence of teachers’ views of inclusion and focused less on what factors affect their views or the supports they believe would be helpful in including students with disabilities in their classrooms. The present study addressed this gap.

Extant data for one school district that was considering a move toward more inclusive education was used in the current study. Teachers filled out surveys concerning where their school was in terms of inclusive special education services, where they would like their school to be in terms of inclusive special education services, and supports they would find helpful if the district moved toward more inclusive classrooms. Issues such as the amount of time teachers have to individualize instruction and the training of general education staff to work with children with disabilities were also assessed in the survey.

It was hypothesized that both perceived time available for inclusion and perceived level of staff training would predict the extent to which teachers support moving toward a more inclusive model of special education. More importantly, it was hypothesized that these factors would interact when predicting support for inclusion, such that teachers who perceive staff as less well prepared for inclusion would perceive less time for inclusion
and be much more negative in terms of their support for inclusion. Teachers’ ratings and rankings of inclusion strategies were also examined and analyzed. Specifically, the strategies teachers rated most highly were determined and a factor analysis was used to determine if commonalities existed among the most highly rated strategies.

To provide a framework for the present study’s objectives, a review of the inclusion literature will be presented. This review will include a discussion of the history of special education and the continuum of services used by schools to provide special services to students with disabilities. Next, a review of the research regarding academic and social outcomes for students with disabilities will be presented. Finally, research regarding teachers’ views of inclusion, including their role in inclusive classrooms, will be discussed.

The present study will make a contribution to the research literature concerning teacher perspectives on inclusion by attempting to identify factors that predict these perceptions and identifying inclusion strategies teachers endorse as being the most helpful.
The purpose of this chapter is to review literature relevant to the present study’s objectives and methodology. First, a brief history of special education will be presented. This history provides a context for the continuing debate about where students with disabilities should be educated, and includes a description of the continuum of services currently used to characterize environments in which special education is provided. This history and description will then be followed by a review of research concerning the academic and social outcomes for children with disabilities in restrictive and inclusive settings. Lastly, research regarding the role and importance of the general education teacher in the inclusive classroom will be discussed.

Brief History of Special Education in the United States

Equality of educational opportunity and access to education for all are fundamental principles of the American educational system. The landmark Supreme Court ruling in the case of *Brown v. Board of Education* (1954) affirmed all children’s right to an education that was not separate or different.

In 1974, these principles were the basis for federal legislation designed to assure that children with physical, cognitive, and behavioral disabilities were not excluded from public education. PL 94-142, the Education of Children with Disabilities Act (1975) established that all children with disabilities were entitled to a free and appropriate education. Consistent with the mandate for non-segregated settings in *Brown v. Board of Education* (1954), the law required that children with disabilities be educated in the “least restrictive environment” possible. However, the fact that some children’s needs could not
be adequately met in the classrooms with their same age peers also was acknowledged in this legislation. Each child was to be educated in the least segregated setting where his or her unique educational needs could be met. Decisions about children’s educational program and settings were to be made on an individual basis by a team of parents and professionals.

In light of the fact that the roots of special education for children with disabilities in the United States are in court rulings finding that segregated educational settings for children potentially violate the United States Constitution, it is not surprising that the extent to which children with disabilities can and should be educated in general education classrooms is a critical focus in special education and a matter of continuing debate (Dunn, 1970; Fuchs & Fuchs, 1994; Gartner & Lipsky, 1987; Rheams & Bain, 2005; Reynolds, Wang, & Walberg, 1987; Will, 1986). Arguments concerning for whom segregated settings are appropriate, and the extent to which general education teachers can and should adapt their instruction to include children with disabilities have been a continuing theme in the history of special education. Following the passage of PL 94-142, concern and debate about the merits of segregated settings for children with disabilities became common in the professional literature.

*The continuum of services defined.* Before proceeding with the history of special education and describing the debate concerning the setting in which children with disabilities receive their education, it is important to understand the language in which this debate is typically framed. Specifically, this section provides definitions for a number of the terms typically used in research and writing about special education placements.
First, children can be served in a range of settings that vary in terms of restrictiveness. The full range is often described as a *continuum of services* (Mastropieri & Scruggs, 2000). The continuum of services has three major categories that encompass the range of services: General education, resource room services, and separate settings (see Figure 1). Within the general education category, *consultative services* is the most common approach. In this model, children with disabilities receive their services from the general education teacher, and the teacher receives consultation on how to best serve these children (Brown, Pryzwansky, & Schulte, 2001). Across the entire continuum of services, the most widely used category is the *resource room*. Here students with disabilities are in the general education classroom for a portion of their day, but are pulled out of the classroom to receive special instruction in target areas (Mastropieri & Scruggs, 2000). Within the separate settings category, the most common placement model is the *full-time special education classroom*. This classroom is in the general public school, but only serves students with disabilities. Children who are served in the separate settings category spend very little or no time with their same aged, non-disabled peers (Mastropieri & Scruggs, 2000).

*The Regular Education Initiative.* Identifying where a child with a disability can receive a proper education in the least restrictive environment (where their services fall on the continuum of services) is a major goal of the special education placement process. However, in the initial stages of implementation of PL 94-142, the focus of much of school districts’ activity related to special education was establishing the procedures for implementing the law and outreach to assure that all children with disabilities were identified and served. As schools grappled with serving and integrating students with
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<table>
<thead>
<tr>
<th>Primary Setting</th>
<th>Delivery Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>Full Inclusion</td>
<td>Child receives no special education services outside the general education classroom.</td>
</tr>
<tr>
<td>General Education</td>
<td>Consultative Services</td>
<td>General education teacher receives consultation on how to best serve child with a disability.</td>
</tr>
<tr>
<td>General Education</td>
<td>Special Instruction</td>
<td>The child receives special instruction and services in the context of the general education classroom.</td>
</tr>
<tr>
<td>Resource Room</td>
<td>Child pulled out of the general education classroom for specific services</td>
<td>The child spends much of the day in the general education classroom, but is pulled-out for resource room services/instruction. The amount of time the child is out of the classroom is variable and dependent on need.</td>
</tr>
<tr>
<td>Separate Settings</td>
<td>Full Time Special Education Classroom</td>
<td>A classroom in the general public school that serves only students with disabilities.</td>
</tr>
<tr>
<td>Separate Settings</td>
<td>Separate Schools</td>
<td>Students are bussed to a separate school everyday; these schools only serve students with disabilities.</td>
</tr>
<tr>
<td>Separate Settings</td>
<td>Special Facilities</td>
<td>A non-public school where students with disabilities live and are educated.</td>
</tr>
</tbody>
</table>

Figure 1

Continuum of Special Education Services

severe disabilities who had been excluded from school or educated in separate schools, there was less concern with the specific models used to serve children with disabilities once they were in school (Mastropieri & Scruggs, 2000). Schools were more interested in making sure that all children who qualified were being served rather than focusing on placing children in the least restrictive environment possible.
However, as the law became more broadly implemented, the issue of the extent to which children in special education were in the same school, but still separated from peers through part- or full-time placement in separate classrooms became a significant issue. One factor that made where children were served a more salient issue was that shortly after implementation of PL 94-142, the majority of the children identified and served in special education were not those with severe disabilities, such as blindness, deafness, or profound mental retardation, but children with more mild disabilities such as learning disabilities, mild mental retardation, and behavior disorders (Mastropieri & Scruggs, 2000). The fact that many children served in special education were not children who had been excluded from school, but children who had previously been served in general education, raised concerns that special education legislation was increasing segregation rather than promoting the integration of children with disabilities into schools and classrooms.

Reflecting this concern, in 1986, Madeline Will, the Assistant Secretary for the Office of Special Education and Rehabilitative Services, introduced the Regular Education Initiative (REI). This initiative, based on data showing poor outcomes for students with mild disabilities using resource room services (e.g., Madden & Slavin, 1983), advocated a merging of special and general education in order to serve children with mild disabilities in the general education classroom (Will, 1986). With the REI, students with mild disabilities, who were (and still remain) the majority of students in special education, would no longer receive special education in resource rooms or separate settings. The goal of the REI was to give children the advantage of being in a
general education classroom while still receiving the supports needed in order to succeed in both the academic and social realms.

Will (1986) called for a greater sharing of responsibility for students with disabilities between general and special educators. This sharing was not quantified in time, as in the student should be in the general classroom for half the day and receive resource room services for the other half. Rather, the expectation was that the special educator would become a part of the general classroom, helping to educate the student in the context of general education. There was a concern that having a student pulled out of the classroom to the resource room allowed general education teachers to have a “dumping ground” where they could send students who they felt did not fit into their classroom and thus abdicate responsibility for the children’s progress (Fuchs & Fuchs, 1998). By removing the resource rooms as an option, teachers would be forced to adapt their classroom and teaching style to a more diverse group of students.

The REI fueled considerable debate about the appropriate place to educate children with disabilities (e.g., Makas, 1988). It also generated considerable research on special education alternatives that did not require students to be removed from the general education classroom to receive specialized services (e.g., Bulgren & Carta, 1992; Salend & Duhaney, 1999). This research will be summarized in a later section.

Inclusion and full inclusion. The REI and the research it stimulated did little to quell the debate about where special education students should be educated. Shortly after the REI, a group of professionals and parents advocating for children with severe disabilities called for increased effort to include all children with disabilities in the general education classroom, including those with severe disabilities (e.g., Ferguson &
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Baumgart, 1991). They termed their vision “full inclusion.” However, their vision was too radical for many special educators. Those that advocated placement of students in the general education classroom as much as possible and greater responsibility for children with disabilities for general educators, termed “inclusionists,” began to separate themselves from “full inclusionists,” who saw few, if any reasons, to exclude a child from the general education classroom regardless of the circumstances (Fuchs & Fuchs, 1998, p. 310).

In describing the two positions, Fuchs and Fuchs (1998) stated that both inclusionists and full inclusionists believe that children with disabilities can be a positive addition to a general education classroom. Both groups believe it is critical for all students to be able to interact in a general education classroom. The major difference between the groups is that full inclusionists believe all children should be in a general education classroom at all times. In contrast, inclusionists believe there should be a continuum of services provided to children with disabilities, and that there are potential benefits to resource room and separate settings that should be considered.

On the surface, it may seem that there are only subtle differences between inclusionists and full inclusionists. However, further investigation reveals a strong theoretical boundary that underlies these subtle differences. The following sections will discuss how each group approaches the issue of how to include children with disabilities in general education classrooms.

Inclusion. “Inclusionists believe it is the job of classroom teachers and special educators to help most children with disabilities learn important skills, knowledge and self-control that will facilitate graduation from high school, or even college, and that will
help them get a good job” (Fuchs & Fuchs, 1998, p. 310). Inclusionists do not object to the most widely used and preferred (Zigmond & Baker, 1996) model of special education service delivery, the resource room. This model allows for individual differences in the students, with those deemed as requiring more intense services having a plan in which they are out of the general classroom for more of the day than students with less need for adapted instruction. Given that researchers have reported that few teachers adjust their type of instruction to address the wide range of achievement that is likely present in their class (Baker & Zigmond, 1990; Fuchs, Roberts, Fuchs, & Bowers, 1996; McIntosh, Vaughn, Schumm, Haager, & Lee, 1993), inclusionists would argue that allowing a child to receive resource room services outside the classroom gives them the opportunity to receive more appropriate, individualized instruction that they would not receive in a general classroom.

Inclusionists argue that general education classrooms that are led by teachers who use best practices and do adapt to individual differences in achievement still may not be the best learning atmosphere for all students with disabilities on a full-time basis. Fuchs and Fuchs (1998) reported that about 30 percent of children with disabilities fail to respond to best practices of teachers in the general classroom (such as cooperative learning, class wide peer tutoring and phonemic awareness training). To inclusionists, having 30 percent of children with disabilities not achieve what they consider to be the goal of education in even the best classrooms is unacceptable and is a strong justification for the continued availability of resource rooms and separate settings for children with disabilities.
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*Full inclusion.* In contrast, full inclusionists see any type of separate setting for children with disabilities as wrong because it communicates to children that it is acceptable for society to view persons with disabilities as different and to segregate them from others (Stainback & Stainback, 1992). From this perspective, the use of resource rooms to deliver special instruction in target areas to children with disabilities is not a compromise, but rather another way in which children are penalized and segregated for being different. Full inclusionists believe there is too little emphasis on accommodating diversity in the general education classroom. They typically place a higher priority on integration and friendships between children with disabilities and their non-disabled peers than academic achievement for students with severe disabilities.

The full inclusionists often are seeking to transform the general education classroom and society as a whole. If children with disabilities are part of the general classroom on a full-time basis, they will not be seen as people who need to be separated. The breaking of this stereotype in school-aged children should carry through to when they become adults, and hopefully end the segregationist attitudes present in our society for future generations. In their view, eliminating segregated alternatives will force teachers to develop the technology to serve all children in the general education classroom. As long as there is the option of excluding children, integrated options for students with disabilities will not be developed.

In sum, inclusionists and full inclusionists have very different views on how students with disabilities should receive their education. Inclusionists are accepting of instruction that may take place outside of the general education classroom, as long as the modification is necessary to the educational progress of the child in question. Full
inclusionists are not accepting of special education children receiving any of their
education outside of the general education classroom, and maintain that any time spent
outside the general education classroom stigmatizes special education children as
different. As Ballard (1995) said:

An inclusive school defines ‘differentness’ as an ordinary part of human
experience, to be valued and organized for. Schools that practice exclusion
define differentness as not ordinary, as outside their area of responsibility
and, by implication, as not as valuable as ‘ordinariness.’ These two
perspectives construct student populations in different ways. This leads to
organizational arrangements that then create disability in different ways.
Inclusive arrangements create disability as an experience to be addressed
within a context of diversity. Exclusive arrangements create disability as
sickness, personal tragedy and object of charity (‘special’ needs may not
be met as of right, but only application for ‘special’ help) within a context
that privileges some human characteristics over others.

Academic Outcomes

The preceding sections discussed the continuum of services that exists in schools
to serve students with disabilities and the arguments made by the proponents of two
different philosophical approaches to the principle of least restrictive environment. For
most persons, discussions about appropriate settings for serving children with disabilities
are made in the context of academic outcomes for students who are served by special
education. In that light, the current section will discuss research findings concerning the
academic achievement of students with disabilities across the continuum of services.
Most of the literature in the area of academic outcomes for children with disabilities has
focused on children with cognitive disabilities. This literature review will therefore use
the term disability to refer to children with cognitive disabilities. An additional focus will
be research concerning the academic outcomes for non-disabled students when students
with disabilities are included in general education classrooms.
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*Academic outcomes for students with disabilities.* Reflecting the historical focus on “place” in special education (Fuchs & Fuchs, 1994), there is a wealth of research that compares academic outcomes for students with disabilities as a function of the setting in which they are educated. However, before proceeding, it is important to note some of the methodological issues that limit the interpretability and clarity of this research. First, although there is considerable research on this issue, few studies have employed random assignment of children to the service delivery settings that were compared (Leinhardt & Pallay, 1982; Madden & Slavin, 1983). Unfortunately, this methodological shortcoming severely limits the conclusions that can be drawn from this body of research, as children are more likely to be placed in more restrictive settings when they have more severe disabilities. Without random assignment, there is a bias toward the finding that more restrictive placements result in poorer academic outcomes, not because the setting results in poor achievement, but because children who are placed in more restrictive placements are likely to have greater learning problems.

Second, most studies compare only a limited number of the possible settings in which children with disabilities might receive their education (e.g., self-contained versus resource room placements). Therefore, individual studies must be viewed as providing only pieces of the puzzle of how setting influences achievement for students with disabilities. This aspect of the research literature makes the focus on cumulative reviews important because results across studies can be compared to allow tentative conclusions about placement effects across the continuum of services.

Third, special education disability categories and their diagnostic criteria vary across states and also have changed over time. In addition, many studies have included
children from several disability categories and/or have not fully described the characteristics of the children included in their sample. To address the changing nature of the study samples and the limited descriptions provided by some researchers, many cumulative reviews have included studies using students from a range of disability categories and referred to the group studied as “students with mild academic disabilities” or “students with mild academic handicaps.” Frequently included in this group are students with mild to moderate mental retardation, learning disabilities, behavior disorders, and language disorders.

Fourth, a hallmark of good research comparing settings is a description of the activities in both settings. In the case of inclusion research, this means operationally defining what is different in an inclusive classroom as opposed to a special education classroom setting. However, much of the inclusion research simply considers the physical place the child is educated in, failing to describe factors that may make the two education placements different, such as teacher variables and time spent on instruction. Without making it clear what is happening in the classrooms that differentiates the settings, it cannot be said that one service delivery method is superior to another, as uncontrolled variables may account for the observed differences.

