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PLACEMENT IN INCLUSION AND NON-INCLUSION CLASSROOMS AND THEIR

PRINCIPALS' PERCEPTIONS OF INCLUSION

by

Loretta Rodgers Hartfield

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Approved:

December 2009

The University of Southern Mississippi

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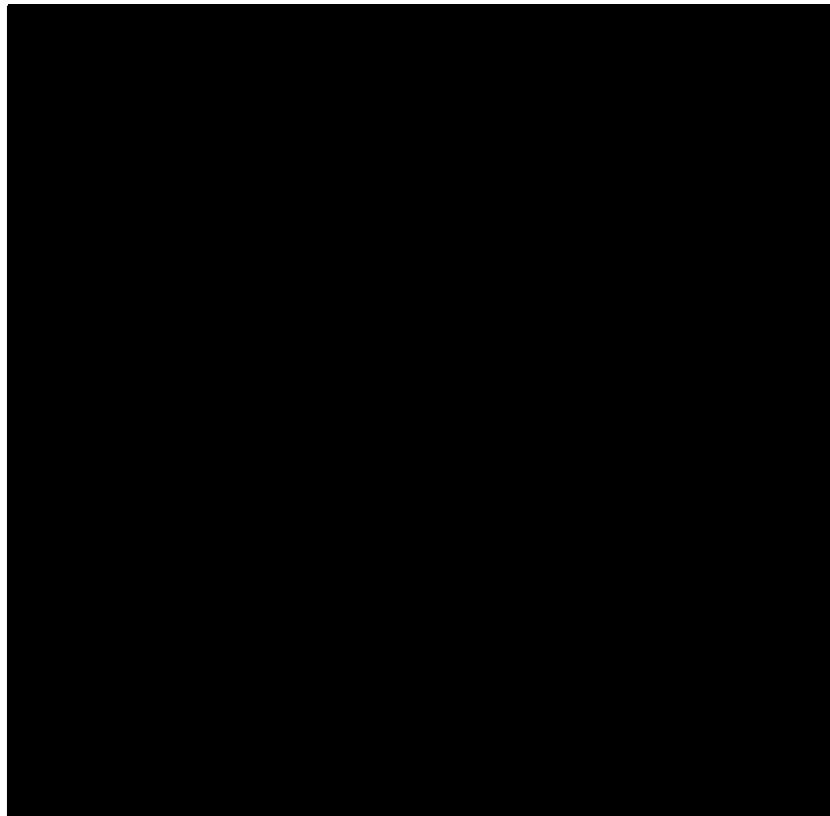
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ABSTRACT

MATHEMATICS ACHIEVEMENT OF REGULAR EDUCATION STUDENTS BY

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December 2009

This study examined mathematics achievement of fourth and fifth grade students
in Mississippi and principals' perceptions of inclusion.

A sample of 462 students from eight separate elementary schools was selected for
this study. Fifteen principals completed the Principal and Inclusion Survey regarding
inclusion education. Eight of the 15 principals were interviewed with 10 open-ended
questions regarding their perceptions of inclusion.

Data were analyzed using an independent two-tailed t test and Pearson product
moment correlation. The independent two-tailed t test was used to determine differences
in mathematics achievement for fourth and fifth grade students in inclusion classrooms
compared to non-inclusion classrooms and by gender. Qualitative data were gathered for
the eight principal interviews. Data were coded to analyze recurring themes throughout
the interviews. Pearson product moment correlation was used to investigate a correlation
between mathematics achievement and principal perceptions of inclusion.

Results of the data analysis showed no significant differences at the .05 level in
mathematics achievements between regular education students in inclusion classrooms
compared to non-inclusion classrooms. Descriptives concerning the Principal and

Inclusion Survey indicated that principal perceptions regarding inclusion were very similar. An independent two tailed t test showed a significant difference by gender of principals regarding appropriate placement for students with disabilities.

Qualitative data resulted in four emerging themes regarding the eight principal interviews regarding their perceptions of inclusion. The themes that emerged from the data included:

1. roles and relationships of teachers in inclusionary practices

2. parental involvement, knowledge, and respect for inclusion education

3. principals' responsibilities in the conflicting nature of inclusionary practices

4. the physical environment inclusive to learning for inclusion education

DEDICATION

This manuscript is dedicated to my husband, Kevin; my children, Kelsey, Codey, Cayson, and Tessa; and my parents, Homer and Hazel Rodgers. Throughout this journey, they have all been strong, supportive, and understanding.

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CHAPTER I

INTRODUCTION

In current public school systems across the United States, changes in educational

reform are continually occurring. High-stakes testing, accountability, differentiated

teaching instruction, and inclusion have become more popular due to specific provisions

and mandates. The *No Child Left Behind Act* (NCLB) of 2001 and *Individuals with*

Disabilities Act (IDEA) of 1997 and its reauthorization of 2004, along with numerous

state mandated major educational reforms have occurred (Carpenter & Dyal, 2007). Many

school systems are redefining their programs in order to increase student academic

achievement and meet proficiency level goals. Student achievement among all students is

a national goal among educators (Mississippi Department of Education [MS DOE],

2007).

In 2008, there were 152 public school districts in Mississippi. The number of K-

12 public schools, according to the 2000-2001 data, was 884. However, the 2008 data

indicated that this number has now increased to 900 elementary and secondary public

schools. A total of 1,074 schools are known within the school districts. The state's

accountability accreditation model is linked to adequate performance for each school

district. Each school district in Mississippi is rated according to a performance index

level ranging from a low of 1.0 to a high of 5.0 (Mississippi Department of Education

[MS DOE], Superintendent's Annual Report, 2007).

High-stakes testing and accountability are required in Mississippi. Students in

elementary and middle school are required to take criterion-referenced tests known as the

Mississippi Criterion Reference Test (MCT2). Students in grades 3-8 are administered the

MCT2 each May. Additionally, statewide Science Assessments are administered for grades 5 and 8 each March. In high school, subject area tests, such as Biology I, Algebra I, U.S. History, and English II, are administered (MS DOE, 2006). These assessments are used to identify proficiency levels for each student and school rating levels.

A factor of these high-stakes testing is accountability. School districts are accountable for students' academic performance and their Accreditation Rating Index Level. However, there are many factors that contribute to test scores. Methods of instruction, implementation of programs, and special education initiatives such as inclusion can play a vital role in student achievement and accountability. Along with high-stakes testing, inclusion education has become an increasingly popular trend in education (MS DOE, 2007).

An integrated approach in providing quality education to all children is commonly known as "Inclusion Education." Inclusion is known as a new vision for education in public school systems. However, there is a concern for student achievement for both regular education and special education students in inclusion classrooms (Ramirez, 2006). Therefore, this study investigated inclusion education, principals' perception of inclusion, and academic achievement of regular education students.