In sum, much of the inclusion research has been methodologically flawed, using non-random assignment to the settings compared and poor operational definitions of the types of services that are being compared. Despite these possible methodological flaws, an understanding of what evidence exists and where it points is important when considering future directions of inclusion research.
One of the earliest and most influential publications in the debate about restrictive versus inclusive placements was a review by Madden and Slavin (1983). Noting the methodological shortcomings of much of the research literature regarding academic outcomes for students with disabilities described above, Madden and Slavin (1983) conducted a critical review of studies that compared the effects of placing students with mild academic disabilities in separate settings versus full-time inclusive (what they called mainstreamed) classrooms. Their review was limited to “methodologically adequate” (p. 529) investigations and included the few studies that used random assignment of students to different settings, as well as studies that used other methods to assure children in the different settings had similar characteristics. The authors chose to only review studies that investigated outcomes of students with mild cognitive disabilities because these children have historically been considered good candidates for placement in general education classrooms and they make up the majority of students who have traditionally been served in special education classes. The authors noted that the students in the review were administratively defined as being in need of special services because of learning problems, and due to the wide variations that can occur with such a broad label, generalizations to specific groups of students who have specific disorders was difficult.

Relying primarily on two methodologically strong studies, where differences in teacher skill and curriculum had been controlled, Madden and Slavin (1983) concluded that general education settings produced better academic outcomes for students with disabilities than separate settings. However, in these studies, instruction had been adapted to meet children’s needs in both types of settings. In other studies, where instruction was not adapted, or extreme differences between settings were not controlled, the results were
less clear. Thus, an important aspect of the observed positive outcomes for students with disabilities in general education classrooms in the Madden and Slavin (1983) review was appropriate instruction.

The Madden and Slavin (1983) review also found that when individualized instruction was not present in general education classrooms, children with IQ scores below 70 had higher academic achievement in well-structured special education classrooms. Furthermore, they reported that general education classrooms with the worst outcomes for students with IQ scores below 70 had no special modifications for students with disabilities. This finding provided more evidence that instruction and modifications within each setting was an important variable when academic outcomes for students with disabilities were compared across placement categories.

In sum, Madden and Slavin (1983) found that the methodologically adequate research suggested that academic achievement for mainstreamed (included) students was superior to the academic achievement of students placed in separate settings models, but only when appropriate supports and individualized instruction were in place. When these supports were not in place in the inclusive classroom, students with low IQ scores performed better in well-structured, separate settings classrooms.

In another classic work, Carlberg and Kavale (1980) conducted a meta-analysis that examined restrictive versus inclusive placements for students identified with five types of disabilities: educable mental retardation, borderline IQ (slow learners), emotionally disturbed, behavior disorders, and learning disabilities. When the results of studies were cumulated across all disability classifications, they found that placement in a separate setting was inferior in terms of academic outcomes to placement in a general
education classroom (overall effect size of -.12). However, academic outcomes varied by disability type. Children with low cognitive functioning (slow learners and educable mentally retarded students) performed better in inclusive classrooms, and children with learning disabilities and behavioral/emotional disorders had better outcomes when they received special resource room services. The authors urged caution when interpreting the results by disability classification because of the small number of studies that considered specific types of disabilities separately.

Carlberg and Kavale (1980) did not distinguish between separate settings and resource rooms in their definition of special education services. Therefore, their definition may have obscured differences between these two types of categories. Wang and Baker (1985-1986), in an effort to differentiate between the two service delivery categories, conducted a meta-analysis that examined academic outcomes of students with a range of disabilities receiving services in either inclusive, resource, or separate classrooms. They found that students in inclusive classrooms made greater academic gains in terms of academic achievement than students with disabilities in either resource room or separate settings classrooms. A limitation of this study was the low percentage of students with learning disabilities (3%) compared to other disabilities in the sample.

Students with learning disabilities account for a large percentage of the students in special education. As a result of the diagnostic criteria for this disorder (i.e., placement is often based on a discrepancy between IQ and achievement), they also have higher IQs than some of the other subgroups of students with mild to moderate cognitive disabilities (e.g., mental retardation). Given the prevalence of this population and the cognitive ability differences of students with learning disabilities in comparison to other special
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education students, an examination of studies that looked explicitly at learning disability is merited.

Waldron and McLeskey (1998) compared the reading and math performance of 71 elementary students with learning disabilities who received their services in an inclusive classroom to that of 73 students who received resource room services. Results of the study were mixed, with students with learning disabilities in the inclusive classroom showing significantly greater gains in reading than students who received resource room services, but no significant difference was found between the groups in terms of math progress. Despite the lack of a difference in math progress, the results of this study indicate that students with learning disabilities can, with adequate support, perform as well or better in inclusive classrooms in terms of academic achievement than students with learning disabilities who are served in a resource room model.

In another study, Marston (1996) compared academic outcomes for students with learning disabilities receiving special services in inclusive, resource rooms and separate settings. In the inclusive model, 33 students received all of their instruction in the general education setting, with the special education teacher and the general education teacher collaborating to assure children’s needs were met. In the resource room model, 36 elementary school children received instruction for an IEP area both in a resource room and in the general education classroom. In this model, the general education teacher and the special education teacher teamed together to provide the student instruction in the general education classroom, with supplemental instruction provided by the special education teacher in a resource room. In the third model, the separate settings model, 171 students received special education services in their IEP areas from the special education
teacher in the resource room only. There was no formal collaboration between the general education teacher and the special education teacher in this model. The students in all groups, at the beginning of the school year, were given a curriculum-based measurement to determine the number of words they could read per minute. At the end of the year, the students were again tested and difference scores between pre-and posttests were determined. Results revealed that students who were in the resource room group had the greatest increase in words read per minute. Students in the inclusive and separate setting conditions had similar, but smaller gains. Furthermore, the special education resource teachers reported being more satisfied with the resource room model than the full inclusion model and the separate settings model. These data support the findings of Carlberg and Kavale (1980) who suggested students with learning disabilities might benefit from resource room support.

Student support and method of instruction. Despite findings in the literature that students with a wide range of disabilities can sometimes perform as well or better in inclusive classrooms than if they were placed in a resource room or separate setting, results from studies such as Marston (1996) suggest that students with disabilities in inclusive settings may not always receive the support they need in order to have positive academic outcomes. In a review of outcomes in three different inclusion programs, Zigmond, Jenkins, Fuchs, Deno, Fuchs, Baker et al. (1995) found that approximately 50% of students in inclusive programs failed to show evidence of increased academic performance in terms of reading achievement relative to their pretest scores. Without a comparative base to other service delivery models it is impossible to say, however, that another service delivery model would have increased the academic performance of these
children. The study does suggest, however, that students with disabilities in inclusive classrooms are at risk for poor academic outcomes, especially if necessary supports (i.e., individualized instruction) are missing.

In large reviews, such as Madden and Slavin (1983), children with disabilities served in inclusive classrooms were found to have better outcomes only when appropriate supports were in place. This finding suggests that understanding variables within the various placement settings may be as important as comparing outcomes across placement categories. Furthermore, although all of the reviews and studies mentioned thus far have found differences between settings in terms of academic outcomes, there are many studies that fail to show differences in academic outcomes for students with disabilities based on their placement setting, suggesting that the physical setting a student receives their services may not account for all the observed differences in comparisons of outcomes for students with disabilities across the continuum of services. It stands to reason that if instruction is similar across placement categories, academic outcomes for students across categories should also be similar. Bulgren and Carta (1992), in their review of studies from 1982-1992, found that there was a lack of significant differences in instruction for students with learning disabilities based on their placement in separate settings or inclusive classrooms.

Similar to Wang and Baker (1985-1986), Leinhardt and Pallay (1982) reviewed the various placement models in terms of academic achievement for students with a range of disabilities. They found that when appropriate supports were in place, inclusive classrooms were able to meet the needs of students with disabilities, and that resource room delivery models were only superior when the supports were missing. Resource
room delivery models were found to be superior in terms of academic outcomes for students with disabilities when compared to separate settings models. Upon further examination, when the students were broken down into groups according to their handicapping condition, they found that IQ moderated outcomes for students across the placement models. That is, similar to Madden and Slavin (1983), they found that students with lower IQs performed better in resource room or separate settings models, and students with higher IQs performed better in inclusive classrooms.

Most of the reviewed studies have focused on the physical place in which students with disabilities receive their education when investigating academic outcomes for these students and whether better outcomes are associated with a particular setting. However, in their review, Leinhardt and Pallay (1982) suggested that setting is not a particularly meaningful variable in understanding academic outcomes for students. They asserted the physical site of instruction is irrelevant in explaining academic outcomes for students with disabilities. Instead, it is the instructional and social processes that may vary across the physical settings that account for different outcomes across placement settings. For example, the rationale for placing children with disabilities in more restrictive settings is to allow the most critical features of instruction to be more easily managed. That is, if putting students in a restrictive setting results in increased student learning time, it stands to reason that their achievement will also increase. Although placing the child in the restrictive setting may allow for increased learning time, setting itself does not have a direct effect on achievement in this model. Therefore, the research that compares outcomes for students across placement categories may not be considering all the
variables that are important in such a comparison. This problem may explain the mixed results about setting found in the studies reviewed in this section.

One of the limitations of the inclusion research discussed at the beginning of this section was the lack of description of what is happening in the different settings that result in differing levels of achievement for students with disabilities. Leinhardt and Pallay (1982) suggested that the variables that likely account for the differences in achievement for students with disabilities across placement categories (including management, teacher affect, teacher instruction, cognitive press, self-concept and instructional pacing) should be well defined rather than controlled for. It is the process of instruction that should be investigated, thus not limiting the research to the physical place where education takes place. In the real world setting of education, it is impossible to control for every detail that will naturally occur in educational settings. Therefore, by accurately defining and describing the variables between general education and special education classrooms, the variables that account for differing achievement across the settings can be identified and used to increase achievement in all settings.

In sum, results in the current literature are mixed in terms of academic outcomes for students with disabilities. Many studies suggest that academic outcomes for students with disabilities are better in inclusive classrooms than in either resource room or separate settings classrooms (Carlberg & Kavale, 1980; Madden & Slavin, 1983), and others suggest there is no significant difference between the academic outcomes of students with disabilities based on the physical place where they receive their special education services (Bulgren & Carta, 1992). Several hypotheses have been suggested to explain why significant differences in academic outcomes are sometimes not found for
students with disabilities based on placement settings or why differences that have been found should be questioned. Carlberg and Kavale (1980) suggested that differences in academic outcomes by placement setting vary based on the handicapping condition of the individual child, with some groups performing better in inclusive classrooms and others performing better in separate settings classrooms. Others have suggested that the natural differences in teaching style within similar models of special education make comparisons of children across groups difficult (Gelzheiser, Meyers, & Pruzek, 1992; Haynes & Jenkins, 1986). In this argument, even if there were differences in academic outcomes for students with disabilities in the different models, the effects may be hidden by the different teaching styles within each model. Furthermore, Leinhardt and Pallay (1982) have suggested that the teaching process and critical features of instruction are what are important for positive outcomes for students with disabilities, and that placement settings are just a way to ensure these features are in place. In this view, the physical place education takes place in has little to do with the academic achievement of students with disabilities, but rather other variables in these settings account for the differences in achievement.

Despite these concerns regarding comparisons of academic outcomes for students with disabilities between models of special education, the current research suggests that students with disabilities, with proper supports in place, can perform as well or better in inclusive classrooms than in either separate settings classrooms or with resource room services. However, from a global perspective regarding academic outcomes, children with disabilities are at risk for poor academic outcomes regardless of their placement setting (Zigmond et al., 1995). Again, this may be a result of what type of instruction
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these children are receiving, or the many variables that account for academic achievement that go beyond placement setting (Leinhardt & Pallay, 1982).

*Academic outcomes for general education students in inclusive classrooms.* Most of the research conducted on inclusive classrooms has investigated the potential benefits these classrooms provide for children with disabilities. However, an understandable concern exists among parents of typically developing children and teachers alike that children with disabilities in inclusive classrooms may be served at the expense of general education children (Peck, Carlson, & Helmstetter, 1992). Potential social benefits for typically developing children in inclusive classrooms would be overshadowed if the inclusion of students with disabilities negatively affected academic outcomes for typically developing students. Two ways of investigating the academic achievement for general education students are: (a) comparing the instructional time students without disabilities receive in included classrooms versus the instruction time they receive in non-included classrooms (if instructional time is similar, academic outcomes should not be affected); and (b) comparing academic outcome data for general education students in inclusive versus non-inclusive classrooms.

Hollowood, Salisbury, Rainforth, and Palombaro (1994) compared inclusive classrooms (defined as having at least one student with a severe disability in a general education classroom) and traditional general education classroom in terms of the amount of instructional time and teacher attention that students without disabilities received. The study addressed whether or not the inclusion of students with disabilities in general education classrooms would result in teachers paying less attention to students without disabilities, and therefore providing students without disabilities less instructional time.
Results of this study revealed that students with disabilities included in general education classrooms did not have a significant effect on the amount of time teachers spent instructing and interacting with students without disabilities. Furthermore, no significant difference in the amount of interruptions to planned activities was found between the classrooms.

In a study of outcome data, Sharpe, York, and Knight (1994) used a pretest-posttest research design to examine the academic performance of general education students in elementary inclusive classrooms. In their study, they compared typically developing students who were in classrooms with two students with significant disabilities to typically developing students who were in classrooms that did not have students with severe disabilities. Across all measures (which included standardized tests and report card grades), there were no significant differences between the groups of children. Similarly, Hunt, Staub, Alwell, and Goetz (1994) compared achievement in math between non-disabled children in inclusive classrooms and non-disabled children in traditional general education classrooms. Results revealed similar progress between the groups, with typically developing students in the inclusive classroom performing as well as students in traditional general education classroom.

In sum, current research suggests that typically developing students in inclusive classrooms are not negatively affected by their placement in an inclusive classroom (Sharpe et al., 1994). Therefore, discussion of inclusive classrooms can focus on outcomes for students with disabilities.

*Summary of academic outcomes and placement settings research.* Existing research on the outcomes for children with disabilities placed in inclusive versus non-
inclusive classrooms is mixed. Taken together, the available studies seem to suggest that separate settings and resource room models are not meeting the academic needs of students with disabilities any better than inclusive settings. From a global perspective, academic outcomes for students with disabilities are poor regardless of where their education takes place (Schulte, Osborne, & Erchul, 1998). Finally, general education students do not appear to be academically disadvantaged by placement in an inclusive classroom.

Social Outcomes

Compared to academic outcomes, both defining and assessing social outcomes for students with disabilities present more challenges for researchers. When investigating academic outcomes, one typically examines either grades or achievement scores. Social success is not as easily defined and measured. Children’s social functioning can be examined from multiple perspectives and there is less consensus on what constitute the key social outcomes for children.

There are two primary ways to assess social outcomes for students with disabilities. The first is to compare social outcomes for students with disabilities across settings, such as comparing social outcomes for students with disabilities in inclusive and restrictive settings. This type of comparison provides information about the impact of different types of settings on children’s social functioning and is useful in weighing the advantages and disadvantages of various service delivery options. The second way is to compare social functioning of students with disabilities to the functioning of their non-disabled peers. This type of comparison is useful in understanding the extent of social impairment children with disabilities experience, and in assessing whether or not
particular settings are associated with “normalized” social functioning. For example, it is possible that an inclusive classroom might be superior to a self-contained classroom in terms of social outcomes for children with autism, but regardless of setting the children’s social functioning might be below that of same age peers who are not disabled.

*Types of social outcomes.* Not only do studies of social outcomes for children with disabilities vary in terms of the type of comparison made, but also researchers typically examine a number of different components of social functioning when assessing social outcomes. Vaughn and Haager (1994) have characterized social outcomes as falling into four domains of social functioning: (a) peer relations, (b) social skills, (c) behavior problems, and (d) social cognition. Peer relations refer to the quality of one’s relationships with peers. Measurements of quality of friendships, number and type of relationships, and level of peer acceptance would fall under peer relations. One of the most common approaches to assessing the social functioning of children with disabilities in the classroom is sociometrics. With this method, peers report on most and least liked peers in their social group, and this information is used to ascertain whether children are popular, rejected, neglected, or controversial (Madden & Slavin, 1983). Other approaches look at the amount of social interaction between a child with a disability and his or her peers, or the quality of friendships children with disabilities experience (Hunt & Goetz, 1997).

Social skills in Vaughn and Haager’s (1994) model refer to specific behaviors a person uses to perform competently on a social task. The ability to use social contacts, have appropriate social interactions, and avoid social alienation are examples of social skills. The third domain, behavior problems, refers to both internalizing and externalizing
behaviors. Therefore, anxiety toward school (internalizing) and aggression in the classroom (externalizing) fall under the same broad domain in this model. Finally, social cognition refers to the ability of individuals to have meaningful, complex social interactions with peers. This domain requires knowledge of appropriate social interactions, such as the ability to engage in preferred, socially appropriate activities. Because social competence is a broad construct, most research in the area of social competence of children with disabilities only takes into account one or two of the domains delineated in this model and usually a limited number of aspects of each domain.