Historically, standardized and high-stakes testing have been used to measure student performance in public education. The aforementioned assessments have been used to rate school and student proficiency levels. However, over the past few decades, an emphasis on special education has been identified. With new laws and regulations such as the *No Child Left Behind Act* (NCLB), accountability and high-stakes testing have been analyzed. President George W. Bush signed NCLB on January 8, 2001, thereby

redefining the federal government's role in education (U.S. Department of Education [USDE], 2004). However, before NCLB, the report *A Nation at Risk* was released in 1983 describing the quality of teaching and learning in the United States. There were many suggestions made for education due to the findings of this report, including testing and accountability (USDE, n.d.).

Mississippi, along with other states, has been encouraged to work more cooperatively with the federal government to set proficiency levels for all students. Each proficiency level is set per grade and per subject. Through NCLB, new requirements were placed upon public schools, including an annul district report card describing schools' rating level according to state accountability standards. Another aspect of NCLB is that states are now required to use test score data to measure academic performance levels in schools (Southern Regional Education Board, 2004).

One growing concern for education is that students with disabilities are also required, under NCLB, to take standardized tests. This is another provision of NCLB and high-stakes testing. Standardized tests have been around for decades; however, flaws have been identified. When students take these assessments, public school systems use them as a "one size fits all approach." However, educators realize that students are different in many characteristics. Students perform at their own level of ability and capacities.

Common aspects of NCLB are inclusion education and highly qualified teachers. Inclusion education is known for providing instruction to all students such as special education and regular education in a regular education classroom setting. Highly qualified teachers became an active requirement of inclusion education. Due to this provision, the

inclusion classroom consists of a highly qualified regular education teacher and a highly qualified special education teacher. Teachers who are highly qualified are defined as experts in the subject matter they teach. The concept of this type of teaching is also known as "Co-Teaching." The term co-teaching refers to the regular education teacher and the special education teacher sharing roles and responsibilities for all students within the regular education classroom. Research has indicated strengths and weaknesses of co-teaching in inclusion education. In theory, both teachers teach cooperatively to all students (Carpenter & Dyal, 2007). The rationale for inclusion as described by Bakker and Bosman (2003) is for children to deal with differences and to show respect for diversity. Bakker and Bosman indicated that children learn, act, and acquire different development at different times.

Major reform efforts affecting students with disabilities are occurring across the United States. NCLB and IDEA have added several educational requirements for public school systems. These laws and regulations allow accountability for instruction and assessment of special needs students. Therefore, school districts are examining their role in the education of all students. Bateman and Bateman (2001) indicated that the law stated, "Schools must maintain a continuum of alternative placement such as special classes, resource rooms, and itinerant instruction to meet the needs of the disabled" (p. 21).

Another growing educational concern is principals' opinions toward inclusion. According to Carpenter and Dyal (2007), administrators are necessary proponents in the effectiveness of their inclusion program. Proactive principals implement the necessary provisions and mandates provided by NCLB and IDEA. Under administrators' guidance

and vision, inclusion can be most effective. Researchers such as Liddiard (1991) suggest that successful and effective inclusion begins at the administrative level. She implied that support from the principal is vital for inclusion programs to perform adequately and successfully. Her research indicated that committed leaders were critical to the learning of all students.

The new vision for these schools may lie in the hands of the administration, according to many recent studies. Praisner (2000), Ramirez (2007), and Cox (2008) all indicated that the principal's opinion is extremely important in the inclusion program. Principals must develop, plan, and implement strong policy statements considering the education of special needs students in their Least Restrictive Environment (LRE) involving inclusion education. However, building level administrators are accountable for student outcomes of all students in their school (Praisner, 2003).

Therefore, inclusion education has become a popular trend in public schools and indicates a legal view for special education students. Walker and Ovington (1998) explained inclusion as a civil and educational right in America. They mentioned that inclusion involves teachers, administrators, and all students. Inclusion does not apply to only the special education students. Therefore, inclusion has an educational aspect to the regular education students. In order for an effective inclusion program, all stakeholders are involved. Therefore, public schools have changed their programs of mainstreaming and the Regular Education Initiative (REI) to inclusion education and provide the LRE for special education students.

Statement of the Problem

Inclusion education and increasing academic achievement are both controversial issues with advocates on both sides of these issues. Inclusion relates to social, educational, and legal values. Educators and parents are somewhat uncertain concerning these concepts. The primary question at hand is "what is best for the children?" Increasing academic achievement is a common goal among parents and educators. However, some advocates feel that all students belong in regular education because each student's individual needs are met by quality instruction. Regardless, these issues remain a central focus in order for public schools to increase academic achievement of all students. Providing the least restrictive environment (LRE) and appropriate placement for special education students is a requirement (Bateman & Bateman, 2001).

Purpose of the Study

Due to *No Child Left Behind* (NCLB), IDEA, and state mandates, inclusion education has become prevalent in public schools. Increasing student achievement continues to be a national goal for educators. However, providing instruction to special education students in general education classrooms has become a controversial concept in education partly due to increased demands for high student test scores. Inclusion practices have been questioned in regards to impact on academic achievement of all students. Consequently, this approach presents many concerns and questions for parents, students, teachers, administrators, and stakeholders involved in educational reform such as "What is the best environment for learners?"

Many changes in public education have occurred over the past decades, and change is an on-going trend in education. There are many proponents as well as

opponents concerning both sides of inclusion and student performance. Researchers such as Praisner (2000) and Cox (2008) have indicated that principals have important roles and responsibilities for inclusion to be effective. According to their studies (Praisner, 2000; Cox, 2008), their opinions regarding inclusion are vital in the success of implementing inclusion in public schools. This study investigated regular education student performance in inclusion settings compared to regular education student performance in non-inclusion settings and their principals' perceptions toward inclusion.

This study investigated the academic achievement of regular education students placed in inclusion and non-inclusion classrooms. For comparison purposes, the content area under investigation was mathematics. The study sought to determine if regular education students perform better academically in an inclusion classroom or a non-inclusion classroom. The study also explored the perceptions of these students' principals' relation to inclusion education.

<div align="center">Research Questions</div>

This study identified five specific research questions.

1. Is there a significant difference in mathematics achievement of regular education students in inclusion classrooms and regular education students in non-inclusion classrooms?

2. Is there a difference in mathematics achievement of regular education students (a) in inclusion classrooms and (b) in non-inclusion classrooms?

3. What are principals' perceptions regarding inclusion by gender?

4.   Is there a relationship between principals' perceptions regarding inclusion

and mathematics achievement of regular education students in inclusion

classrooms?

5.   What are principal perceptions of inclusion?

Definition of Terms

Academic achievement - a variable in this study measured by the Mississippi

Criterion Reference Test (MCT2) scores and report card grades in the area of

mathematics (Mississippi Department of Education, 2007).

Collaborative teaching - highly qualified teachers working together to create

guidance, activities, problem solving, and effective strategies to model and meet the

needs of all students (Moore, Gilbreath, & Maiuri, 1998).

Cooperative learning - heterogeneous grouping of students to work together to

achieve an assignment or project (Johnson & Johnson, 1998).

Free and Appropriate Education (FAPE) - an educational right under the

provision of IDEA of 1990 in which children with disabilities are guaranteed educational

services to meet their individual needs (Praisner, 2000).

Full inclusion - the practice of teaching students with disabilities, regardless of

type or severity, in general education classrooms with the support needed to meet their

needs (Stainback & Stainback, 1996).

General education - synonymous with regular education and non-inclusion; a

classroom environment in which students without disabilities are generally taught (Lilly,

1988).

High-stakes testing - standardized tests that are required for students to measure academic achievement; these tests are administered as part of the provision under the No Child Left Behind federal law (Fish, n.d.).

Highly qualified teachers - a provision of the NCLB act; refers to teachers in all grades who are considered experts in the subject matter/core content areas they teach (Carpenter & Dyal, 2007).

Individualized Education Program (IEP) - a requirement of IDEA; a written document that describes educational programs provided to students with disabilities (Stainback & Stainback, 1996).

Inclusion - an educational delivery model in which students with disabilities are taught in the general education classroom along with their non-disabled peers; there they receive the same opportunities in social and learning contexts (Praisner, 2000).

Inclusive school - a school which can be characterized as "a place where everyone belongs, is accepted, supports, and is supported by his or her peers and other members of the school community in the course of having his or her educational needs met" (Stainback & Stainback, 1996, p. 3).

Individuals with Disabilities Education (IDEA) - originally the *Education for All Handicapped Children Act* of 1975 (Public Law 94-142), the *Individuals with Disabilities Education Act* (IDEA) mandates that every child is eligible to receive a free and appropriate public education (FAPE) and should be taught in his or her least restrictive environment (LRE) (Ramirez, 2007).

Least restrictive environment (LRE) - a concept of IDEA where, to the maximum extent appropriate, children with disabilities are educated with non-disabled peers; a

placement that least restricts opportunities of students with disabilities to interact with their non-disabled peers (20 U.S.C. 1412 (5) (B), cited in Praisner, 2000).

Mainstreaming - selective placement of special education students in one or more "regular" education classes (Rogers, 1993).

Mississippi Curriculum Test (MCT) - state mandated tests in the areas of reading, language, and mathematics administered annually in Mississippi public schools in grades 3-8 based on the Mississippi Curriculum Frameworks (MS DOE, 2007).

No Child Left Behind Act (NCLB) - legislation signed into law by President George W. Bush on January 8, 2001, which redefines the federal government's role in education; NCLB requires all stats to bring all students to proficient levels in reading and mathematics by the year 2014 (Cortiella, 2006).

Perception - is defined by Merriam-Webster's dictionary as a "mental image" (*Merriam-Webster Collegiate Dictionary*, 1995).

Principal and Inclusion Survey (PIS) - instrument designed by Praisner and Stainback and used in this study to measure the extent of factors such as training, experience, and programs related to principals' perceptions of inclusion (Praisner, 2000).

Resourced - the practice of removing special education students from regular education classrooms at specific times to provide further services to meet their individualized needs (Olson, 2003).

Special education student - a student with a disability whose impairment(s) requires special education and/or related services; such impairments may be related to health or specific learning disabilities (Praisner, 2003).

Regular education student - a student who has not been declared eligible for special education services (Liddiard, 1991).

Support staff - an individual who provides services to students either in or out of the classroom in addition to special education or general education teacher; such services support instruction and provide individualized help to students when needed (Ramirez, 2007).

Delimitations

This study was delimited to the following:

1. The sample was taken from a single rural southeastern state.

2. The sample included 8 public schools from six select school districts.

3. Academic achievement was limited to mathematics achievement as measured by student grades on report cards and MCT2 scores.

4. Regarding data collection survey and interview methodology, the questionnaire was sent electronically via email and interviews were conducted face-to-face.

Assumptions

This study operated under the following assumptions:

1. The curriculum in each school was the same for the inclusion classroom and non-inclusion classroom.

2. Classrooms were accurately identified as inclusion or non-inclusion.

3. Co-teaching was utilized in inclusion classrooms.

4. Principals responded openly and honestly.

5. Report card grades accurately reflected students' academic achievement.

6.   MCT2 test scores were accurate and complete.

7.   Students were correctly identified as being a regular education student.

<div align="center">Justification</div>

Walker and Ovington (1998) stated, The issue of inclusion and how it affects

students is important because our schools must provide the best education possible for all

its students" (¶ 2). As more students with special needs are being educated in regular

classrooms, legislation such as NCLB is demanding that schools produce higher

academic outcomes for all students as measured by high-stakes tests. School leaders are

more accountable than ever before to ensure that all students are reaching levels of

proficiency. Subsequently, they need and want to know how to best meet the needs of

their students. While most inclusion research has focused on the needs of students with

disabilities, few have investigated how inclusion may impact students without

disabilities.

Salend (1999) indicated a need to conduct further research for inclusion

education. His study involved the impact on regular education students and special

education students placed in inclusion. Although he stated that future research was

needed to expand the knowledge of practices and limitations of inclusion education, his

study revealed that inclusion has the potential to be positive for all students and teachers.

As cited by Sharpe (2001), John McDonnell stated in *Education World* that

educators must resolve many issues in order for inclusion to become a reality. "Although

there is a research base on school reform and systems change, the nuts and bolts of what

schools should specifically be doing to make inclusion work is just merging" (¶ 15).

McDonnell indicated three issues must be met in order for inclusion to become reality. He

indicated that there was a "need" for more research to be conducted. He felt that teachers needed more training to provide services to all students. Lastly, he implied that colleges and universities should redesign their teacher education programs. He stated that teacher education programs at the university level should redesign their programs. He stated, "Colleges of education need to begin to be more aggressive in redesigning their teacher education programs to provide novice teachers with this common knowledge base and set of experiences" (¶ 16).

Liddiard (1991) shared that additional research was needed on inclusion concerning academic achievement. She stated that, "educators need more information about inclusion as it affects the academic growth of both regular and special education children" (p. 45).

McDonnell's research was consistent with Liddiard (1991) who indicated a need for educators to determine if regular education students' achievement was affected in inclusion classrooms. He expressed a concern that placement in inclusion classrooms had an impact on achievement whether positive or negative. Both McDonnell and Liddiard advocated for future studies on inclusion and its impact on the achievement of regular education students.

Additionally, there is a "need" for further research concerning opinions and perceptions of administrators toward inclusion as well as identifying academic achievement. Cox (2008) stated, "There is limited literature on current attitudes of middle level principals regarding inclusion" (¶ 2). His study indicated the vital role of principals in the successful implementation of inclusion. Tanner, Linscott, and Galis (1996) also indicated in their study a need for future research concerning principals' perceptions

toward inclusion. They indicated a concern that limited data existed on principals'

perceptions regarding inclusion.

A study by Praisner (2000) revealed that principals' perceptions toward inclusion

is ultimately important. She suggested that future studies should focus on two areas:

identifying factors for successful inclusion and adding knowledge for improving

educational practices. Existing literature supports the need for further research in the area

of inclusion, student performance, and principals' perception regarding inclusion.