In this section, the current research on social outcomes for: (a) students with mild and severe disabilities in general education classrooms versus separate settings classrooms, (b) children with mild disabilities receiving resource room services, and (c) students with disabilities as compared to their non-disabled peers across settings will be discussed. The final section will discuss the role of the teacher in promoting positive social outcomes. Consistent with the state of research on this topic, research using a variety of ways of defining social outcomes has been included in this section.

_**Social outcomes for students with disabilities in separate versus inclusive settings.**_

One of the most common ways researchers have investigated social outcomes for students with disabilities is to compare the outcomes for similar children in different placement settings. Typically outcomes for children in more inclusive placements (inclusion or resource room) are compared to outcomes for students placed in separate settings. Furthermore, much of the research on social outcomes for children with disabilities specifies the severity of the disability. The following discussion of social
outcomes for children with disabilities in inclusive versus separate settings will be divided between children with mild disabilities and children with severe disabilities.

Children with mild disabilities. As discussed in the academic outcomes section, Madden and Slavin (1983) conducted a critical review of studies that compared the effects of placing students with disabilities in separate settings versus full-time inclusive classrooms. In addition to examining academic outcomes, they also examined social outcomes. Overall, the authors found that students with mild disabilities placed in inclusive classrooms demonstrated more social gains (demonstrated more behaviors associated with the general construct of social competence) than their peers who were placed in separate settings. In order for this effect to be observed however, appropriate supports (i.e., resource support or individualized instruction) had to be in place. They reported that when individualization or resource supports were not used in inclusive classrooms, social-emotional outcomes for students placed in inclusive settings were variable.

With regard to peer relations, as measured by the social acceptance of students with mild disabilities by their non-disabled peers, the Madden and Slavin (1983) review did not support the superiority of inclusive placements over separate settings for students with mild disabilities. The reviewed studies indicated that children with mild disabilities in inclusive settings were less well accepted and more frequently rejected than their non-disabled peers. These studies provide evidence that social acceptance of children with mild disabilities is a major problem in inclusive classrooms. However, it is not a problem that is unique to inclusive classrooms, as children with mild disabilities across placement settings were found to be less accepted by their same-aged, non-disabled peers.
For all other measured social outcomes (social skills and behavior problems), the review found inclusive classroom settings to be superior to placements in separate settings for students with mild disabilities. The authors reported that the methodologically adequate research on separate settings versus inclusive placements for children with mild disabilities indicated there are few advantages of full-time special education placements. The only cases in which inclusive classroom placements were not superior to separate settings placements in terms of social-emotional outcomes for students with disabilities were studies in which no special supports were available in the inclusive classrooms. This finding is similar to the Leinhardt and Pallay (1982) review of academic outcomes that suggested the physical place of instruction is not as important to outcomes as the quality of instruction in the different settings. The authors therefore endorsed an inclusive classroom with appropriate supports as the primary setting in which to attempt to improve the social acceptance of students with mild disabilities by their non-disabled peers.

*Children with severe disabilities.* Hunt and Goetz (1997), in their larger review of studies that examined a range of inclusion issues, reviewed eight studies conducted between 1988 and 1996 that addressed social relationships and friendships in inclusive classrooms. In order to limit the large amount of literature that exists on inclusion, the authors only reviewed studies that: (a) included students with severe disabilities; (b) defined inclusion as a full inclusion model; and (c) employed inclusion as the independent variable; that is, studies that compared inclusive versus non-inclusive classrooms. All of the reviewed studies found that students with severe disabilities in inclusive settings had more interactions with their non-disabled peers than did students
with severe disabilities in separate settings. Similar to findings by Madden and Slavin (1983), Hunt and Goetz (1997) found most of these studies required teacher preparation and active intervention/program planning for the increased interactions to be observed. Unlike Madden and Slavin (1983), who found that students with mild disabilities in inclusive classrooms were likely to be rejected by their peers in a similar manner to students with disabilities in separate settings, the findings of this review suggested students with severe disabilities in inclusive settings realize acceptance, interactions and friendships more often than do students in separate settings. Furthermore, this review found that students who had IEPs written to include social interaction goals had more reciprocal interactions and friendships with their non-disabled peers. This review provides evidence that students with severe disabilities in inclusive classrooms who have social interaction goals included in their IEP and are provided appropriate support from their teacher are more likely to demonstrate social competence than students with severe disabilities in separate settings. Without adequate classroom support however, social outcomes for students with severe disabilities in inclusive classrooms are less likely to be positive.

Fryxell and Kennedy (1995) used a matched group design to compare the peer relations and social skills of students with severe disabilities who spent the majority of their time in the general education classroom, and students with severe disabilities educated in separate settings. The two groups were matched in terms of gender, age, disability category, social skills level, communication level, and years of attendance at their current school. The two service delivery models were also matched using an educational quality indicators rating scale so the different settings would be similar in
instruction and support. Through direct observation and student interviews, results revealed that the students with severe disabilities served in the general education classroom had more social contacts, stronger friendship networks, and received more social support than students with severe disabilities in separate settings classrooms.

As part of a five-year longitudinal study to examine social relationships of children and youth with significant disabilities, Fisher and Meyer (2002) compared two groups of twenty students across two years of inclusive versus separate educational settings. The Scales of Independent Behavior (SIB) and the Assessment of Social Competence (ASC) were used to measure the children’s development and social competence. The students in this study met the definitional criteria for severe disabilities according to their local education agency. The students in the inclusive group received the bulk of their special education services in general education settings, with students pulled out of the general education setting an average of 13% of the day. Students in the separate settings model received nearly all of their services in self-contained settings. Results of this study revealed that students with severe disabilities in inclusive settings made more positive gains in the social skills domain of social competence (specifically in social interactions) than did students with severe disabilities in separate settings models. Alternative explanatory factors such as individual differences between teachers (including teacher preparation and training) and the quality of the instruction within each setting were not assessed in this study. Despite this potential limitation, results of this study suggest students with severe disabilities in inclusive settings make social gains that are superior to students with severe disabilities in separate settings.
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Social outcomes for students with disabilities who receive resource room services.

As discussed earlier, most students with disabilities are neither fully included nor fully separated from the general education classroom. Resource room services are an often-used instructional alternative for children with disabilities, especially students with learning disabilities. Resource room placement poses unique social issues because the student is not placed full-time in any one setting. This situation may have a distinctive impact on social functioning because the student is not a full member of one social group all day, and because general education students observe special education students being taken out of the classroom. Therefore, when investigating social outcomes for students with disabilities, resource room services need specific consideration, independent from separate settings or fully inclusive classrooms. There is concern that resource room services for students with disabilities, especially students whose disabilities are considered mild, will have adverse effects on their social functioning within the school.

Stone and La Greca (1990) found students with learning disabilities who were not in the general education classroom full-time were less accepted and more frequently rejected than were their non-disabled classmates, which is indicative of poor peer relations. Vaughn, Hogan, Kouzekanani, and Shapiro (1990) found similar results for students who eventually got a label of learning disabled, but the data were collected before they actually received the label and resource room services. This finding suggested that it is not just being pulled out of the general classroom for resource room services that caused students with learning disabilities to be less accepted by their classmates, but rather it is other behavioral factors that lead to their poor acceptance. Because other studies have provided evidence that students’ with mild disabilities can
have positive social outcomes in inclusive classrooms, the observed difference between social outcomes for students who received resource room services and those who did not in the Stone and La Greca (1990) study may have been the result of the students not having received the supports they needed in order to be successful. Teachers may provide more supports for students who did not receive resource room services but have been diagnosed with a disability than they do for children who do receive resource room services, as there exists an expectation that children who receive resource room services will get all the support they need from the resource room (Stone & La Greca, 1990).

Many studies have provided evidence that students with a range of disabilities can have positive social outcomes in terms of social functioning in inclusive classrooms. However, these positive gains were often only observed in situations in which adequate support was provided for the disabled student (Madden & Slavin, 1983), which may include resource room services. In sum, students who are pulled out of the general education classroom often have less positive peer relations than do students who are not pulled out of the classroom. However, this does not appear to be a function of children simply being pulled out of the classroom, and therefore being less a part of the classroom social structure. The studies in this section suggest that less classroom-based support for students who receive resource room services may result in less positive peer relations for students with disabilities.

*Social outcomes for students with disabilities versus students without disabilities.*

The research reviewed thus far, although showing that social outcomes for students with disabilities in inclusive classrooms may be superior to social outcomes for students placed in separate settings, has not provided evidence that social outcomes for students
with disabilities are as positive as social outcomes for non-disabled students.

Investigating social outcomes of students with disabilities as compared to their non-disabled peers is perhaps more difficult than comparing social outcomes of students with disabilities across placement setting: The placement setting can be manipulated as an independent variable, but individual differences between students (which is the basis for comparison when comparing students with disabilities to their non-disabled peers) is not a construct that can be manipulated. In an attempt to have a meaningful construct as a basis for comparison, Edwards, Patrick, and Topolski (2003) have suggested that measures of quality of life should be the basis for assessing the social functioning of children with disabilities. This approach takes into account “individuals’ perceptions of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (p. 1403).

This new approach seems promising as it views social success from the perspective of the individual embedded within his or her culture and social structure. The individual’s perspective may be especially important for children with more severe disabilities because their limitations may make comparisons with non-disabled peers less relevant. For example, a child with mental retardation may not share the same interests as his or her peers, and may derive more pleasure out of interacting with younger peers.

However, most of the available research at this time does not use the general quality of life framework as a basis for measuring social functioning, using instead measures of peer relations, social skills and/or classroom behavior. Vaughn, Elbaum, and Shumm (1996) compared children with disabilities in general education classrooms with other children in general education classrooms. Specifically, they compared 16 students
identified as learning disabled with 27 low achieving and 21 average/high achieving students. The comparison included peer ratings of liking, loneliness (indicative of peer relations), and social alienation (indicative of social skills). Results revealed that: (a) the peer acceptance of the average/high achieving students was greater than the acceptance of children with learning disabilities, and children who were low achieving; (b) the ratings of loneliness were similar for all three groups; and (c) children with learning disabilities developed the greatest number of reciprocal friendships with other students. The results of this study suggest that students with learning disabilities can function well in general education classrooms. Although the students with learning disabilities in this study did not show the same peer acceptance as did average or high achieving students in their classes, neither did students who were simply low achieving. Furthermore, students with learning disabilities in this study outperformed their peers in terms of reciprocal friendships, indicating they had the ability to interact meaningfully with their same-aged peers.

However, this study did not address supports that may have been in place for the students with learning disabilities, supports that have been shown to be critical factors in the social functioning of students with disabilities (Hunt & Goetz, 1997; Madden & Slavin, 1983). Therefore it cannot be said that these students outperformed their non-disabled peers as a function only of individual differences between students. Nonetheless, results of this study provide evidence that students with disabilities can have positive social interactions in general education settings, even when compared to their non-disabled peers.
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Despite the evidence of social acceptance of children with disabilities provided by Vaughn et al. (1996), there is ample evidence in the professional literature to suggest that children with a range of disabilities are at an elevated risk of becoming socially isolated (indicative of poor peer relations and social skills) when compared to their same aged, non-disabled peers (Buysse, 1993; Guralnick, 2002; Guralnick, Gottman, & Hammond, 1996). These findings suggest that asking the question of what type of setting yields the most positive social outcomes for students with disabilities (to which the evidence supports an inclusion model) might be shortsighted, as global social outcomes for students with disabilities may still be poor in comparison to their non-disabled peers. Although individual differences between students may account for some of the social difficulties students with disabilities have, there is a growing body of literature that suggests teachers play a vital role in the social outcomes of students with disabilities in inclusive classrooms (Hunt & Goetz, 1997).

Role of teachers in inclusive settings. Findings that suggest students with disabilities in inclusive classrooms can function appropriately often do not take into account the role and potential effectiveness of interventions designed to enhance the social interactions and acceptance of students with disabilities (Hunt, Alwell, Farron-Davis, & Goetz, 1996), and how these interventions may increase their quality of life. A review of the literature suggests that children with a range of disabilities, who are dependent solely on their individual resources without adult support, are less likely to be involved with reciprocal relationships, have a less well-developed social network, and have lower levels of peer acceptance and social integration than their same aged, typically developing peers (Guralnick, 2002), and appear to be judged differently than
their same aged, typically developing peers (Salisbury, Palombaro, Berryman, & Hollowood, 1992). When taken from the perspective of the model of social functioning proposed by Vaughn and Haager (1994), these findings suggest children with disabilities are at risk for poor functioning in every component of social competence. Although the issue of quality of life was not specifically addressed in any of the reviewed literature, these findings also suggest children with disabilities who are placed in inclusive settings without support may be at risk for having a lower quality of life (WHOQOL, 1995).

Without the intervention of classroom supervisors (e.g., teachers, teachers’ aides, assistants), children with a range of disabilities are more likely, in the general classroom setting, to engage in isolated, non-interactive play (Guralnick & Groom, 1987). If this type of play were a result of individual differences in children (some children may prefer non-interactive play), it would not be indicative of a child’s perception of lower quality of life. Edwards et al. (2003) sought to provide evidence that this apparent isolation is not the result of preferred activities of children with disabilities, but rather their perceived lack of acceptance and ability to engage in preferred activities. They investigated the perceived quality of life of 2,801 7th to 12th grade students with and without a range of disabilities in a rural area in the United States. Participants filled out the Youth Quality of Life Instrument Surveillance Module (WHOQOL, 1995) in order to compare ratings of quality of life for typically developing students and students with disabilities. They found that 46% of students with disabilities reported missing out on activities they would have liked to have been a part of compared to 16% of their typically developing peers. They also found that 16% of students with disabilities were made to feel unwelcome in their school, as compared to 6% of their typically developing peers. The authors suggested
these findings that indicated students with a range of disabilities may become socially isolated in the general education classroom may be the result of poor support systems and lack of interventions intended to increase the social awareness of non-disabled peers.

Hunt et al. (1996) investigated the use of a package of intervention strategies in general education classrooms that were designed to facilitate the social skills and peer relations for three students with severe disabilities when interacting with their typically developing peers. The intervention package provided information to the typically developing students in the general education classroom about ways they could communicate with their peers with disabilities. Results revealed that the interventions led to an increase in reciprocal social interactions between students with disabilities and their typically developing peers. Follow-up interviews indicated an increase in the number of typically developing students who identified students with severe disabilities as friends (indicative of social acceptance), thus illustrating the importance of the teacher in inclusive classrooms in order for students with disabilities to have positive social outcomes. Teachers, as the leaders of inclusive classrooms, have the responsibility of preparing the non-disabled students in the classroom to accept their disabled peers. Furthermore, teachers should be prepared to provide support (in terms of active interventions) for students with disabilities in inclusive classrooms to increase the odds that these children experience positive social outcomes.

Summary of social outcomes. Quality of life for individuals with disabilities should ultimately be at the forefront of research and placement determinations; however, there is little available research that uses quality of life as the basis for social outcome goals. The reviewed research suggests students with a range of disabilities in inclusive
settings who have appropriate teacher support have better outcomes in terms of peer relations, social skills, classroom behavior, and social cognition than do students with disabilities in separate settings models. The literature suggests proper supports and interventions may be necessary in order to foster the social competence of individuals with disabilities in a general education setting (Guralnick, 2002; Madden & Slavin, 1983), ensuring that individuals with disabilities have the opportunity to interact with their same-aged peers and be involved in activities that they would ordinarily choose to be a part of, which is one of the main goals of the Regular Education Initiative (Will, 1986). Although there still exist obstacles to obtaining positive social outcomes for students with disabilities in inclusive classrooms, especially in the area of peer acceptance, the inclusive classroom seems to be superior to separate settings placements when proper supports are in place, and therefore inclusive settings are advocated as the best setting to achieve positive social outcomes for students with disabilities. However, without active monitoring and intervention by the classroom teachers, the inclusive classroom may still take the form of a separate settings model; although the children with disabilities will be in the same physical place as typically developing children, they may not have the skills necessary to function in a socially competent manner without adult (teacher) guidance (Guralnick & Groom, 1987).

Current Education Policy and the Future of Inclusion

As indicated by the previous sections summarizing research related to outcomes for students in special education, students with disabilities are at risk for poor achievement regardless of the setting in which they are taught. Thus, the argument that restrictive educational settings for students with disabilities can be justified on the basis
of producing better academic outcomes for students with disabilities is not strongly supported. Although methodological flaws limit the confidence with which one can draw conclusions from this body of research, the absence of data to support restrictive settings, the positive results students with disabilities have shown in terms of social outcomes in inclusive classrooms, and the principle of least restrictive environment embodied in special education legislation all argue for increased inclusion of students with disabilities in general education.