This study is organized into five chapters. Chapter I introduces the study. Chapter

II provides a review of literature relevant to the study. Chapter III presents the

participants, instrument, procedures, and method for data analysis. Chapter IV presents

the results of the study. Chapter V presents the conclusion, discussion, results, and

recommendations for future study.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter presents a review of literature related to the history, roles, and responsibilities of inclusion education. This study evolved from the theoretical concepts of cooperative learning and collaboration involving peer tutoring, guided instruction, and modeling to improve student academic achievement of regular education students placed in inclusion education. Research studies and existing quantitative data have revealed specific strengths and advantages of inclusion in increasing academic achievement for both special education students and regular education students.

Liddiard's (1991) study found that regular education students in inclusion did not suffer negative effects on their academic achievement. Rather, regular education students exposed to inclusion education performed adequately on their given performance assessments when compared to regular education students in regular education.

The 1994 study conducted by Fishbaugh and Gum identified academic gains for regular education students in inclusion classrooms. These regular education students actually out-performed their peers in general education classrooms. The study conducted by Pawlowicz (2001) also indicated positive outcomes for regular education students placed in inclusion.

Liddiard (1991) explained the outcomes of inclusion concerning student academic performance. She reported that inclusion can be positive for regular education and special education students. She stated, "With this understanding of the concepts of mainstreaming and inclusion, a review of the existing studies that address their impact on the achievement of regular education students is in order" (p. 15). Research has indicated

that academic achievement in inclusion classrooms for regular education students in comparison with their peers receiving instruction in general education classroom settings was positive.

Students learn through various learning styles, curriculum designs, and teaching methods of instruction. Johnson and Johnson (1998) indicated that children can learn socially among their peers. Along with teacher guidance and peer learning, children can learn through engagement, imitations, and interactions with others. Lev Vygotsky's Theory of Cognitive Development is important for understanding child development in leaning. In his book *Mind in Society: The Development of Higher Psychological Processes* (1978), the zone of proximal development is explained and it is theorized that children may solve problems under the direction of an adult or through collaboration with advanced peers. The zone of proximal development is the difference between working independently and working cooperatively with others. The Cooperative Learning Theory and Collaborative Learning Styles focus on the concepts and the theories of Vygotsky in which children learn together with peers.

Wertsch's book *Culture, Communication and Cognition: Vygotskian Perspectivesi* (1985) explained Vygotsky's concept of problem solving. His writings focused on Vygotsky's approach in children's development, ideas, and theories. Wertch described the three learning concepts among children as described by Vygotsky's three learning concepts. These concepts/tools are known as: (a) imitation learning, (b) instructed learning, (c) collaborative learning. These concepts outline Vygotsky's theoretical framework for learning. Wertsch (1985) indicated that Vygotsky's theories have potential for testing procedures, achievement measures, and instruction of a child's

proximal zone. Therefore, students may not reach their maximum learning potential if educational practices do not provide necessary experiences and appropriate development skills for students.

Another theorist, Jean Piaget, was known for his Cognitive-Development Theory. However, Vygotsky argued with Piaget that social environment and culture could assist in a child's cognitive development. He believed that peer interactions, cooperative learning, and collaborative task were required (Wertsch, 1985). Tryphon and Voneche (1996) explained that Vygotsky's approach compared to Piaget's was described as outside-in, rather than inside-out. As indicated, Vygotsky noted that children learn outside-in by observing, imitating, and copying behaviors, whereas Piaget believed that children developed thought processes within their own cognitive thinking. Vygotsky explained that children initially develop external relationships with others. Resulting relationships that develop may guide the child's cognitive processes for further knowledge and application.

Johnson and Johnson's (1998) study on cooperative learning was based on social interdependence. Their research concluded that children require cooperative learning skills and social concepts in order for children to solve problems. According to their research, peer tutoring is an advantage that can indicate benefits to the peer tutor as well as to the child receiving assistance.

Cooperative learning and many educational designs have been guided by Vygotskyan theory. Tryphon and Voneche (1996) stated, "The agenda that faced Vygotsky and Piaget decades ago is still vibrantly alive for their followers today" (p.

266). Modern educators are designing instruction, curriculum, and assessment from influences concerning psychology and educational theories of Vygotsky and Piaget.

<div style="text-align: center">Inclusion</div>

An integrated approach in providing quality education that fosters interdependence for children is commonly known as "inclusion." Inclusion education is a provision in compliance with NCLB, IDEA, and state regulations. The federal law requires the least restrictive environment (LRE) for special education students and the best placement for some is an inclusion classroom. There are many concepts involved in inclusion education (Bateman & Bateman, 2001).

Inclusion is defined by Bateman and Bateman (2001) as "the meaningful participation of students with disabilities in general education classrooms and programs" (p. 73). Different terms have been identified with inclusion. Bateman and Bateman further stated that mainstreaming, the Regular Education Initiative (REI), and full inclusion are both associated with the term "inclusion."

Each historical period has referred to and reflected different terms that have been used to describe instruction services provided to special education students. Bateman and Bateman explained that the term "mainstreaming" was used in the 1970s and 1980s. The Regular Education Intuitive, associated with M. Will, was used in 1986. Today, the term "inclusion" is commonly associated with the concepts of special needs students being integrated into the educational setting with their non-disabled peers.

According to Moore et al. (1998), inclusion is more of a philosophy of acceptance and belonging. Their study found that inclusion is a process in which classroom experiences are structured for the needs of all students within the same classroom.

However, their research added that supplementary aids and additional services should be provided for effective learning. A wide range of students' abilities and various aids can typically be found in the inclusion classroom. Various abilities, learning styles, and accommodated services are supported and accepted by the most students and teachers (Moore et al., 1998).

Several recent studies have found that inclusion is effective if positive support is provided by teachers, students, parents, administrators, and community. Carpenter and Dyal (2007) defined inclusion as a philosophy on a global level instead of a classroom level. They explained the challenges in creating an inclusive school community. They continued that the community must "buy-in" to the vision of inclusion for it to be effective and successful. Effective inclusion begins with acceptance from the community and is brought to the classroom with administrative guidance and direction.

Zemelman, Daniels, and Hyde's (1993) research involved a national curriculum report that indicated several positive strengths in the inclusion classroom. Their research reported that more learning experiences were offered such as inductive learning, hands-on learning, and inquiry approaches. Also, higher-order thinking skills and concepts were emphasized. Variety of choices, heterogeneous grouping, and meaningful projects were constructed and offered. More cooperation and group collaboration were found in the inclusion classrooms.

Heterogeneous learning groups offered peer tutoring, guidance, engagement, and acceptance for the students. The classroom projects and instruction practices allowed more opportunities for students' needs to be met. Various and cooperative roles involving teachers, parents, and the administration were noted nationwide in their study (Zemelman

et al., 1993). These recent studies align with the theories of cooperative and collaboratively learning groups as Vygotsky and Piaget investigated centuries ago. Vygotsky indicted in his theories and research that students learn from their peers through social interactions, guidance, and peer tutoring.

A 1991 study conducted by Saint-Laurent and Lessard evaluated student progress in inclusion classrooms and compared the progress to regular classrooms. They evaluated two different types of curriculum known as functional and traditional. The results indicated that the students performed better, engaged in more activities, and increased their social interactions with their peers and adults in inclusion classrooms. The students, according to their teachers, also exhibited positive behavioral progress. More active participation involving risk-taking and engagement were identified in cooperative learning groups.

Moore et al. (1998) indicated that many individuals think that inclusion presents a "watered down" curriculum for the regular education students placed in the inclusion classroom. They noted that several studies which examined the outcomes of regular education students revealed no negative impacts concerning performance and achievements.

A study conducted by Fishbaugh and Gum (1994) indicated that the regular education students in inclusion classrooms made higher gains in academic performance as measured by their test data. Standardized tests and report cards were used as measures of academic performance by Hunt, Staub, Alwell, and Goetz (1994) for regular education students placed in inclusion. They found that regular education students who participated

in cooperative learning groups with special education students did not experience significant negative effects on behavior or academics as a result of inclusion.

A study conducted by Sharpe, York, and Knight (1994) measured academic achievement for students in inclusion compared to their peers in non-inclusion. The study consisted of a pretest and posttest to measure performance using student report card grades as the form of measurement. The researchers' findings indicated no significant differences between the two groups (i.e., regular education students did not experience any negative effects in mathematics achievement when placed in an inclusion classroom compared to regular education students in non-inclusion classrooms).

Bateman and Bateman (2001) indicated many benefits of inclusion for regular education students. They explained that regular education students in inclusion gained an awareness, understanding, and acceptance of learning disabilities. Contrary to a prevailing misconception that the curriculum is "watered-down," they found that the inclusion classrooms actually could address more of the curriculum. They also stated that regular education students "have achieved slightly higher test scores than the non-inclusion classes" (p. 101).

History of Inclusion

Inclusion education has been practiced in the United States and several other countries for many years. For instance, the term inclusion has been widely used in the Netherlands, appearing in a 1990-1991 policy called "Weer Samen NaarSchool" which translated means "Back to School Together." Peetsma, Vergeer, Roeleveld, and Karsten's 4-year quantitative and qualitative study in the Netherlands indicated positive results of inclusion. The Netherlands and other western countries questioned the value of

segregation for students with educational problems and now integrate special needs students in regular education (Peetsma et al., 2001).

According to Bakker and Bosman (2003), there were 20 different types of schools in the Netherlands for special education students in 1975. After research and studies, these schools soon integrated the children into inclusion classrooms. The number of special education students attending school increased in 1975 from 1.5% to 3.7% in 1995.

Sharpe (2001) indicated that public schools in the United States included few classrooms that included students with disabilities explaining that in the 1970s students with disabilities did not attend public school. He indicated that approximately 1 million students with disabilities did not attend public schools. The students who did attend school were placed in self-contained classes. Crossley (2000) stated that the education of children with special disabilities was not concerned by the public or government before 1975. Therefore, Congress enacted a law in 1975 entitled the Education for All Handicapped Children Act. This law required that children, regardless of their disability, be educated in their LRE. However, in 1979 and 1997 this changed due to the IDEA law and its amendments. This resulted in an increase in student enrollment, and students were placed in their LRE.

Three federal laws were passed to ensure and protect the rights of individuals with disabilities regarding educational opportunities. They were:

- Section 504 of the Rehabilitation Act of 1973

- Individuals with Disabilities Education Act (IDEA)

- Americans with Disabilities Act of 1990 (ADA)

These laws require specific guidelines and jurisdiction for individuals with disabilities. Among these rights, there are many federal court cases dealing with inclusion and/or equality concerning individuals with disabilities (Walker & Ovington, 1998).

Segregation occurred for many years in the United States and other countries. Inclusion and education have been the topic of many court cases. In the historic landmark case of 1954, *Brown v. Board of Education*, the United States addressed the issue of segregation. Another court case, *Oberti v. Board of Education*, questioned the placement of a child with a disability. In most court cases, according to Bateman and Bateman (2001), the findings of the court reflected the individual child's ability.

The research from Salend's (1999) study indicated that approximately 73% of students with disabilities receive their instruction in resource rooms and 95% receive instruction in general education, such as inclusion. His research and studies indicated that inclusion education does not interfere with regular education students' academic performance.

IDEA's requirements and amendments assisted in the movement of special education students from segregated special education classrooms to general education classrooms. Many individuals were uncertain about this new legislation which proposed many questions and concerns. Many studies and much research have been conducted to answer the nation's many questions regarding inclusion education. Therefore, a need to gather data concerning parents', teachers', students', and administrators' perceptions concerning inclusion education are in demand (Bateman & Bateman, 2001).

Teachers' Roles and Viewpoints of Inclusion

Pugach and Wesson's (1995) research revealed that teachers felt positive concerning inclusion education. In their study, fifth grade teachers reported feeling confident that they were meeting the needs of most of the children in their inclusion classrooms by providing remediation and enrichment activities. The teachers indicated that collaboration and co-teaching were key elements in the success of their classrooms. Furthermore, the teachers perceived that the integrated general education students modeled positive behaviors and reinforced social skills in the inclusion setting.

Rogers (1993) stated that the teacher's role is "to arrange instruction that benefits all students, even though the various students may derive different benefits" (p. 4). Individualized and differentiated instruction plays a vital role in understanding one's audience of students in the appropriate delivery of instruction. Designing instruction that meets the needs of all students is commonly used in the delivery of instruction. Ramirez (2007) indicated that inclusion classrooms provide quality learning for all students through cooperation.

James McDonnell, an educator, gave clear expectations of successful inclusion programs (Sharpe, 2001). He described that inclusion classrooms should have students distributed among all teachers. Other criteria he described aligned with theorist Lev Vygotsky. McDonnell indicated that peer tutoring and cooperative learning must be used within this type of classrooms. Students learn problem-solving skills and acquire social acceptance as a result of these strategies. Teachers should utilize and adapt curriculum and instruction to meet the needs of all students. Teachers should also maximize student full potential and participation. As mentioned previously by Wertsh (1985), students may

not reach their maximum learning potential if teachers do not provide meaningful opportunities for children to develop their acquired skills. McDonnell mentioned that students should be provided with meaningful opportunities and experiences that involve engagement in order to maximize students' full potential.

Through collaboration, the inclusion teachers choose which subjects they would deliver to students through instruction. The special education teacher and the regular education teacher collaboratively make decisions regarding curriculum, instruction, activities, and assessments. The teachers also expressed that having both teachers to respond to students' questions and concerns was much better in the inclusion classroom. Therefore, students would have less wait time for feedback or assistance from a teacher. Having two teachers collaboratively teaming exhibits a win/win situation for everyone involved. The teachers in this study stated that mathematics activities were usually performed in cooperative groups. This provided opportunities for partners to share ideas, thoughts, and development with one another (Pugach & Wesson, 1995).