Provisions in the recent reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA 2004), as well as those in the No Child Left Behind Act of 2001 (NCLB) may also increase pressure to include children with disabilities in general education classrooms. The 2004 reauthorization of IDEA required that all but a small percentage of students in special education be included in the general education curriculum. Although this requirement does not mean that students with disabilities must be taught in general education classrooms, it does mean that most students in special education will be addressing the same instructional objectives as their non-disabled classmates. In addition, NCLB requires that teachers be “highly qualified” in their discipline. This requirement may increase pressure on schools to move toward inclusion, although the impact may depend on how states choose to interpret this requirement and the grade level of the students in question. For example, it is unlikely that a special education teacher without a certification in mathematics would be considered “highly qualified” to teach algebra in a middle or high school. Therefore, special education teachers would either need to acquire certification in multiple academic areas, students in special education taking algebra would need to be placed in general education.
classrooms, or classrooms would need to be team taught by a general and special education teacher. Concerns have been raised that some states may interpret the “highly qualified” requirement in NCLB to mean that even in the elementary school, a special education teacher could not be the sole teacher in a subject area unless he or she was also certified in elementary education.

Current policy in the United States is transitioning away from traditional procedures for identifying students with learning disabilities toward a response to intervention (RTI) model. A basic assumption of the RTI model is that a general education model is in place that results in academic success for 80-85% of children, and that of the remaining 10-15% of children who do not succeed in general education, a substantial percentage will respond to short-term, intensive interventions (Bradley, Danielson, & Hallahan, 2002). The remaining “non-responders” would be placed in special education.

The focus of RTI models is improving instruction for diverse learners in general education and lowering the percent of students identified as learning disabled. If successful, the use of the RTI model will result in many children who previously would have been placed in special education remaining in the regular education classroom. Thus, what constitutes inclusion will likely change. With many children who traditionally would have been diagnosed with specific learning disabilities considered part of the general education population, those to be “included” will be more disabled. One possibility is that this change may increase general education teachers’ willingness to include children in special education, as they are already accommodating a broad range of learners. Alternately, teachers may resist inclusion more, as the children placed in
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special education will be less likely to benefit from general education and classroom
demands on teachers from the broadened general education population will be greater.
Although the ultimate impact of the implementation of the RTI model is not known, it is
likely to change how inclusion is defined and the teachers’ needs for its implementation.

In sum, most students in special education already spend considerable time in
general education classrooms. The lack of clear benefits for restrictive placements, the
mandate that all but a small number of students in special education follow the general
education curriculum, and new legislative requirements concerning the qualifications
teachers must possess to be responsible for instruction in particular content areas, are all
forces that may result in more inclusion of students with disabilities in general education.
At the same time, research suggests that outcomes for many students with disabilities in
general education settings are poor. It is clear that more information is needed about how
to successfully include students with disabilities in general education classrooms.

Teachers are an important source of information about the feasibility of increasing
inclusion of children with disabilities in general education classrooms, and effective
strategies for doing so. However, teacher perceptions on the issue of inclusion are
generally missing from public discussion of inclusion (Vaughn, Schumm, Jallad, Slusher,
& Saumell, 1996).

*Teachers’ views of inclusion.* Horne (1983) has suggested that as responsibilities
for inclusion decrease, positive attitudes toward inclusion increase. If this is the case, it
suggests that those in the best position to influence inclusion policies, such as
administrators (who are in charge of their schools) and researchers, (who produce most of
the research in this area), may not have a good understanding of the complexities and
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difficulties involved in including students with disabilities in the general education classroom. The critical role of the teacher in inclusion suggests that teachers’ attitudes, opinions, and concerns should be taken into consideration when inclusion policies are formulated (Scruggs & Mastropieri, 1996). In this next section, research relevant to teachers’ perceptions on inclusion will be summarized. The section begins with a discussion of studies concerning teachers’ global support for the inclusion of students with disabilities in general education classrooms, followed by studies examining teacher perceptions of the barriers to inclusion, the supports necessary to include students with disabilities in the classroom, and recommended strategies for accomplishing inclusion.

**Teachers’ global support of inclusion.** Several studies have addressed the basic question, “Do teachers support inclusion?” Many of these studies have also asked finer grained questions about teachers’ views of inclusion, but only teachers’ global responses to inclusion will be discussed in this section.

In their review of 28 investigations on teacher attitudes toward inclusion from 1958 to 1995, Scruggs and Mastropieri (1996) summarized studies that collectively included 10,560 teachers and other school personnel from all sections of the United States as well as teachers from Australia and Canada. About 8,500 of the respondents were general or special education teachers. They found that about two thirds of classroom teachers supported the concept of inclusion, although less than one third of the teachers felt they had the time necessary to properly incorporate special education students in their classroom. Despite the perceived lack of time for inclusion, 70-90 percent of general education teachers responded that students with mild disabilities should be placed in their general education classrooms. General education teachers did not show the same support
for having students with moderate to severe disabilities (i.e., moderate attention, language or socio-emotional disabilities) in their classrooms, with a range of 11.9 to 32.3 percent of general education teachers endorsing the suitability of having these students in their classrooms.

Vaughn et al. (1996) conducted a qualitative analysis of teachers’ views of inclusion in which teachers identified several factors that would affect the success of inclusion. In this study, the use of focus groups was employed in order to allow teachers an open forum to discuss their concerns regarding inclusion. A total of 74 teachers from an inner city, southeastern United States school district made up the ten focus groups. Four main probes guided the direction of the focus group discussions: (a) Tell me what you know about inclusion, (b) What factors do you see as possible facilitators or barriers to implementing an inclusion model? (c) What do you see as an ideal model for inclusion? (d) What questions should researchers be asking when examining the effects of inclusion models? All sessions were videotaped, discussions coded, and major themes were drawn from these discussions. Among the major themes identified from the focus group discussions were teachers’ concerns over an exact definition of inclusion/confusion about what inclusion is, lashing out at decision makers whom teachers saw as disengaged from what actually happens in the classroom, and a lack of teacher preparedness for teaching in an inclusive classroom.

Vaughn et al. (1996) reported that very few teachers had positive views of inclusion in terms of outcomes for students with disabilities. Many general and special education teachers were concerned that general education teachers are not properly
trained to work with special education students in the general education classroom, but that adequate preparation was essential for positive student outcomes.

The teachers involved in the Vaughn et al. (1996) focus groups were not randomly chosen, but instead were targeted if they were not currently teaching in an inclusive classroom, and were recruited to take part in the focus groups through school liaisons. Therefore, it may not be appropriate to generalize the findings of their study to the general population of teachers. The authors pointed out that even if the results of this study are only appropriate for a subset of teachers (those who are not teaching in an inclusive classroom), the results are still important as they provide insight into how difficult it may be to have teachers accept an inclusive classroom if they are not currently teaching one, which would make inclusion in schools a difficult proposition.

Barriers to Inclusion

In sum, both the Scruggs and Mastropieri (1996) review and the Vaughn et al. study (1996) suggest that special and general education teachers have some reservations about the feasibility and desirability of inclusion. Support appears much stronger for the inclusion of students with mild disabilities. In both cases, however, teachers perceived a number of barriers to successful inclusion. In the next section, research related to teacher perceptions to barriers to inclusion is summarized.

Lack of understanding of inclusion. As stated above, Scruggs and Mastropieri (1996) found that teachers generally supported the inclusion of children with mild disabilities in their classroom (such as students with learning disabilities), but did not have the same support for the inclusion of children with more severe disabilities. However, the term inclusion by itself does not differentiate between children with mild,
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moderate, and severe disabilities. Making teachers aware of what inclusion is and who is involved is an important part of the process of assessing their views of inclusive classrooms. If teachers do not have this awareness, simply asking them their perceptions about inclusion may be too vague a question, as they may have no basis for answering the question. Teachers may be fearful of inclusion simply because they do not understand what it is (Vaughn et al., 1996).

Lack of training. Many studies have indicated that students with disabilities do not receive the modifications and supports they need in order to succeed in the general education classroom (Fuchs, Roberts, Fuchs, & Bowers, 1996; Schumm & Vaughn, 1995). Osborne and Dimattia (1994) pointed to the lack of training provided to general education teachers that would enable them to provide good instruction to students with a range of disabilities, especially those children with severe disabilities. If the lead teacher of an inclusive classroom does not have the training to adequately teach exceptional children, the positive aspects of an inclusive classroom are likely to be overshadowed by the lack of academic progress of children with disabilities in that classroom.

In their review of teachers’ views of inclusion mentioned earlier, Scruggs and Mastropieri (1996) found that 71 percent of general education teachers did not feel they had enough training to lead an inclusive classroom. Furthermore, Mastropieri (2001) has suggested that the issue of poor teacher preparation for inclusive classrooms may be becoming more critical over time, as expectations move toward teachers working with any student with any disability in any setting.

In the Vaughn et al. (1996) focus groups for teachers described earlier, teachers
suggested that in order for new teachers to be prepared to teach an inclusive classroom, they will have to take many classes in special education at the minimum, with some teachers saying that new teachers will have to have a double major in education and special education as undergraduate students. Other themes relevant to training emerging in the Vaughn et al. (1996) focus groups concerning barriers to inclusion were the belief that teachers’ lack of adequate preparation to teach an inclusive classroom could result in poor outcomes for students with disabilities, teachers’ lacking confidence in their skills because of the realization they were not providing the best services for students, and teachers’ being overwhelmed by the amount of education they would need in order to provide the best services for students in an inclusive classroom.

Janney, Snell, Beers, and Raynes (1995), in their interviews with teachers entering an inclusive classroom for the first time, identified four categories of teachers’ primary concerns about inclusion: “(a) comprehending its purpose or rationale, (b) clarifying what to expect and what was expected of them, (c) knowing how much time and energy it would require, and what supports and resources would be provided, and (d) perceiving its rewards” (p. 96). Most of the teachers in the interviews, when explaining to the interviewer that they did not know what the inclusive program was trying to do said, “I’m not trained in special ed.” (p. 97).

A simple explanation of inclusion and what its goals are is not sufficient for teachers who may have to change their way of approaching a classroom, and therefore rethink most of their classroom strategies. If teachers do not have a strong background in “special education,” they are likely to respond to inclusive innovations in their schools with anxiety, ambivalence, and/or resistance (Fullan, 1991). An emphasis on training
Predictors of Teachers’ Perceptions

teachers to be inclusive classroom teachers was a recurring theme in the Janney et al. (1995) interviews. Adequate teacher training would prepare teachers for what they can expect in an inclusive classroom, provide a sound rationale for inclusion, provide the teacher with strategies for instructing children with diverse needs, and show how all students can benefit from an effective inclusive classroom.

_Lack of time._ The Janney et al. (1995) study just discussed found that one of the primary teacher concerns about inclusion was knowing the amount of time it would require. Similarly, lack of teacher time to accommodate the needs of students with disabilities was a major barrier to inclusion cited by teachers in the Scruggs and Mastropieri (1996) review. These findings suggest that time is perceived by teachers as a critical variable in successful inclusion classrooms. A study by Forlin (2001) also suggests lack of time is a critical barrier to inclusion. In this study Forlin aimed, “to consider the effect of potential stressors on teachers related to the specific situation of including a child with a moderate or severe intellectual disability in a general classroom” (p. 45). In the sample of 571 teachers of inclusive classrooms, the overriding factor among the identified classroom stressors in this situation was an increased workload, specifically the time available for working with students with and without disabilities. More experience and formal training in special education were associated with lower ratings of stress concerning the inclusion situation posed in the questionnaire.

Limitations of Forlin’s (2001) study include the lack of an operational definition of inclusion and the use of a simple inclusion scenario concerning one child with one type of disability. It is difficult to generalize these findings to situations involving the inclusion of students with other types of disabilities, such as learning disabilities or
physical handicaps. In addition, many of the endorsed stressors seemed to be quite similar, and a factor analysis might have provided a clearer indication of the number of stressors and overall level of stress associated with inclusion. Despite these potential limitations, this study provides valuable information on the stressors teachers endorse as being present in an inclusive environment, and therefore potential barriers to effective inclusive classrooms.

Research on predictors of teachers’ attitudes toward and use of inclusive practices in the classroom. The previous sections provided evidence that teachers view adequate training and time as keys to successful inclusion. One way of validating these perceptions is to examine whether teachers’ amount of time available for inclusion and level of training are related to their views of inclusion or use of inclusive practices in their classrooms.

Van Reusen, Shoho, and Barker (2000) surveyed 125 teachers in a large, suburban San Antonio high school to assess teacher attitudes toward inclusion and what predicted these attitudes. They assessed a number of demographic and background variables, including years of teaching experience, gender, professional responsibility, dominant content area assignment, type of teacher training preparation, and level of expertise or training in special education. The authors defined minimal special education training as one, or part of one, college level course in special education. Adequate special education training was defined as two or more college courses in special education, and high special education training was the completion of a special education certification program or more preparation, such as a masters degree in special education. In addition to these demographic items, the authors’ survey contained 20 items concerning teachers’
Predictors of Teachers’ Perceptions

beliefs about their ability to teach students with disabilities, such as, “I can be effective with the students with disabilities in my class.” They found the amount of training teachers have in teaching students with disabilities was related to their attitudes toward inclusion. Results revealed a significant difference between the overall attitudinal responses of teachers who reported high levels of special education training and those who reported no or minimal training. Specifically, the teachers in this study who reported more positive attitudes toward the inclusion of students in their classroom also reported the highest level of special education training. Interestingly, gender, subject area taught, and experience level were not found to be related to the attitudinal responses of the teachers in this study.

deBettencourt (1999) compared the number of special education courses teachers had in their pre-service training to the instructional strategies they employed in their classrooms. Fifty-nine general education teachers, who led inclusive classrooms, from three middle schools completed self-reports of their preparation and practices in this study. The self-report data included background information and the Bender Classroom Structure Questionnaire (BCSQ), a 40-item Likert scale questionnaire that included questions concerning the use of instructional strategies within the general education classroom (Bender, Vail, & Scott, 1995). Included in this measure is a subscale that provides data on individualized instruction strategies (a component thought to be critical to the success of inclusive classrooms). Results of the study revealed that teachers who had taken three or more special education classes had significantly higher scores on the individualized instruction subscale of the BCSQ than teachers who had taken one to two special education courses, and teachers who had taken no special education courses. This
finding suggests teachers who receive more pre-service special education training, whom other studies have found have more positive perceptions on inclusion (e.g., Van Reusen et al., 2000), are also more likely to individualize instruction.

A comparison between teachers beliefs about who should and should not be included in general education classrooms, based on the students’ handicapping condition (Scruggs & Mastropieri, 1996), suggests that teacher perception of time needed to address particular students’ needs is related to their view of inclusion. Students with more severe handicapping conditions are perceived as requiring more individualized instruction, which in turn will take more time both in terms of preparation and delivery of services. This relationship between time and severity of disability may be one reason teachers are less likely to endorse having students with more severe disabilities in inclusive classrooms than students with mild disabilities. Time may be an important, if not overriding, factor in teachers’ positive or negative views of inclusion. If teachers feel the inclusion of certain students will take up more time and therefore take away from other teaching areas, their views toward inclusion may be more negative than if they perceived they had more time.

Summary of teachers support for inclusion and barriers to inclusion. Lack of understanding of what inclusion is, limited pre-service training, and perceived time to dedicate to inclusion issues have been identified as possible barriers to inclusion. Much of the research in the literature, in order to validate teachers’ perceptions on inclusion, has measured teachers’ views toward inclusion. In order for inclusive classrooms to be effective, teachers need to use the best practices available. The literature suggests teachers who do not have positive views toward inclusion are unlikely to actively seek
out and employ the best inclusive strategies. Furthermore, teachers who do not have positive views toward inclusion but are mandated to teach inclusive classrooms may experience more stress and have a faster burnout rate (Forlin, 2001). With provisions in IDEA and No Child Left Behind creating more inclusive classrooms, it is important that teachers have the necessary skills and support to succeed in their evolving role in the classroom. If teachers do not have a strong background in special education and have negative views toward inclusion, they are likely to respond to their changing role in inclusive classrooms with anxiety and/or resistance, thus not seeking out and using what the research suggests are the best inclusive strategies (Fullan, 1991). Investigating teacher perspectives on inclusion and supports they find helpful is important in order to understand the current functioning of inclusive classrooms and potential strategies administrators can use to support teachers as they move toward more inclusive schools.

Summary of Literature Review

Currently, there are approximately six million children who have been classified as disabled and receive some form of special education in United States’ schools (U.S Department of Education, 2004). These children are at risk for poor academic and social outcomes, and there is a longstanding debate about how these children should be served. Because the right of children with disabilities to an adequate education grew out of the civil rights court cases, the primary focus of this debate about how they should be served has been concerned with the “place” they are educated, with the three primary settings being general education classrooms, resource rooms, and separate settings.

The available research on educational outcomes for children with disabilities in different settings, although flawed, does not show a marked advantage for resource rooms.
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or separate settings. When teachers provide adequate support in the general education classroom, children with mild to moderate disabilities appear to do as well or better academically in this setting than in more restrictive settings.