Salend's (1999) study identified several positive views for teachers that provide instruction in inclusion education. Through their research, teachers reported an increase in confidence levels in order to meet the needs of all students. They became more aware of their positive role modeling behaviors for all students to acquire. The highly qualified special education teachers expressed their sense of belonging and feeling more accepted by the school and community. They also enjoyed observing the success of the special education students in the inclusion classroom. They participated in cooperative teaching arrangements where shared decision making became priority. The arrangement of team

teaching has deemed to be positive and enjoyable for the teachers in providing services to meet the needs of all students in the inclusion classroom.

The teacher's role in inclusion education is continuously changing due to legislative mandates and programs. Pawlowicz's (2001) study revealed that teachers differentiate their instruction to meet the students with special needs. Teachers' responsibilities in delivery of instruction have changed due to differentiated instruction. He listed some examples of a modified curriculum that teachers used as strategies for meeting the needs of all students in inclusion. A few of his strategies for differentiated instruction are:

- Peer tutoring

- Cooperative group learning

- Alternative activities

Teachers are responsible for making decisions regarding the delivery of instruction and curriculum development that benefits their students. As Pawlowicz indicated, teachers can make important decisions that will assist the performance of both regular and special education students within their classroom. Teachers assist in providing a learning environment that will meet the individual needs of students (Pawlowicz, 2001).

Pawlowicz's (2001) study also indicated positive results of peer tutoring that teachers utilize in inclusion. Teachers reported that regular education students mastered the knowledge, applied it to their own understanding, and transferred it to their peer through peer tutoring. Teachers reported that they observed a decrease in behavioral

problems in the inclusion classroom. They believed this change occurred due to their role in providing adult modeling, guiding, and imitation of positive behavior.

Stanovich, Jordan, and Perot's (1998) research indicated that the teacher's role in designing and creating a learning environment pertaining to diverse learners. Their research described heterogeneous classrooms designed by the teacher for inclusion settings. Teachers created a heterogeneous classroom and provided teaching instruction and activities for all learners. This type of heterogeneity, however, has increased teachers' roles in providing a least restricted environment. According to Stanovich et al., teachers in their study favored the heterogeneous schools and classrooms for learning as their responsibility to provide a positive inclusive learning environment.

Student Viewpoints and Perceptions of Inclusion

The 2001 study conducted by Pawlowicz indicated that students perceive inclusion as a positive approach. Special education students reported that they felt more at ease and comfortable in inclusion classrooms. The study also revealed that special education students were embarrassed when they were pulled out of a regular class and resourced. The students reported that they gained peer relationships and increased self-esteem through inclusion education. His study listed many positive outcomes for both regular and special education students in inclusion education. Regular education students reported learning many skills and concepts such as compassion, understanding, acceptance, and tolerance for the special learner. The students also believed that they benefitted from cooperative and heterogeneous groups. The special education learner reported self-worth and actively participated in team projects.

Another study conducted by Johnson and Johnson (1998) investigated the interactions in the cooperative group conditions of special education and regular education students. Their study found that regular education students were not frustrated working with lower-achieving students. It also revealed that regular education students liked their peers and accepted them as part of the classroom environment. Their study was corroborated by other studies that indicated an increase in achievement in which students were involved in cooperative learning groups in inclusion education.

Pugach and Wesson (1995) interviewed students regarding their perceptions of inclusion education. Both special education and regular education students viewed inclusion as positive experiences. Students reported feeling accepted and comfortable engaging in activities in the inclusion classroom. The students reported that they felt confident about themselves, their teachers, and other students. Most students in the study felt that they did better academically in inclusion compared to being in a non-inclusion classroom setting. The students expressed their love for school and how they enjoyed the experiences and opportunities they had been given in inclusion. One student reported that her inclusion classroom felt like one family working together.

Parent Viewpoints of Inclusion

Palmer, Fuller, Arora, and Nelson (2001) reported comments by 140 parents of special education students viewed inclusion both positively and negatively. However, their study revealed that most parents were fully supportive of inclusion. There were many contributing factors and reasons for their viewpoints. Their findings indicated 45% of the parents expressed positive perceptions of inclusion. Those parents mentioned that

special education classrooms limited their children's development and viewed inclusion as the most beneficial and appropriate placement.

Parents who opposed inclusion felt that a child's disability could best be accommodated in a special education classroom. These parents felt that inclusion education may not be the most appropriate environment for specific disabilities such as cerebral palsy, medical needs, and sensory impairments. Rather, children with such disabilities might best be taught in special education classrooms instead of inclusion. However, most had positive comments regarding inclusion education. They felt that inclusion can be beneficial and provide an educational opportunity for students with specific disabilities (Palmer et al., 2001).

Kochhar, West, and Taymans (2000) stated that most parents of regular and special education students support inclusion. They indicated that parents receive social support from the school system in regards to inclusion and placement. This type of communication and network is considered to be a positive factor for positive support. Most parents indicated a strong sense of communication with the administration concerning decisions regarding appropriate placement for their child. This network of communication provides more resources for parents, guardians, stakeholders, and community leaders.

Sharpe (2001) reported that parents hold positive views regarding inclusion. For example, Pat Linkhorn, a parent and consultant to other parents, strongly supports inclusion education. She had two daughters, one blind and one with autism, who received instruction in inclusion classrooms. Ms. Linkhorn stated that inclusion improved social skills and provided meaningful experiences for her daughters. She reported to Sharpe that

inclusion had been a very positive experience for both her and her daughters. She explained how she and the principal had many discussions about inclusion and that they shared different viewpoints regarding inclusion. However, through many compromises and a shared respect for one another they worked through the process (Sharpe, 2001).

<div align="center">Benefits of Inclusion</div>

Inclusion can create a positive teaching environment influencing all students. According to Carpenter and Dyal (2007), the No Child Left Behind Act has impacted inclusion education in various ways. An implication referring to highly qualified teachers in inclusion has been a challenge for some public school systems. The special education teacher is providing services and instruction in the regular education classroom along with the regular education teacher. Both teachers provide guidance and instruction for all students. However, the special education teacher is considered to be the consultative teacher. The inclusion teacher may make educational provisions based on the students' IEP. Inclusion can create positive learning benefits and positive teaching environments influencing all students.

Carpenter and Dyal (2007) mentioned that the key to co-teaching is collaboration. In order for the inclusion program to be most beneficial, both teachers collaborate and make necessary provisions regarding all students. Through collaboration each teacher can decide the responsibilities that are needed to meet all students' diverse needs. The teachers collaborate to discuss each other's role, delivery of instruction, and evaluation of student performance.

Co-teaching was first described during the 1970s and was essentially designed to assist students with special needs. However, with today's current mandates for inclusion,

two teachers with professional status are considered qualified. These teachers share teaching instruction for all students (Friend, 2007). Inclusion is considered to be a movement in which schools are created based on the needs of social instructions, schools, and global diversity (Salend, 1999). The aim of inclusion is to teach all children and to respect diversity (Bakker & Bosman, 2003) which revealed positive benefits which met individual needs for each student.

Pawlowicz's (2001) study indicated that students have benefitted from having two teachers delivering instruction in the classroom. This practice can assist in creating small student-teacher ratios which contribute to small class sizes. The teachers can share responsibilities that may reduce teacher stress levels. Teachers can work together through cooperation and collaboration. They teach, plan, and guide all students to successfully master necessary skills and concepts. The special education students reported that they do not feel "singled out" in inclusion. Inclusion offers these two highly qualified teachers to teach and assist all students to be successful.

The two teachers work cooperatively to handle discipline, grading, and delivery of instruction. Roles and responsibilities are established through collaboration and teamwork. Measuring student outcome such as achievement scores is a factor of co-teaching. Teachers have realized that student achievement may be improving in inclusion, but not quickly enough for a chance to observe on high-stakes tests. Therefore, a single year may not yield enough student growth to change the scores on statewide assessments (Friend, 2007).

The primary purpose of co-teaching, according to Pugach and Wesson (1995), was to provide services to special education students in general education without a pull-

out/resource program. Instead of students being pulled out to a special education classroom/resource room, the special education teacher is placed in the general education classroom to assist all students. The two teachers deliver instruction to meet individual needs of their students. Liddiard (1991) explained, "With this understanding of the concepts of mainstreaming and inclusion, a review of the existing studies that address their impact on the achievement of regular education students is in order" (p. 30).

Data have revealed specific strengths and benefits to the concepts of inclusion and co-teaching. One advantage is smaller class size and lower student-teacher ratio. A lower student-teacher ratio occurs by having two certified teachers in the same classroom. Because the administration normally limits the number of students placed in the inclusion classrooms, the number tends to be smaller. Co-teaching is possible because the general education teacher and the special education teacher establish a partnership of cooperative teaching. In inclusion classroom settings, the general education teacher focuses on the school curriculum and content. The special education teacher focuses on the process of learning and helping the student acquire skills. When these teaching styles are blended, students benefit during the classroom instruction. That may be a factor in increasing student achievement (Carpenter & Dyal, 2007).

Another benefit of inclusion is cooperative learning groups. In the inclusion classroom, students are grouped in heterogeneous groups for math instruction. This is an advantage for both the special education student and regular education student. In cooperative groups, students may take more risks in inclusion education than the general education classroom. The studies of Bateman and Bateman (2001) focused on cooperative learning and problem solving. They concluded that inclusion allowed

students more experiences and opportunities that are not in general education. Their studies aligned with Vygotsky's zone of proximal development theory in which children learn from their peers through cooperative learning. This in return increases student achievement and performance.

Johnson and Johnson's (1998) study compared cooperative and individualistic learning situations. Their study compared academic achievement of special education, regular education and gifted students. Their findings indicated that students of all abilities achieved higher on achievement tests when they worked in cooperative situations with their peers. As a result of working in heterogeneous cooperative groups, students of all abilities scored higher on achievement tests. Johnson and Johnson stated, "Educators and psychologists who fear that the achievement of normal-progress and gifted students be lowered when they work with handicapped students . . . may experience some relief from these results" (p. 282). Again, as theorist Vygotsky explained, cooperative groups assist in development through imitation and experiences.

Johnson and Johnson's study was consistent with Stanovich et al.'s (1998) study concerning heterogeneous classrooms. Their study suggested that curricula procedures and instructional strategies should be designed by the teacher. These activities should then be implemented to aid in the needs of the diverse learners. Therefore, the need for heterogeneous groups in inclusion is beneficial to all learners in the classroom. Their findings were statistically significant for students who participated in heterogenous classrooms.

There are also several benefits and advantages identified in inclusion education that promote behaviors, academics, and social skills. Regular education students can

model positive behaviors for special education students within the classroom environment (Pugach & Wesson, 1995). An opportunity for peer tutoring is another advantage that fits both the peer tutor and the child receiving additional assistance. Academic achievement and social efficacy have been identified as positive effects of inclusion education.

According to Rogers (1993), inclusion should be focused around the child, which is beneficial for student performance. Child-centered instruction and activities are essential. Each highly qualified teacher is responsible to be familiar with the student's academic abilities, social skills, and cultural background. This will enhance and determine the effective methods of instruction. Modified instruction, cooperative learning groups, and peer tutoring are vital for inclusion education. Rogers stated that "Inclusion is the more popular educational term referring to the move to educate all children, to the greatest possible extent, together in a regular classroom setting" (p. 4).

There are many benefits of inclusion for both regular and special education students. Walker and Ovington (1998) listed these specific benefits of inclusion: (a) flexible curriculum, (b) response to individual needs, (c) support services, (d) presence of technology, (e) collaboration between co-teachers, (f) teaching training, and (g) instructional strategies. Walker and Ovington found that students in inclusion were more likely to become risk-takers and to acquire problem-solving skills. Other benefits of inclusion address citizenship, role models, and civic virtue. They indicated that regular education students may be more understanding and responsive to people with disabilities as an adult in the nation's global society. Therefore, inclusion education may provide benefits to all who are involved in this type of educational program.

Principals' Role in Inclusion

The principal plays a vital role in the success of inclusion programs. Belcher et al. (1996) found that a majority of principals are supportive of inclusion. Cox (2008) suggested that principals are role models for the inclusion learning environment. He stated that the attitudes and perceptions of principals play a vital role in the support of inclusion and that principals influence many aspects of the school's climate. He stated, "As the instructional leader, the principal must ensure an equitable education for all students" (¶ 2).

Fortunately, principals' attitudes and perceptions toward inclusion are essential for the success of the inclusion programs. Studies have indicated positive opinions toward inclusion to be a key factor in the success of this program. Carpenter and Dyal (2007) noted that planning is an important aspect of inclusion and it is the principal's responsibility to facilitate planning and scheduling for inclusion programs. Regular and special education teachers need time for collaboration to be successful. Principals must utilize a variety of strategies to promote an effective inclusion program.

Butler-Hayes (1995) conducted an attitude survey involving principals, teachers, students, and parents regarding inclusion. The results indicated that the largest percentages of principals support the goal of inclusion. The findings revealed that the principal's role in inclusion is ultimately vital for inclusion. The majority of teachers have positive attitudes toward inclusion accompanied by the support and guidance of the administrator. Many studies have revealed that administrative support and collaboration are strong factors in exhibiting positive opinions toward inclusion.

Praisner's (2000) study involved positive opinions of administrators in the success of inclusion education. She stated that "the degree to which administrators support innovations is often determined by the attitudes and values that they hold" (p. 4). With the changing demands and challenges involved with change, principals are ultimately responsible to implement and provide support for programs in their schools. As Praisner mentioned, the principals are held accountable for student success and performance in their schools. They are also responsible for evaluating strengths and weaknesses of programs with shared decision making with teachers and staff in order to provide the "best" programs available for all students to be successful.