Similar to the research on academic outcomes for students with disabilities, the methodologically adequate research on social outcomes for students with disabilities suggests that children with disabilities can perform as well or better in general education classrooms than they do in separate settings classrooms. The specific consideration of resource room services for students with disabilities in terms of social outcomes suggests that students with disabilities can receive resource room services without negative social consequences in terms of peer interactions with their non-disabled peers. Again, in order for students with disabilities to have positive social outcomes in general education classrooms, regardless of whether or not they receive resource room services, appropriate supports need to be in place.

Given the mandate for the least restrictive environment, the lack of clear advantages for restrictive settings creates a press for more inclusion. There are also a number of current factors that are creating more press for inclusion, such as the “highly qualified teacher” requirements in No Child Left Behind and the response to intervention models replacing traditional methods of identifying students with learning disabilities. The increased press for inclusion has resulted in more scrutiny of how students with disabilities are educated in inclusive classrooms. As the head of inclusive classrooms, general education teachers are expected to implement and carry out most of the education services to all children in their classrooms. It is therefore important to consider their views and perceptions on inclusion, as they are at the front lines of service delivery, and
the success of an inclusive classroom is largely dependent on their implementation of services to children with disabilities.
CHAPTER 3
Research Aims

Statement of the Problem

General education teachers are increasingly responsible for providing instruction to students with disabilities (Mastropieri & Scruggs, 2000). However, teacher views are often not considered in debates on inclusion. Furthermore, general education teachers of inclusive classrooms, because of their familiarity with their classroom and students, are in perhaps the best position to provide insight as to the barriers and facilitators of successful inclusive classrooms. That is, teachers’ day-to-day experience in inclusive classrooms makes their views of inclusion valuable to researchers.

Although teachers’ views on inclusion are of great interest to researchers studying inclusive classrooms, gathering this information is difficult for two reasons. One, research (Vaughn et al., 1996) indicates that inclusion is a poorly understood term for teachers because it can be used to refer to both full inclusion or inclusion, as noted in the previous literature review. Two, much of the previous research has not defined, or only vaguely defined, inclusion when surveying teachers (Marston, 1996). Despite this potential limitation, current research suggests teachers have generally negative views of inclusion, although they are more supportive of inclusion of children with mild disabilities.

Given the critical role general education teachers play in inclusion, and the widespread and increasing placement of children with disabilities in general education, it is important to have a full understanding of general education teachers’ views of inclusion. Understanding the views of general education teachers on inclusion, the
factors that influence their views, and the strategies they perceive as effective in implementing inclusion may provide insights that can be useful in improving outcomes for students with disabilities in general education classrooms.

Researchers have begun to search for variables that affect teacher perceptions of inclusion. Staff training and the amount of time teachers have to dedicate to inclusion have been found, separately, to be related to teacher perspectives on inclusion. However, many of the studies did not specifically investigate a direct association between amount of available time to dedicate to inclusion and teachers’ positive or negative views of inclusion and did not examine how factors predicting teachers’ views may interact. For example, Scruggs and Mastropieri (1996) reported that teachers endorsed having students with mild disabilities in their classroom more than they endorsed having students with severe disabilities in their classroom. They hypothesized that the difference between these endorsements was based, in part, on the perceived amount of time teachers believed they had to dedicate to the included students. Students with severe disabilities may be perceived as requiring more attention and time from the teachers. If teachers are already feeling they do not have enough time to dedicate to inclusion (Forlin, 2001), any factors that would lead them to have to dedicate even more time to inclusion are likely to be viewed negatively.

The purpose of this study was to examine general education teachers’ views of inclusion, identify factors that increase or decrease teachers’ favorable endorsement of inclusive practices in schools, and identify inclusion strategies that teachers and staff found helpful. The study design addressed two major shortcomings in the inclusion research discussed in the literature review. First, the failure to provide a clear definition
of inclusion in previous studies was addressed in the present study by the use of an instrument that assessed teachers’ views of inclusion that (a) contained individual items describing several dimensions of inclusion and (b) provided behavioral descriptors on these dimensions that reflected both inclusionist and full inclusionist perspectives on educating children with disabilities. Second, the present study allowed a more complex view of how time and training were related to teachers’ view of inclusion by examining how these factors interacted. In addition to these improvements on earlier research, the present study also advanced our understanding of school-based staff’s views of inclusion by examining their endorsement of specific strategies for supporting inclusion.

Although identifying factors that influence teachers’ views of inclusion and strategies they see as helpful may be useful research directions, it is important to acknowledge that this type of research is only an initial step in identifying educational practices that are both liked by teachers and helpful to students with disabilities. This research may point us in a useful direction to help teachers feel more prepared to include children with disabilities and suggest workable strategies for educating children with disabilities in general education classrooms. However, these strategies will have to be tested empirically in subsequent research.

**Overview of Study Design**

The present study used survey methodology to examine teacher views of inclusion and classroom strategies for supporting inclusion. A survey based on two views of inclusion and incorporating focus group results concerning inclusive strategies was used to examine: (a) teachers’ support for inclusion, (b) how teachers’ perceptions of time available and their perceptions of the adequacy of staff training interacted to predict
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teachers’ degree of support for inclusion, and (c) the types of strategies teachers and staff viewed as useful for supporting the education of students with disabilities in the general education classroom.

Unlike most previous research on inclusion, the current study asked teachers to rate where they would like their school to be on a variety of inclusion dimensions rather than provide an abbreviated (or no) definition of inclusion. The questions that specifically addressed teacher perceptions of what the existing literature considers to be components of inclusion were then collapsed into one construct: Teachers’ support of moving toward inclusive practices in their schools. The extent to which perceived time and adequacy of training predicted teachers’ support of moving toward inclusion was examined. Teachers and staff also rated their support of specific inclusion strategies.

Research Questions and Hypotheses

Question 1. What factors predict teacher support for moving toward a more inclusive model of special education at their school?

Hypothesis 1. The higher the teachers rate the adequacy of staff’s special education training, the higher their support for moving toward a more inclusive model.

Rationale for this hypothesis came from the research literature on teacher attitudes toward inclusion (e.g., Van Reusen et al., 2000) and from research that has examined the relationship between teacher training and the use of best inclusive classroom strategies (deBettencourt, 1999). This research has found that teachers who receive more special education training have more positive attitudes toward inclusion and tend to use best practice strategies in inclusive classrooms when compared to teachers who receive little or no special education training. These findings are of interest given that teacher attitudes
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toward inclusion have been found to be related to their classroom functioning and use of
best practices (Fullan, 1991), and teachers using best practices have been linked to
positive academic (Leinhardt & Pallay, 1982) and social (Hunt & Goetz, 1997) outcomes
for students with disabilities. Previous research concerning the association between staff
and perceptions of inclusion have been limited to comparing the amount of special
education training teachers receive. Thus, it was a unique aim of the present study to use
teacher perceptions of the adequacy of staff training as the basis for comparing staff
training and their perceptions on inclusion.

**Hypothesis 2.** The more time teachers perceive staff have to individualize
instruction, the higher their support for moving toward a more inclusive model.

Rationale for this hypothesis came from research concerning potential stressors
for teachers in inclusive classrooms. It has been substantiated that an overriding factor
that contributes to teacher stress in inclusive classrooms is increased workload, which
includes the time available for teachers to individualize instruction (Forlin, 2001).
Including students with disabilities in general education classrooms, then, will likely
increase the stress teachers feel, as there will be a need to individualize instruction
according to the varying needs of children in inclusive classrooms. Teachers perceived
lack of time could therefore be considered a barrier to effective inclusive classrooms, thus
casting teachers to have less positive perceptions on inclusion.

**Hypothesis 3.** Perceptions of adequacy of staff training will moderate the
relationship between perceived time and teacher support for moving toward a more
inclusive model.
Predictors of Teachers’ Perceptions

Teachers who have less special education training have been found to have less positive perceptions on inclusion (Van Reusen et al., 2000). Teachers’ perception of limited time available to individualize instruction has been shown to be a stressor for teachers (Forlin, 2001), and because individualized instruction is an important component of inclusion, teachers’ perceptions of time may be related to teachers’ perceptions of inclusion. Teacher training in special education provides future teachers strategies for working with children with disabilities, allowing them to learn the strategies and understand them before entering the classroom. This pre-service training may reduce the time-based stress teachers feel when entering inclusive classrooms as they will not have to learn strategies to work with children with disabilities while having the other responsibilities that go along with being a teacher. Thus, it may be reasonable that special education training can serve to reduce the time-based stress teachers may feel because of inclusion, resulting in teachers having more positive perceptions of inclusion.

Question 2. What strategies do teachers and staff endorse as being the most important to improving services to children with disabilities?

Teachers and staff were asked to rate a number of inclusion strategies identified by focus groups as to their helpfulness. It is important to not only understand what supports teachers in inclusive classrooms need, but also how to provide the supports. These ratings may provide direction to subsequent researchers exploring effective inclusion strategies by identifying strategies that are viewed as helpful and workable by classroom teachers. These ratings are only a first step, however. It is important to understand what inclusion strategies teachers find most helpful, as they will likely be responsible for implementing the strategies into their classrooms. However, after
identifying what strategies teachers find most helpful, research should seek to find empirical support for the strategies, as student outcomes (both academic and social) should be the final criterion for judging the usefulness of inclusion strategies.
CHAPTER 4

Method

The current study made use of extant data from a district-wide survey designed to investigate teacher and parent perceptions of special education services. The survey also assessed staff and school readiness for inclusion, and strategies perceived as being helpful in providing instruction to children with disabilities in general education classrooms.

Study Context

The original study that provided the data for the current study was conducted in a suburban North Carolina school district that was considering a move toward more inclusive education practices for special education students. The proposed change involved increased delivery of special education instruction in general education classrooms for children, and the integration of related services for special education students (e.g., speech/language therapy, occupational therapy) into general education classrooms. At the request of the school district superintendent, an inclusion feasibility study was conducted to estimate the costs and organizational needs that would accompany the proposed change, as well as to assess staff and parent perceptions of the current and proposed changes to the district’s special education services. One data collection method in the feasibility study was a survey of staff perceptions of inclusion that was sent to all instructional and related services staff in the district. It is staff responses to this survey that served as the data for the current study.

The district served a primarily suburban population and was noted for its high academic achievement scores. At the time the survey data were collected, nearly 70% of
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the students in the district were white, 17% were black, and 13% other ethnicities. The district had a strong reputation for serving students with special needs. Local funding allowed special education teachers to have relatively small caseloads, with cross-categorical classrooms ranging from 18-25 students. The district served all exceptional students on a continuum of services, and the type of special education delivery model varied by school. Part-time special education services were provided through cross-categorical classrooms. Self-contained classrooms were considered district level classes, and therefore not every school had a self-contained classroom for each exceptionality category. Instead, the schools across the district shared the responsibility for self-contained classrooms and hosted a portion of the self-contained classrooms for the district (Schulte et al., 2001).

Participants

A total of 510 staff members, comprising 56% of the total staff in the school district, completed the survey. Of the staff members who responded to the questionnaire, 52% \(N = 265\) identified themselves as general education teachers. Only their responses were used to investigate the hypotheses set forth in the current study, as the hypotheses were concerned with the perceptions of general education teachers rather than all staff. One teacher only filled out demographic information and therefore was not included in any of the analyses. Table 1 provides demographic information for the sample in the current study. Due to missing responses to some survey items, 260 participants were included in the analyses of hypotheses one and three, 264 participants were included in the analysis of hypothesis 2, and 214 participants were included in the analyses pertinent
to question 2. Exclusion rules for considering data missing are presented in the results section.

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Instrumentation: Survey Development and Description

All data for the current study were collected using the Serving Special Education Students Survey-Staff Version (SSESS; Schulte, Terhaar-Yonkers, & McCoy, 2000). The SSESS is a multi-part survey developed to assess teachers’ and parents’ views of inclusive educational practices.

Instrument development began with the collection of staff and parents’ views of inclusion through a series of focus groups. The purpose of the focus groups was to help assure that the items on the survey, which were primarily written in a forced-choice rather than an open-ended format, would not solely reflect the views of the survey
authors, but those of the constituents who would be affected by the policy change. To do so, staff representatives were asked a series of open-ended questions about inclusion and special education.

In implementing the focus groups, each school in the district was asked to send two staff in each of four categories to the focus group sessions: general educators (including classroom, specials and electives teachers, counselors, and support staff); special educators (including special education teachers and related services staff); teaching assistants (both general and special education), and administrators. In addition, district level staff, general education parents, and special education parents were invited to participate in separate focus groups. The staff focus group sessions took place during the school day, and substitutes were provided for teachers and teaching assistants. The parent focus groups took place in the evening. Researchers and district staff who had been trained in focus group facilitation led the focus groups.

A total of 76 staff from the school district participated in sixteen focus groups. (Only one high school teacher volunteered to participate in the focus groups. She was interviewed individually rather than joining an existing focus group.) In each focus group, a series of questions were asked to elicit views of inclusion, barriers to more inclusive special education, and the supports that staff and parents perceived were needed to move toward more inclusive education. Responses were tape-recorded and a trained ethnographer completed a content analysis of the responses. This content analysis was used in developing the survey.

The survey’s format was modeled on Bailey’s FOCAS instrument (Family Orientation of Community and Agency Services; Bailey, Buysse, Smith, & Elam, 1992).
The FOCAS asks respondents to indicate current and desired practices on numerical scales with behavioral anchors at each extreme and the midpoint of the scale. The FOCAS has been used in planned change efforts in the area of preschool special education services and its format has been shown to be sensitive to shifts in staff perceptions of special education practices during organizational change efforts (Bailey, Buysse, Smith, & Elam, 1992; Winton, McWilliam, Harrison, Owens, & Bailey, 1992).

The SSESS was constructed with multiple parts. Part 1 asked respondents to provide demographic information, including their instructional role, years of experience, gender, and ethnicity. Part 2 was similar to Bailey et al.’s (1992) FOCAS. This section of the SSESS consisted of 12 pairs of items with each pair describing a particular school practice related to special education. For each school practice, behavioral descriptions anchored the ratings for the first, third, and fifth point on five-point Likert scales. The behavioral anchor for the first point in each scale described a problematic school practice. The behavioral descriptor for the third point described an adequate special education practice. The behavioral description anchoring the fifth point on the scale described a practice that reflected a special education system that was closely integrated with general education (moderate inclusion) where special education was a top organizational priority. For each of the 12 school practices, staff and parents were asked to provide two ratings, “Where is your school now?” (“Present” scale) and “Where would you want your school to be?” (“Future” scale) on separate Likert scales. Part 3 of the SSESS asked respondents to rate the adequacy of support for students in the regular education classroom at their school across a variety of domains of child functioning (e.g., academic, behavioral, medical). Part 4 asked respondents to rate 21 specific support strategies in terms of their
importance for improving services to children with disabilities who are served in general education classrooms on a five-point Likert scale (1 = Not very important to 5 = Very important). Respondents also were asked to circle the top three strategies they preferred, so that closely rated items could be distinguished by rankings.

A committee composed of district administrators, general and special education teachers and assistants, and special education parents reviewed a draft of the survey. After minor changes, the survey was approved, formatted, and printed. The staff version was printed with a cover letter introducing the survey and promising confidentiality to respondents and a back page that was blank except for the address of the Director of Special Education for the district.

As new variables were created from the original survey responses for the present study, the psychometric characteristics of these variables are described in the Results section.

**Procedure**

Copies of the staff version of the SSESS were provided to school principals in a district-level meeting. They were instructed to give the survey to their staff and ask the staff to return the survey via the district courier service. Surveys were distributed at all schools. One principal elected to collect surveys in an envelope and then mailed them to the district office. The remainder of the principals followed the survey procedures as they were outlined. There were no follow up procedures for missing surveys.

Forty-five respondents from two elementary schools were also asked to complete the survey a second time, within a week of completing the first survey. Each was paid ten dollars for completing the second survey. Their responses were collected to allow
calculation of test/retest reliability for the survey. Thirty-nine respondents returned the second survey.
This chapter will describe the data analysis procedures and results for the research questions and hypotheses presented in Chapter 3. The chapter begins with a description of the variables created to address question 1 and the results of analyses examining the psychometric characteristics of these variables. This description is followed by a presentation of the results related to the hypotheses tested in answering question 1. The section concludes with the analyses related to question 2.

**Question 1**

Question 1 was concerned with what factors predicted teachers’ support for their school moving to a more inclusive model. Three new variables were created to examine this issue. The first was a measure of teachers’ support for a school-wide move toward inclusion (the Inclusion Support Scale). The second was a single-item measure of teachers’ perception of the time available for inclusion. The third was a single-item measure of teachers’ perception of the adequacy of staff training for inclusion at their school. The creation of these variables and their psychometric characteristics are described below.

*Inclusion Support Scale.* To create the first variable, the five items that specifically relate to how much staff would like to see their school move toward inclusive practices on the Future scale of the SSESS were combined. Specifically, average teacher ratings of where they would like their school to be on survey items A (Inclusion), D (Special and general education), E (Classroom accommodations), I (Willingness), and L
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(Instruction) were calculated. This score, the Inclusion Support Score, served as the
outcome variable for the current study.

To examine the reliability of the Inclusion Support Scale, its test-retest reliability
was calculated using the responses from the 39 staff members who had completed the
survey twice in the original study. A test-retest reliability of .84 was obtained.

To examine the validity of the Inclusion Support Scale, a confirmatory factor
analysis was then conducted on the five items from the SSESS used to create the
Inclusion Support Scale in order to test the a priori hypothesis that they formed one
factor. Hu and Bentler (1999) recommended that in order to minimize Type I and Type II
errors, a combination of goodness of fit indices should be used in evaluating the results of
a confirmatory factor analysis. For the present study, three criteria were used to
determine the number of factors that should be extracted: the Comparative Fit Index
(CFI), the root mean square error of approximation (RMSEA), and the Hoelter score.
Acceptable models should have CFI values over .90 and RMSEA values less than .1
(Bentler & Bonett, 1980). The Hoelter score suggests the number of participants that are
needed for a strong test of the model.

The goodness of fit for this confirmatory factor analysis model was adequate
(CFI = .976, RMSEA = .087), and the Hoelter test suggested there were an acceptable
number of participants in the model to make it a strong test (Hoelter Score = 234). The
confirmatory factor analysis also revealed a significant chi-square, an indication that a
one-factor solution for this model may not be appropriate. However, chi square scores are
sensitive to the number of participants or data entry points in a given study (Bentler &
Bonett, 1980). Thus, the significant chi-square in this model may have been due to the
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power of the study in general and not related to the goodness of fit for the model. Based on these results, it was concluded that there was sufficient evidence that the five items from the SSESS formed a single factor to use this variable within the present study.

Time for inclusion. A single item (item K, Time) from the SSESS Present scale was used to assess teachers’ perceptions of the time they have available to individualize instruction in the general education classroom. The item asked staff to rate the amount of time the staff had available at the respondent’s school for supporting special education students in general education classrooms. The test-retest reliability for this variable was .58.

Training for inclusion. The third variable in the current study was created using another single item from the SSESS Present scale (item H, Training). This item asked teachers to rate the level of staff preparation to work with children with disabilities at their school. The test-retest reliability for this variable was .69.

Missing data. To account for missing data in the sample, the following exclusion rules were used. For hypothesis 1, all participants who did not respond to item H (Training) on the present scale were excluded from analysis. For hypothesis 2, all participants who did not respond to K (Time) on the present scale were excluded from analysis. For hypothesis 3, all participants who did not respond to either item H or item K were excluded. For analysis of teachers’ most endorsed strategies in question 2, participants who did not select at least two strategies as important inclusion strategies were excluded from analysis. See Table 2 below for a description of the demographic characteristics of the sample for each question.
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Table 2

Demographic Characteristics of Respondents Used in Analyses for Each Hypothesis and Question 2

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Hypotheses 1 &amp; 3</th>
<th>Hypothesis 2</th>
<th>Endorsed Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>225 86.5</td>
<td>229 86.7</td>
<td>183 85.5</td>
</tr>
<tr>
<td>Male</td>
<td>35 13.5</td>
<td>35 13.3</td>
<td>31 14.5</td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>158 60.7</td>
<td>159 61.1</td>
<td>130 60.7</td>
</tr>
<tr>
<td>Middle/High</td>
<td>102 39.3</td>
<td>105 39.7</td>
<td>84 39.3</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>30 11.5</td>
<td>31 11.7</td>
<td>21 9.8</td>
</tr>
<tr>
<td>White</td>
<td>215 82.7</td>
<td>218 82.6</td>
<td>182 85.1</td>
</tr>
<tr>
<td>Other</td>
<td>6 2.3</td>
<td>6 2.3</td>
<td>6 2.8</td>
</tr>
<tr>
<td>Unspecified</td>
<td>9 3.5</td>
<td>9 3.4</td>
<td>5 2.3</td>
</tr>
<tr>
<td>Total</td>
<td>260</td>
<td>264</td>
<td>214</td>
</tr>
</tbody>
</table>

Note. One participant only filled out demographic information, reducing the total number of participants in the study to 264.

Descriptive statistics for variables related to question 1. Table 3 presents descriptive statistics on the three variables included in the hypotheses tested to address question 1.
Table 3


<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Training</td>
<td>2.53</td>
<td>.87</td>
<td>1-5</td>
</tr>
<tr>
<td>Current Time</td>
<td>2.07</td>
<td>.64</td>
<td>1-5</td>
</tr>
<tr>
<td>Inclusion Support Scale</td>
<td>3.98</td>
<td>1.06</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Note. Ratings based on a 1-5 Likert scale (1 = a problematic condition, 3 = an adequate condition, 5 = a desirable condition).

Hypothesis 1. Hypothesis 1, as described in Chapter 3, asserted that the higher the teachers rate the adequacy of staffs’ special education training, the higher their support would be for moving toward a more inclusive model of education. To determine whether teacher ratings of the adequacy of special education training predicted their support for moving toward a more inclusive model, a regression analysis was performed. This analysis revealed that teacher ratings of staffs’ special education training were positively related to their support for moving toward an inclusive model of education (F (1, 221) = 7.01, p < .05), although this predictor only explained 3% of the variance of teachers’ perceptions of inclusion.

Hypothesis 2. Hypothesis 2 suggested there was a relationship between teachers’ perceived time available to dedicate to inclusion issues and their support for moving toward an inclusive model of education. It was expected that teachers who felt staff had little time to dedicate to inclusion issues would be less supportive of moving toward an inclusive model. Similar to Hypothesis 1, regression analyses were utilized with perceived time available predicting teacher support for moving toward an inclusive
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model. The results of this analysis revealed that teachers’ ratings of staff’s available time significantly predicted teachers’ support, $F(1, 221) = 13.78, p < .05$, explaining 6% of the variance.

**Hypothesis 3.** To test if teacher training moderated the relationship between teachers’ perceived time and support for moving toward a more inclusive model, interaction terms were first computed from the product of teachers’ ratings of perceived time and their ratings of the adequacy of staff’s special education training. Using a simultaneous regression analysis, teacher ratings of available time, teacher ratings of the adequacy of staff’s special education and the interaction term were then entered into the regression equation. Examination of the univariate effects revealed that training did not significantly moderate the association of perceived available time and teachers’ support for moving toward an inclusive model of education, ($\beta = .003, p > .05$).

**Follow-up analyses.** In an attempt to explain a greater portion of the variance for teachers’ support for moving toward more inclusive practices at their school, follow up analyses were conducted using demographic information as predictor variables. Specifically, gender, years of experience, years at their current school, type of school (middle or elementary) and ethnicity were used as predictors for teachers’ support for moving toward more inclusive practices at their school. Of these demographics, only type of school (middle or elementary) was significantly related to teachers’ support, $F(1, 222) = 11.70, p < .05$. However, the type of school the teacher taught at only accounted for 5% of the variance. Taken together, the demographic information only accounted for 6% of the variance in teachers’ perspectives concerning moving toward inclusion.
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**Question 2**

Question 2 asked what strategies teachers endorse as being the most important to improving services to children with disabilities. Staff ratings of the importance of the 21 inclusion strategies identified by the focus groups were analyzed in three separate steps. First, the mean scores of the staff ratings were computed. Second, frequency counts and percentages were computed for the strategies staff ranked as either their first, second or third most important strategy. Finally, an exploratory factor analysis was conducted to identify similarities between strategies and group them together. The means for groups of strategies, as defined by the factors extracted, were then compared.

*Descriptive statistics.* The mean staff ratings on the 1 to 5 Likert scale for the 21 inclusion strategies were computed. All of the strategies were rated as being relatively important, with means for 14 out of the 21 strategies above 4.0. Strategy 6 (reduce class size based on classroom needs) was rated as the most important by the staff ($M = 4.72$, $SD = .68$) and Strategy 14 (cluster groups of children with similar needs together for instruction) the least important ($M = 3.61$, $SD = 1.17$) (see Table 4).

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1. Increase team teaching between regular and special education</td>
<td>4.23</td>
<td>.99</td>
</tr>
<tr>
<td>S2. Provide time in the school day for joint planning among regular and special education staff.</td>
<td>4.37</td>
<td>.92</td>
</tr>
<tr>
<td>S3. Provide easy access to modified materials for children with disabilities (e.g., simplified texts, enlarged print).</td>
<td>4.56</td>
<td>.69</td>
</tr>
<tr>
<td>S4. Implement a comprehensive staff development program that is responsive to the unique needs of staff and children.</td>
<td>3.99</td>
<td>1.06</td>
</tr>
<tr>
<td>Strategy</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>S5. Develop a communication system for easy exchange of information</td>
<td>4.50</td>
<td>.72</td>
</tr>
<tr>
<td>among staff who work with a particular student.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S6. Reduce class size based on the number and intensity of special</td>
<td>4.72</td>
<td>.68</td>
</tr>
<tr>
<td>needs students in the regular classroom.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S7. Develop guidelines for how to decide if special education student</td>
<td>4.29</td>
<td>.88</td>
</tr>
<tr>
<td>needs are best met in regular vs. special education settings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S8. Develop training for peer helpers to assist children with disabilities in the regular education classroom.</td>
<td>3.77</td>
<td>1.10</td>
</tr>
<tr>
<td>S9. Allow regular education and special education teachers to plan</td>
<td>4.48</td>
<td>.76</td>
</tr>
<tr>
<td>together in assigning students to classes for the upcoming year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S10. Assign students to next year’s teacher(s) ahead of time, so staff</td>
<td>4.40</td>
<td>.88</td>
</tr>
<tr>
<td>have time to plan and prepare to meet the needs of children with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>disabilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S11. Recognize and reward staff who are actively involved in serving</td>
<td>3.81</td>
<td>1.27</td>
</tr>
<tr>
<td>special education students in the regular classroom.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S12. Provide training to regular education classroom assistants in</td>
<td>4.39</td>
<td>.86</td>
</tr>
<tr>
<td>working with children with disabilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S13. Continue to maintain a continuum or range of services in addition</td>
<td>4.46</td>
<td>.73</td>
</tr>
<tr>
<td>to the regular education classroom to meet the needs of children with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>disabilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S14. Cluster small groups of special education children with similar</td>
<td>3.61</td>
<td>1.17</td>
</tr>
<tr>
<td>needs within the regular education classroom to reduce the range of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>needs in a single classroom.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S15. Provide opportunities for staff to observe other classrooms or</td>
<td>4.08</td>
<td>.90</td>
</tr>
<tr>
<td>seek support from colleagues when they need help in serving a special</td>
<td></td>
<td></td>
</tr>
<tr>
<td>education student.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S16. Develop a comprehensive, system-wide position on inclusion to</td>
<td>3.69</td>
<td>1.23</td>
</tr>
<tr>
<td>reduce variability of services between schools.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S17. Make IEPs (Individual Education Plans) more flexible so that</td>
<td>4.11</td>
<td>.90</td>
</tr>
<tr>
<td>amount of time and types of services can be easily adjusted.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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Table 4 Continued

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>S18. Increase the availability of special education assistants in the regular education classroom.</td>
<td>4.43</td>
<td>.84</td>
</tr>
<tr>
<td>S19. Develop a training program for special education assistants.</td>
<td>4.49</td>
<td>.77</td>
</tr>
<tr>
<td>S20. Increase involvement of regular education staff in IEP (Individual Education Plan) development.</td>
<td>3.91</td>
<td>.98</td>
</tr>
<tr>
<td>S21. Increase individualized instruction and support available in regular education so that fewer resources are spent on labeling children to receive these services in special education.</td>
<td>3.98</td>
<td>1.13</td>
</tr>
</tbody>
</table>

Note. Ratings based on a 1-5 Likert scale (1=Not Very Important, 5=Very Important).

It was anticipated that staff might rate most of the strategies as being important, and therefore respondents were also asked to select the three most important strategies from the list provided and rank them (referred to subsequently as the top-ranked strategies). When the results indicated high ratings for many strategies, an analysis of teacher rankings of the three most important inclusion strategies was added to the originally planned statistical procedures in the present study. Table 5 shows the percentage of general education teachers that identified each strategy as the most important inclusion strategy and as one of the three top ranked strategies.

In terms of frequency of being selected as the first-ranked strategy, Strategy 2, which called for joint planning time for regular and special education teachers, was selected the most often (by 23.4% of respondents). Strategy 6 (reduction of class size based on needs of the classroom) and Strategy 1 (increase team teaching) were also identified by about one quarter of the teachers as the most important inclusion strategy.
Overall, Strategy 6 had the most support from the staff, with 64.8% of the staff selecting it as one of the three top-ranked strategies. Strategy 2, the strategy most frequently ranked first, was second in terms of being selected as one of the top three ranked strategies. Thirty-three percent of staff identified it as one of the top-ranked strategies. Strategy 18 (increase the availability of special education assistants in general education classrooms) and Strategy 1 also stood out as having high overall rankings. Interestingly, although Strategy 18 was supported by nearly 26% of general education teachers as one of the three most important inclusion strategies, less than 3% of the teachers ranked this strategy as the most important strategy. After the four most endorsed strategies, there was some variation in the top ranked strategies, as many of the strategies had at least 10% of the staff’s endorsement as a top-ranked strategy.

Table 5

Percent of Strategies Endorsed by Teachers as the Most Important Inclusion Strategy ("Most Important") and as One of the Three Most Important Inclusion Strategies ("Overall") Ordered by Overall Rankings

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Most Important</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>S6. Reduce class size based on the number and intensity of special needs students in the regular classroom.</td>
<td>22.82</td>
<td>64.80</td>
</tr>
<tr>
<td>S2. Provide time in the school day for joint planning among regular and special education staff.</td>
<td>23.45</td>
<td>33.03</td>
</tr>
<tr>
<td>S18. Increase the availability of special education assistants in the regular education classroom.</td>
<td>2.88</td>
<td>25.95</td>
</tr>
<tr>
<td>S1. Increase team teaching between regular and special education</td>
<td>19.53</td>
<td>20.32</td>
</tr>
<tr>
<td>S10. Assign students to next year’s teacher ahead of time so staff have time to plan to meet the needs of children.</td>
<td>1.06</td>
<td>17.44</td>
</tr>
</tbody>
</table>
Table 5 Continued

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Most Important</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>S12. Provide training to regular education classroom assistants in working with children with disabilities.</td>
<td>2.34</td>
<td>14.13</td>
</tr>
<tr>
<td>S4. Implement a comprehensive staff development program that is responsive to the unique needs of staff and children with disabilities at each school.</td>
<td>8.13</td>
<td>13.82</td>
</tr>
<tr>
<td>S5. Develop a communication system for easy exchange of information among staff who work with a particular student.</td>
<td>6.64</td>
<td>13.83</td>
</tr>
<tr>
<td>S21. Increase individualized instruction and support available in regular education so that fewer resources are spent on labeling children to receive these services in special education.</td>
<td>.56</td>
<td>12.87</td>
</tr>
<tr>
<td>S3. Provide easy access to modified materials for children with disabilities (e.g., simplified texts, enlarged print).</td>
<td>6.61</td>
<td>11.88</td>
</tr>
<tr>
<td>S9. Allow regular education and special education teachers to plan together in assigning students to classes for the upcoming year.</td>
<td>0.52</td>
<td>11.09</td>
</tr>
<tr>
<td>S13. Continue to maintain a continuum or range of services in addition to the regular education classroom to meet the needs of children with disabilities.</td>
<td>1.35</td>
<td>10.71</td>
</tr>
<tr>
<td>S19. Develop a training program for special education assistants.</td>
<td>.88</td>
<td>10.53</td>
</tr>
<tr>
<td>S7. Develop guidelines for how to decide if special education student needs are best met in regular vs. special education settings.</td>
<td>1.83</td>
<td>10.41</td>
</tr>
<tr>
<td>S11. Recognize and reward staff who are actively involved in serving special education students in the regular classroom.</td>
<td>.00</td>
<td>6.03</td>
</tr>
<tr>
<td>S14. Cluster small groups of special education children with similar needs within the regular education classroom to reduce the range of needs in a single classroom.</td>
<td>.33</td>
<td>5.04</td>
</tr>
<tr>
<td>S8. Develop training for peer helpers to assist children with disabilities in the regular education classroom.</td>
<td>.33</td>
<td>4.57</td>
</tr>
</tbody>
</table>
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**Table 5 Continued**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Most Important</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>S17. Make IEPs (Individual Education Plans) more flexible so that amount of time and types of services can be easily adjusted when a child’s needs change.</td>
<td>.37</td>
<td>4.52</td>
</tr>
<tr>
<td>S16. Develop a comprehensive, system-wide position on inclusion to reduce variability of services between schools.</td>
<td>.82</td>
<td>4.23</td>
</tr>
<tr>
<td>S15. Provide opportunities for staff to observe other classrooms or seek support from colleagues when they need help in serving a special education student.</td>
<td>.33</td>
<td>3.96</td>
</tr>
<tr>
<td>S20. Increase involvement of regular education staff in IEP (Individual Education Plan) development.</td>
<td>.35</td>
<td>2.42</td>
</tr>
</tbody>
</table>

*Exploratory factor analysis.* A principal components analysis was conducted on the strategies in Part IV of the SSESS to determine the dimensionality of the individual items. Because there was not an a priori hypothesis to suggest the number of factors, the following criteria were used to determine the number of factors to extract: the scree test, the Kaiser-Guttman rule, the incremental variance explained and the interpretability of the solution. In the scree test, the eigenvalues are plotted in descending order, and the number of factors to extract corresponds to a bend or a break in the plot. The interpretation of this test is subjective, with no hard rule for ruling in or ruling out the number of factors. The Kaiser-Guttman rule states the number of factors to be extracted corresponds to the number of eigenvalues from the full correlation matrix that are greater than 1.0. Using incremental variance explained is also subjective; the goal is to find a clear breaking point in the variance explained by adding more factors, and weighing the benefit of explaining more of the variance against the law of parsimony (which warns...
against having high cross loadings) and difficulty with interpretability. Interpretability should be considered the ultimate criterion to be used when determining factor extraction, and simply means the items in each factor make logical sense when grouped together.

The scree plot indicated a large break between factors 1 and 2 and another break between factors 3 and 4. Five factors had eigenvalues greater than 1. A five-factor solution explained 55% of the variance in the model. However, a one-factor solution only explained 28% of the variance. This led the researcher to explore a range of possible solutions using principal components analysis with a varimax rotation. A five-factor rotation was un-interpretable and revealed a factor that contained only two items, which is not an optimal solution for a 21-item scale. A four-factor solution violated the law of parsimony by yielding high cross-loadings (greater than .35) on 4 of the 19 items and was also uninterpretable. Both the three-factor and the two-factor solutions were interpretable and did not violate the law of parsimony. However, interpretation of the two-factor solution would have had to be very broad, making the factors of little practical use. Furthermore, when considering incremental variance explained, the three-factor solution was superior to the two-factor solution. Finally, a one-factor solution was un-interpretable and was markedly inferior in terms of incremental variance explained.

Based on the criteria set forth at the outset of this section, a three-factor solution was retained. Strategies 6 (reduction of class size based on classroom needs), 11 (recognize and reward staff who serve students with disabilities in regular education classrooms) and 14 (cluster groups of children with disabilities in regular education classrooms) were removed from the final solution in order to increase the reliability of the overall model. Recall from the descriptive statistics that Strategy 6 was one of the
strategies staff endorsed most often as being one of the top ranked strategies, and therefore removing it from the final factor solution may seem inappropriate. However, the strategy begins by referring to class size, and ends by saying “according to the needs of the classroom,” leading to the potential for an unreliable item. If the staff ignored the second part of the item, they would have almost assuredly endorsed the item, as most teachers would be in favor of reducing class size (Smith & Glass, 1980). Therefore, for the purpose of this analysis and in order to have a more reliable factor solution, the decision was made to remove Strategy 6. The final model revealed no significant cross-loadings. Questionnaire items and the corresponding factors and factor loadings are presented in Table 6. A description of each factor is provided next.

<table>
<thead>
<tr>
<th>Factors and Items</th>
<th>Factor Loading</th>
<th>Percent of Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1: Organizational and Policy Changes that Reduce Ambiguity</strong></td>
<td></td>
<td>28.31%</td>
</tr>
<tr>
<td>S9. Allow regular education and special education teachers to plan together in assigning students to classes for the upcoming year.</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>S10. Assign students to next year’s teacher(s) ahead of time, so staff have time to plan and prepare to meet the needs of children with disabilities.</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>S7. Develop guidelines for how to decide if special education student needs are best met in regular vs. special education settings.</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>S13. Continue to maintain a continuum or range of services in addition to the regular education classroom to meet the needs of children with disabilities</td>
<td>.49</td>
<td></td>
</tr>
</tbody>
</table>
### Table 6 Continued

<table>
<thead>
<tr>
<th>Factors and Items</th>
<th>Factor Loading</th>
<th>Percent of Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>S17. Make IEPs (Individual Education Plans) more flexible so that amount of time and types of services can be easily adjusted when a child’s needs change.</td>
<td>.47</td>
<td></td>
</tr>
<tr>
<td>S19. Develop a training program for special education assistants.</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>S18. Increase the availability of special education assistants in the regular education classroom.</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>S15. Provide opportunities for staff to observe other classrooms or seek support from colleagues when they need help in serving a special education student.</td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td>S3. Provide easy access to modified materials for children with disabilities (e.g., simplified texts, enlarged print).</td>
<td>.41</td>
<td></td>
</tr>
<tr>
<td>S5. Develop a communication system for easy exchange of information among staff who work with a particular student.</td>
<td>.36</td>
<td></td>
</tr>
</tbody>
</table>

**Factor 2: Training**

8.15%

S8. Develop training for peer helpers to assist children with disabilities in the regular education classroom. .62

S12. Provide training to regular education classroom assistants in working with children with disabilities. .57

S4. Implement a comprehensive staff development program that is responsive to the unique needs of staff and children. .55

S16. Develop a comprehensive, system-wide position on inclusion to reduce variability of services between schools. .37

**Factor 3: Collaboration**

6.71%

S1. Increase team teaching between regular and special education .74

S2. Provide time in the school day for joint planning among regular and special education staff. .55
Predictors of Teachers’ Perceptions

Table 6 Continued

<table>
<thead>
<tr>
<th>Factors and Items</th>
<th>Factor Loading</th>
<th>Percent of Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>S21. Increase individualized instruction and support available in regular education so that fewer resources are spent on labeling children to receive these services in special education.</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>S20. Increase involvement of regular education staff in IEP (Individual Education Plan) development.</td>
<td>.29</td>
<td></td>
</tr>
</tbody>
</table>

Note. Three items were omitted from this factor analysis in order to increase reliability.

Factor one. A review of the items in factor one led the investigator to name it, “Organizational and Policy Changes that Reduce Ambiguity.” As discussed in the review of the literature, ambiguity as to what inclusion means has been found to be a major barrier to inclusion (Vaughn, Schumm, Jallad, Slusher, & Saumell, 1996). This ambiguity can extend beyond the definition of inclusion to confusion concerning assignment of staff responsibilities in inclusive schools. Many of the strategies that fell under factor one seemed to reflect steps to reduce ambiguity surrounding staff responsibilities.

The strategies with the highest factor loadings on this factor (Strategies 9 and 10) dealt with policy changes to permit early placement of students into classrooms for the next school year, allowing for pre-planning about how to best accommodate each student. By planning early, teachers can know who is responsible for each child, and how they will be best able to serve that child.

The strategies with the next highest factor loadings on factor one (Strategies 7 and 13) dealt with assuring clear guidelines for how decisions are made to place students, and the continuum of services that are available to students with disabilities. These policy changes appear to reflect teachers’ desire for a clear definition of what inclusion means in
their school. That is, teachers want to know where students will be placed, why they are placed there, and what services general education teachers are expected to provide to students with disabilities. The next strategy in terms of factor loading for this factor (Strategy 17) called for making IEPs more flexible. This policy change would allow teachers to adjust the IEP based on the immediate needs of the child, giving the teachers the ability to apply a larger range of services to children with disabilities without having to go through support staff to make changes to the IEP.

Because of its focus on training, the next strategy according to factor loadings for factor one (Strategy 19) would seem to fit best with factor two, “Training.” However, this strategy deals with the training of special education assistants who are not necessarily based in regular education classrooms. Therefore, it is likely the teachers view this as an organizational strategy, as this training does not call for the training to be specifically adapted to regular education classrooms, but rather addresses the training of special education assistants. The final strategies in this factor according to factor loadings (Strategies 15, 3 and 5) describe policy changes that would allow teachers avenues to seek out help if they need it with particular students, and easy access to materials they need for working with students with disabilities. These strategies seem to be aimed at providing systems level policies on communication and access to materials in order to better serve students with disabilities.

*Factor two.* A review of the items in factor two led the investigator to name the factor, “Training.” The items in this factor dealt specifically with the training of regular education teachers and support staff. The type of training ranged from classroom based, such as training peer helpers (Strategy 8) and classroom assistants to help students with
disabilities (Strategy 12), to comprehensive staff training, such as implementing a staff development program that would be responsive to the unique needs of students with disabilities and teachers (Strategy 4). The major difference between these strategies and the training strategies loading on factor one was that these strategies dealt with the training of personnel to work specifically with students with disabilities in regular education classrooms, while the strategies in factor one dealt with the training of support staff in general. Strategy 16, which calls for the development of a system wide position on inclusion to reduce variability of services in schools, seemingly would fit well in factor one. However, calling for the reduction of variability between schools may also be a training issue. Developing the position would be an organizational change, but implementing the position in the classrooms may require training for the school staff in how to work with students with disabilities so that all classrooms can provide a similar range of services.

Factor three. A review of the items in factor three led the researcher to name it, “Collaboration.” Strategies loading highest on this factor appeared to deal with allowing time for joint planning and increasing the communication between staff on inclusion issues. Three of the strategies in this factor referred to collaboration between regular and special education teachers. Strategy 1 called for regular and special education teachers to team teach. Strategy 2 suggested joint planning time for special and regular education teachers, and Strategy 21 called for support to be provided to students with disabilities in the general education classroom. The final strategy in this factor (Strategy 20) pertained to regular education staff involvement in the IEP development for students with disabilities, thus also reflecting collaboration.
Predictors of Teachers’ Perceptions

**Factor comparisons.** An examination of differences in means by factor revealed that the mean of the staff ratings for the strategies that comprised factor one, “Organizational and policy changes that reduce ambiguity,” (M = 4.40, SD = .81) was significantly higher than the overall mean for the strategies that comprised factor three, “Collaboration,” (M = 4.13, SD = 1.00), F(16, 432) = 10.62, p < .05. The overall mean of factor three strategies was significantly higher than factor two (“Training”) strategies (M = 3.96, SD = 1.07), F(15, 437) = 17.62, p < .05.
Across placement settings, students with disabilities are more likely to struggle academically than students without disabilities (Schulte, Osborne, & Erchul, 1998). In inclusive models of education, students with disabilities who have teachers that use best inclusion practices are more likely to have positive academic and social outcomes (Gelzheiser, Meyers, & Pruzek, 1992; Guralnick & Groom, 1987). It is therefore important to investigate and understand factors that are associated with teachers’ use of best inclusive practices. The research literature suggests that teachers who do not have positive views of inclusion are less likely to use best inclusive practices (Fullan, 1991; Scruggs & Mastropieri, 1996).

Given that teacher views of inclusion appear to affect their willingness to adopt classroom strategies that lead to positive outcomes for students with disabilities, it is important to understand what factors are associated with positive and negative teacher views of inclusion. Two factors that have been found to negatively affect teachers’ support for inclusion are their concerns that they have little time to dedicate to inclusion (Janney, Snell, Beers, & Raynes, 1995) and not enough training in special education to effectively lead an inclusive classroom (Scruggs & Mastropieri, 1996).

Although these two teacher concerns have individually been found to have an impact on teacher support for inclusion, the interplay of the two in determining teacher support for inclusion has not been studied. In the present study, it was hypothesized that teachers’ perceptions of the adequacy of their school staff’s special education training would moderate the relationship between their perceived lack of time to dedicate to
inclusive practices and their desire to move toward a more inclusive model of special education at their school. It was reasoned that teachers who rated staff as having adequate special education training would be more likely to be comfortable in working with students with disabilities. Furthermore, special education training would provide teachers and staff with insight on how to integrate support for, and instruction of, students with disabilities into regular classroom routines, resulting in teachers with high special education training needing less preparation time than teachers with less training. A primary objective of the present study, therefore, was to test a specific model of how factors that individually have been found to predict teachers’ support for inclusion may interact in determining their willingness to move toward an inclusive model of serving students with disabilities.

In addition, the present study attempted to address a methodological problem in much of the previous research on teacher views of inclusion: failure to clearly define the term “inclusion.” In order to operationally define the variable, “Teachers’ perceptions of inclusion,” in the present study, teachers were provided with five survey items that provided concrete descriptions of different aspects of inclusion. They were then asked to indicate their degree of support for moving toward that practice at their school. A confirmatory factor analysis revealed that these five items were strongly linked to each other, resulting in a measure that provided a strong operational definition of inclusion.

This chapter contains a discussion of the results from the present study. In the first section, findings relative to the three research hypotheses related to question 1 are discussed. In the second section, findings relative to question 2 are discussed. The third
section delineates limitations and directions for future research. The chapter ends with a
discussion of implications of the current study.

**Question 1**

*Hypothesis 1.* Hypothesis 1 predicted that the higher teachers rated the adequacy
of staff’s special education training, the higher their support would be for moving toward
a more inclusive model of education. As predicted, teachers’ perceptions of staff’s special
education training were related to their support for inclusion. Teachers who perceived
staff at their school as having adequate special education training had higher support for
moving toward an inclusion model than teachers who perceived staff training as less
adequate. These findings are consistent with previous research (e.g., deBettencourt, 1999;
Van Reusen, Shoho, & Barker, 2000) investigating lack of teacher training as a potential
barrier to inclusion and provide further support for the claim that teacher training is
related to teachers’ support for inclusion.

*Hypothesis 2.* Hypothesis 2 predicted that teachers who felt staff at their school
had adequate time to dedicate to inclusion would have higher support for moving toward
a more inclusive model of education. This hypothesis was also supported.

This finding is consistent with the work of Forlin (2001), who found that lack of
time was a major stressor to teachers of inclusive classrooms, resulting in teachers being
less supportive of the inclusion of children with disabilities in their classroom. Unlike
studies that use a generic definition of inclusion, the present results were obtained with an
instrument that employed an operational, multidimensional definition of inclusion. Thus,
the current study not only added support for previous research on barriers to inclusion,
but also provided the support in the context of a clear definition of what inclusion meant to the teachers.

_Variance explained._ Despite findings in the current study that teachers’ perceptions of available time and the adequacy staff training were related to their support for moving toward more inclusive education, both variables accounted for only a small portion of the variance in teachers’ support for inclusion. Both the manner in which these predictor variables were measured, and the choices about what was measured, may account for the small amount of variance in support for inclusion explained. Examining these methodological choices and their impact on current study results has implications for improving future research in this area.

First, single item predictor variables were used in the current study, which may explain the truncated range in teacher ratings of these predictor variables. Restriction of range in either the predictor or outcome variables reduces the amount of variance explained in regression designs (Cohen, Cohen, West, & Aiken, 2003). In addition, the use of single item scales results in lower reliability, again because of a reduction of variance. Had multiple items been used to comprise the predictor variables, there may have been more variability in the teachers’ ratings, as well as increased reliability. Increases in either the variability or reliability of the two predictor scales would have increased the amount of variance explained.

Future research should employ multiple item measures of constructs. For example, separate items that ask about teacher perceptions of how much time staff have for individual planning, joint planning with other teachers and/or support staff, and implementation of inclusion strategies could be used to assess teacher perceptions of
Predictors of Teachers’ Perceptions

available time. Additionally, future measures of teacher perceptions of available time could include objective items that ask teachers to indicate the actual amount of available time they have for inclusion in terms of hours per week. Allowing teachers to make specific rather than global statements about their available time may increase the variability in their responses.

Second, the predictor items in the present survey asked respondents to indicate their perceptions of the amount of time available and adequacy of inclusion training for the staff as a whole. Investigating teachers’ individual perceptions of the impact of inclusion rather than their perceptions of their school staff collectively might have allowed the current study to account for more of the variance in teachers’ support for moving toward more inclusive practices. There may be a constellation of beliefs about the impact of inclusion that is unique to each teacher that cannot be investigated when teachers are asked about school staff in general. For instance, some teachers may feel that inclusion will restrict the autonomy they have in their classrooms in contrast to other teachers who may be concerned that they will not have the administrative support they need to lead an inclusive classroom (Marshall & Patterson, 2002). If this is the case, asking teachers to rate the school staff as a whole may have missed individual differences between teachers in their perceptions about how inclusion would affect them.

Third, it is possible that different predictor variables might have accounted for a larger portion of the variance in teachers’ perceptions of inclusion than was explained in the current study. Other potential predictors of teacher’s support for moving toward more inclusive practices at their school include teachers’ confidence in their own skills to lead an inclusive classroom (Scruggs and Mastropieri, 2000), their perceptions of how leading
an inclusive classroom will affect high stakes test scores, their perceptions of potential consequences if their class has poor test scores, and their perceptions of the overall impact of inclusion. Future research might include survey items to assess these areas.

Teachers’ past experiences with people with disabilities may also account for a greater share of the variance in their support for inclusion. The type of experience the teachers had, how much school-based experience they have working with children with disabilities, and whether the experiences were positive or negative could all be related to teachers’ support for inclusion. However, these variables would likely need to be investigated qualitatively as they would be difficult to assess in a survey format. A survey format would not allow for an in-depth investigation of the types of experiences the teacher have had, both in and outside of school, with people with disabilities. A qualitative investigation may allow future researchers to investigate both school and non-school based experiences teachers have had with students with disabilities, and also investigate a potential relationship between these experiences and their support for moving toward more inclusive practices at their school.

_Hypothesis 3._ Hypothesis 3 predicted that teachers’ perceptions of staff’s special education training would moderate the relationship between teachers’ perception of available time to dedicate to inclusion and their support for moving toward an inclusive model of special education. This hypothesis was not supported.

One explanation for the failure of the present study to support Hypothesis 3 was the restriction of range of the predictor variables. As discussed earlier, restriction of range for the predictor variables was a limitation in the current study. Restriction of range
makes it exceedingly difficult for a variable to moderate the strength of any relationship between two other variables (Cohen et al., 2003).

Another potential explanation for the failure of the present study to support Hypothesis 3 is the way that teacher training was defined in the current study. Teachers were asked to rate the adequacy of their school staff’s training in special education, and there may have been individual differences as to what teachers felt was “adequate” special education training. Thus, one teacher may perceive a single class in special education as being adequate. However, it would be unlikely that one class in special education would provide staff with enough background to affect their time management skills in an inclusive classroom (Mastropieri & Scruggs, 2000). Future research should look to use multiple items to assess teacher perceptions of staff training. Also, having teachers rate the adequacy of their own special education training may provide insight into their perceptions of how prepared they are to lead inclusive classrooms, rather than the inclusion preparedness of the school staff in general. Furthermore, a more objective measure of the staff’s special education training (such as the number of special education credits completed) may eliminate the potential problem of individual differences in the perceptions of staff training.

Finally, a potential explanation for the failure to support Hypothesis 3 is simply that teachers’ perceptions of staff training do not moderate the relationship between teachers’ perceived time available and their desire to move toward an inclusive model of education. Although it seems plausible that teachers who perceive staff as having adequate special education training would also see staff as more able to manage the demands of inclusion, there are many other factors that may lead a teacher or staff
member to perceive him or herself as having limited time. Specifically, general education teachers are responsible for every aspect of their classroom, and therefore it is not just students with disabilities who place demands on their time. Even if teachers are able to manage their time very well and have a high level of special education training, they may still be functioning at capacity in terms of available time and therefore resist any change in educational practices that will place further demands on them.

**Question 2**

*Inclusion strategies endorsed as being the most important.* Question 2 asked what inclusion strategies teachers and staff endorse as helpful. As expected, most of the strategies provided to respondents on the survey were rated as at least somewhat important for implementing inclusion. To illustrate, even the mean for the lowest rated strategy, “Cluster groups of children with similar needs together for instruction,” was 3.69 on the five-point Likert scale used in the survey (where a “3” indicated the strategy was “somewhat important”). Given these uniformly high ratings, discussion of the most important strategies in terms of mean ratings is not useful. However, the survey also asked the teachers to choose the three strategies that were most important for improving the services to children with disabilities. Forcing the participants to choose their top three strategies allowed for an analysis of what teachers endorsed as the most important strategies without the potential for ceiling effects.

When looking at the survey results related to question 2 in terms of top-ranked strategies, strong teacher support for two strategies emerged. By far, the most highly ranked strategy was the reduction of class size based on the needs of the classroom. This strategy received the second most nominations for the top-ranked strategy and 64% of the
teachers ranked it as one of their top three choices. The second most highly ranked strategy overall was providing time in the school day for joint planning among regular and special education staff. This strategy was selected by 33% of teachers as one of their top three choices, and was nominated by 23% of teachers as the most important inclusion strategy. Beyond these two strategies, no strategy was selected by more than one third of the teachers as a top-ranked strategy.

Smith and Glass (1980) provided evidence in their meta-analysis that a reduction in class size was related to more positive academic outcomes for students, higher morale for teachers, and more positive teacher attitudes toward students. The findings of this meta-analysis indicated that reducing class size had beneficial effects on the teaching process itself, making classrooms more conducive to individualized instruction. It is therefore not surprising that teachers identified a reduction of class size (Strategy 6) as a top inclusion strategy. However, it is unclear if the teachers fully considered this strategy beyond reducing their class size. It is possible that teachers focused on the first part of the strategy (reduce class size) and ignored the second part of the strategy (according to the needs of the classroom) when rating this strategy.

Strategy 2 (provide time in the school day for joint planning among regular and special education staff) was second in the overall rankings of strategies. Based on literature that suggests lack of time is a barrier to inclusion (i.e., Janney et al., 1995; Scruggs & Mastropieri, 1996) it is not surprising that this strategy was highly supported, as it dealt with the amount of time available to dedicate to inclusion issues. By identifying this strategy, teachers were supportive of having time available to allow them to plan with other regular and special education staff. This finding suggests teachers are
supportive of collaboration between regular and special education staff, a strategy that has been identified as a best practice for inclusion classrooms (Baker & Zigmond, 1990).

As mentioned earlier, a primary reason for having the teachers identify the three most important inclusion strategies was to reduce the ambiguity that may result from teachers rating every inclusion strategy as important. Interestingly, even with rankings, consensus was hard to achieve. Although two strategies stood out from the others with this methodology, twelve strategies were identified by at least ten percent of staff as being one of the three most important inclusion strategies. It may be that many of the strategies included in the survey are interrelated, perhaps as components of broader organizational thrusts that support inclusion. This possibility was addressed by conducting an exploratory factor analysis, and results from the factor analysis are discussed in the next section.

*Exploratory Factor Analysis*

The exploratory factor analysis conducted on teachers’ endorsements of inclusion strategies found support for a three-factor solution. Factor one had many strategies that were aimed at a systems level and dealt with organizational support and planning. Factor two strategies centered around the training of educators and support staff. Finally, factor three strategies dealt with collaboration among school staff. This section discusses each factor in detail with regard to their importance to school districts and teachers.

*Factor one.* The strategies in factor one, “Organizational and Policy Changes that Reduce Ambiguity” included many strategies that teachers selected for their top three strategies. However, only 22% of the number-one ranked strategies came from this group. It is interesting that teachers supported factor one strategies in general, but did not
select them as often as their first choice for an inclusion strategy. Perhaps teachers are more likely to select strategies that provide immediate relief to problems they have in the classroom (such as a reduction in class size) as their first choice for an inclusion strategy. Organizational and policy changes are generally long term plans that typically do not have immediate effects. Therefore, although teachers see the benefit of policy and organizational strategies, they are less likely to rate them as the single most important type of inclusion strategy.

*Factor two.* Although the hypothesized relationship between teachers’ perceptions of training and endorsement of inclusive practices was supported in the current study, staff ratings of what inclusion strategies were most important did not reflect an emphasis on special education training. When compared to strategies from the other factors, factor two (“Training”) strategies had the least support from teachers and were identified least often as top three choices for inclusion strategies. These results suggest that although teachers perceive training as important, it is not viewed by teachers as central to successful inclusion when compared to other school-based inclusion strategies.

There are three potential reasons why the training factor mean was lower than the other factors. First, teachers who were asked about school staff’s training, especially special education training, may have only considered pre-service training and not continuing education training. Therefore, asking teachers about training may not have tapped into their desire or need for continuing education training. Second, teachers may see continuing education training as another burden that will be time consuming. As supported in the literature review and results of the current study, teachers’ perceptions of the time available to dedicate to special education was related to their support for moving
toward inclusion. Even if teachers felt that continuing education in working with children with disabilities would be beneficial, they may be hesitant to endorse this type of strategy because of the time commitment involved. Finally, two of the strategies included in this factor involved the training of other staff and peers, not the teachers themselves. It is possible that teachers are more supportive of strategies that deal directly with general education teachers rather than the training of other school personnel and/or peers.

Factor three. Factor three ("Collaboration") represented nearly 23% of the strategies teachers rated as the top-ranked strategies and had high support from teachers in general. Similar to factor one strategies, the support teachers showed for these strategies may reflect their perception that a key barrier to inclusion is the ambiguity in what constitutes inclusion and how teacher responsibilities should be divided when inclusion is implemented. By increasing collaboration, especially between special education staff and general education teachers, teachers may feel that everyone will know what is expected of them and others. Furthermore, teachers may feel they could benefit from the knowledge that special education teachers have for working with children with disabilities, thus bridging the gap that may exist due to their own lack of special education training.

Summary of question 2. Question 2 investigated what strategies teachers endorsed as being important for moving toward inclusion at their school. Having the teachers rate and then rank the most important strategies allowed for an investigation of the strategies while attempting to account for the potential of ceiling effects in ratings. Also, removing Strategy 6 (reducing class size) from the exploratory factor analysis allowed for an investigation of teacher support for strategies that are more feasible given the financial
constraints that face school districts. It is not surprising that teachers endorsed Strategy 6 most often. However, it is unlikely that school districts will have the financial resources to be able to reduce their class sizes. The second and third most endorsed strategies (Strategy 2 and Strategy 1) both dealt with collaboration between staff, which seem to be more feasible strategies for school districts.

In terms of groups of strategies, organizational and policy strategies had the most support from teachers, followed by collaborative strategies. The strategies most often endorsed seem to reflect teachers’ concerns about the ambiguous nature of inclusion, as well as their concerns over their available time to dedicate to inclusion. Surprisingly, teachers’ concerns over special education training were not represented by the inclusion strategies they endorsed. However, the concerns teachers may have over their perceived lack of education may be overshadowed by their perceptions of limited time available to dedicate to inclusion, as they may be unwilling to endorse a strategy (such as continuing education) if it would result in a need to dedicate additional time and resources to that strategy.

Limitations of the Study and Directions for Future Research

When interpreting the findings of this study, several limitations should be considered. One limitation is the lack of representation of the sample from a national perspective. All of the staff in the current study were from the same school district in the southeastern United States. It is unclear whether the results of this study represent those that would be found in the population of teachers across the country. Future research should attempt to enlist more than one school district for participation in teacher support for inclusion studies. This would enhance the diversity of the study sample and thus
eliminate any potential sampling effects that may result from using only one school district.

The current study attempted to predict teachers’ support for inclusion based on their perceptions of current practices at their school. Although the current study did use some analyses that might be used in a true experimental study, such as the comparison of endorsed strategies between factors, the current study was correlational. Significant relationships were observed in the present study; however, correlational data do not allow for an investigation into the direction of the relationship. As with all correlational studies, the current study should not be mistaken for a true experimental study in which causation is investigated.

Another potential limitation was the operational definitions of the variables that were used in the current study. As discussed in the literature review, inclusion is a broad term and can mean many different things to a school district. As part of the current study, inclusion was defined by items on a teacher survey via factor analysis. However, the definition of inclusion used in this study was created for the purpose of this study and is therefore not universally accepted. Future researchers should use caution when defining inclusion, taking care to ensure that the definition used is meaningful to the setting. Future research should also investigate alternative ways to operationally define the predictor variables. The current study used teacher perceptions of time and training, but it may be useful for future researchers to utilize more objective measures, such as the actual amount of time teachers have to dedicate to inclusion in terms of hours per week or the number of special education training courses completed.
Future researchers could also explore potential barriers to inclusion not investigated in the current study. The predictor variables in the current study explained only a small portion of the variance for teachers’ support for moving toward more inclusive practices. Investigating other variables, such as teachers’ previous experience in working with children with disabilities or a qualitative exploration of biases they may have against inclusion, may prove beneficial in attempting to predict teachers’ support for moving toward more inclusive practices at their school. Finding relationships between predictor variables should remain a goal of future researchers, as there are many potential variables that can affect teachers’ views of inclusion. By combining predictors, future researchers may be able to explain a greater portion of the variance in teachers’ perceptions.

Another direction for future research would be a comparison of past research on teachers’ views on reduction of class size (i.e., Smith and Glass, 1980) and if that differs from their views on reduction of class size as an inclusion strategy. Recall that teachers endorsed Strategy 6 (reduce class size based on the needs of the classroom) most often as an inclusion strategy; however, it was not retained in the factor analysis in the current study because it reduced the reliability of the overall model. It is possible that teachers only considered the first part of the strategy (reducing class size) and not the second part of the strategy (based on the needs of the classroom) when endorsing this strategy. Therefore, the teachers’ endorsement of a reduction in class size in this study was not necessarily an inclusion strategy; it may have been a global statement about their desire to reduce class size.
Finally, future research should seek to find empirical support for the inclusion strategies teachers identified as the most helpful. Teachers’ support for these strategies is just a first step, as it shows that teachers will likely use these strategies because they perceive them as helpful. A logical next step is for researchers to investigate if these strategies actually are effective for inclusive schools. An important step for this research will be the need to define the outcome variables that will be used in order to deem whether the inclusion strategies are effective. These outcome variables may include academic and/or social outcomes for special and/or regular education students. These outcomes can be measured in several ways, such as classroom grades and standardized testing for academic outcomes, and positive and negative peer nominations for social outcomes, which makes it important to identify the best way to measure these outcomes. Additionally, the outcomes could be investigated in terms of individual classrooms, school-wide results or district-wide results. The present study provided information about what strategies teachers are likely to support. As teacher acceptance is likely to affect implementation, this knowledge is important. However, the demonstrated effectiveness of inclusion strategies in terms of their impact on academic and social outcomes for children with disabilities must be the ultimate criterion for endorsing new practices.

Conclusions and Implications

Three overall conclusions can be drawn from the current study. First, teachers perceived time available to dedicate to inclusion issues and their perceptions of staff’s special education training were related to their perceptions of moving toward more inclusive practices. Teachers who perceived they had more time available were more likely to support moving toward a more inclusive model at their school. Similarly,
teachers who rated staff’s special education training as adequate were more likely to support moving toward a more inclusive model of education at their school. These relationships have been reported in several previous research papers and reviews (e.g., Forlin, 2001; Madden & Slavin, 1983; Scruggs & Mastropieri, 1996).

Second, based on the results of the present study, teachers’ perceptions of their special education training did not moderate the relationship between teachers’ perceptions of available time to dedicate to inclusion and their support for moving toward more inclusive practices at their school. Methodological problems could account for the failure to find this outcome, as discussed earlier. Alternatively, it may be that teachers’ perception of staff’s training does not, in fact, moderate the relationship between teachers’ perceptions of time available to dedicate to inclusion and their support for moving toward more inclusive practices at their school.

Third, three groups of inclusion strategies were extracted from the current study that do not deal with the reduction of class size. Of these three groups, teachers found the strategies in the, “Organizational and Policy Changes that Reduce Ambiguity” group to be the most important, and the strategies in the, “Training” group to be the least important. It should be noted, however, that the teachers generally found all of the strategies to be at least somewhat important, and that reducing class size was the most often endorsed inclusion strategy.

These findings have various implications for schools seeking to move toward more inclusive forms of education. First, teachers’ perceptions of staff having adequate special education training and their perception of time available to dedicate to inclusion are important, as these perceptions are related to their support for moving toward more
inclusive models of education. Furthermore, teachers’ support for inclusion is related to academic and social outcomes of inclusive classrooms (Fullan, 1991; Scruggs & Mastropieri, 1996).

Second, although it is apparent that available time to dedicate to inclusion is important to teachers, the amount of time in a given school day cannot be lengthened. It is therefore important that inclusion strategies become an integrated and regular part of general education classrooms rather than strategies that are in addition to the regular curriculum. One general strategy that might be considered is adopting a Universal Design for Learning approach (Robinson, Haynes, Richman, & Bode, 2006). Universal Design for Learning is a set of principles that include providing multiple representations of content and multiple options for engagement and motivation. By utilizing the principles of Universal Design for Learning, teachers may have the opportunity to engage all students in inclusive classrooms in worthwhile learning activities without having to put extra time into add-on inclusion based strategies (Blamires, 1999). Because the goal of Universal Design for Learning is to engage all students in activities using several modalities in the context of the regular curriculum, the extra time needed for specific in-class inclusion strategies should be minimal.

Finally, the current study provided evidence that inclusion strategies can be grouped together. Grouping allows for a unified approach to moving toward inclusion, rather than mismatched strategies implemented individually that may confuse roles. When an inclusion strategy is implemented in a school, it should be explained to the teachers in terms of what group it falls under, how it relates to other strategies that are already being used, and how the strategy will help the school district move toward more
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positive outcomes for inclusive classrooms. All of this is aimed at reducing the ambiguity that is often associated with inclusion, allowing the school system to work together as a cohesive unit in terms of inclusion.

In summary, this study was successful in demonstrating that teachers’ perceptions of time to dedicate to inclusion and their perceptions of the adequacy of staff’s special education training were both related to teachers’ support for moving toward more inclusive practices at their school. The present study also identified inclusion strategies that teachers found to be the most helpful and organized these strategies into three distinct groups.
REFERENCES


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