Another role for administrators is to work cooperatively with teachers. Working cooperatively and collaboratively is vital in planning and team building in order to meet individual needs of regular education and special education students. Praisner (2000) indicated that "the specific factors which are related to a principal's attitude have not been well researched" (p. 23). Praisner stated that when school districts evaluate administrators or hire a new administrator, they should consider that individual's opinion toward inclusion.

The school climate and environment is also the role of the school administrator. Cox (2008) suggested that the principal's role in inclusion education is to provide a positive school environment, climate, and culture. He concluded that principals create an environment for learning that is considered an all-inclusive learning environment. Principals develop and implement school vision, serve as a role model for the school spirit, and make sure everyone is positively integrated in the inclusion process.

In order to improve practices throughout each state, Cox stated that it is imperative to understand the principal's role of inclusion. Cox stated that the principal must ensure that education for all students is equitable. The principal is ultimately responsible for the implementation and outcome of his or her programs at the school level. Teachers, parents, students, and community leaders must support the principal's role in inclusion in order to be successful. Cox found a statistically significant relationship between principals' experience and their opinions regarding inclusion.

Praisner's (2003) study described how the principal's role and requirements are consistently changing due to accountability, new programs, and state mandates. As she explained, leadership is a key factor to the success of a principal's school. A successful inclusion program may be envisioned as student centered and led by the principal. However, the school vision that the leader conveys can directly influence the success of inclusion. The administrator is responsible and vital for student academic achievement. Therefore, school principals must display and convey a positive opinion of inclusion in leading their schools.

Cruzeiro and Morgan's (2006) study was consistent with Praisner (2003) and Cox (2008) regarding leadership and roles of school principals. They contended that inclusion has become an educational trend that strongly involves the support and influences the role of the principal. They described inclusion as an on-going shift in public education where special education learners are provided meaningful instruction in a regular classroom environment. In order for inclusion to be successful, they concluded that the principal's role is important. The principal is necessary for providing and assisting in the direction and vision for inclusion.

Pawlowicz's (2001) study indicated positive results of inclusion by parents, administrators, students, and teachers. He stated, "Regardless of whom you ask, inclusion will be a positive experience if those involved believe in it and work hard to make it work" (p. 21). As he mentioned, there are many people involved in the educational aspect and decisions for children. The principal is responsible in involving decisions for parents, teachers, and students. Working together to make inclusion successful is a moral duty and top priority in schools today and begins with administration. Therefore, it takes the effective efforts of everyone involved in order for inclusion to become and remain successful.

In summary, a relatively small number of studies have evaluated the effects of regular education students' mathematics achievement in inclusion compared to non-inclusion. There were also a small number of studies that have evaluated the principals' perceptions regarding inclusion. In addition, there is an increased interest in inclusion education and principals' perceptions of inclusion.

CHAPTER III

METHODOLOGY

This chapter provides a summary of participants, research design instrument, and procedures. The detailed methods for analyzing data are presented and outlined. This study investigated regular education student performance in inclusion settings compared to regular education student performance in non-inclusion settings and their principals' opinions toward inclusion. Increasing academic achievement is a goal of schools in America. Therefore, educators and principals are striving to increase student performance in public schools. This study investigated mathematics performance of regular education students placed in inclusion classrooms and regular education students placed in non-inclusion classrooms. This study also investigated principals' perceptions of inclusion.

Instrument and Reliability/Validity

The *Principals and Inclusion Survey* (PIS) (Appendix A) was used to measure the extent to which factors such as training, experience, and program are related to principals' opinions. The questionnaire was designed by Cynthia Praisner and adapted from the work of George Stainback (Praisner, 2000). The original PIS was divided into four main sections that included demographics, principal training and experience, attitudes toward inclusion, and principals' beliefs about most appropriate placements.

Section I consists of four questions relating to demographic information of the school. Questions related to the school size, average class size, and percentage of students with IEPs who are placed in regular education settings.

Section II consists of 13 questions designed to gather background information on participants. Questions relate to participants' age; gender; years of experience as a regular

education teacher, special education teacher, and principal; level of training; experience with special education students; and school's vision/plan for dealing with special needs students.

Section III consists of 10 questions that were adapted by Stainback (1986) from the *Autism Attitude Scale for Teachers*. These questions were constructed to be evenly distributed in terms of positive or negative tones throughout the section. Each statement is answered using a five-point Likert-type scale with the following options: *strongly agree, agree, uncertain, disagree,* and *strongly disagree.* A score weight of 1-5 was given to score this section. A score of 5 indicates *strongly disagree* toward inclusion and a score of 1 indicates *strongly agree* attitude toward inclusion. A score of 3 represents a neutral response.

Section IV consists of 11 items that measure principals' perceptions of placement of students with special needs. For each disability category, participants are asked to choose one of six different placement options. An inclusive score was generated from the responses of this section. For each placement, a value of 1 to 6 was assigned with 1 representing special education services outside regular school and 6 representing full-time regular education with support. Total scores ranged from a low of 11 (most restrictive) to a high of 66 (most inclusive). Based upon the responses of the principals, a total score determined average responses for each disability category.

Section V was written collaboratively with a focus group of educators in the field of special services/education from a southeastern state. Ten discussion questions have been added to the survey for a more thorough measure of the principal's perceptions of inclusion. Patton (1987) stated that the most important source of the qualitative process

occurs when the researcher goes into the "field" to observe and take notes. Therefore, the researcher conducted face-to-face interviews with eight participants in their designated office areas. Qualitative data were gathered in reference to research question five. This section contained 10 discussion questions that investigated a qualitative component. The eight participants responded to the 10 open-ended questions. The process was semi-structured and all interviews took place in the office of each principal.

A reliability measure was not computed for the entire survey due to the variety of question types and amount of different information collected within it. However, Praisner had the survey reviewed by four professors with experience in the area of inclusive education. The original PIS was piloted and utilized in other studies. To improve reliability and minimize errors, Praisner used the National Computer Systems, Inc. to interpret the data.

Stainback (1986) established the validity by presenting the questionnaire to a panel of five administrators with experience in the integration of students with severe and profound disabilities into general education environments. Stainback also conducted an analysis of reliability by computing a Pearson product-moment correlation coefficient with a split half correction factor. The reliability coefficient was 0.89 for section III. The validity of this section was considered excellent by a panel of specialists because the items were based upon possible placement and identification currently available through special education services as defined by the Individuals with Disabilities Education Act Regulations (34 CFR Part 300).

To ensure the quality of this instrument, the content chosen for the questions was based on a review of the inclusion literature to identify those factors related to personal

characteristics, training, and experience that might relate to education professionals' attitudes toward inclusion. Variables that showed the principals' opinions toward inclusion were chosen for incorporation in the survey. In order to measure validity, the questionnaire was critiqued by public school administrators, teachers, and university professors.

In addition, to improve the clarity and assess the content validity of the survey instrument, the survey was piloted with nine individuals in school leadership positions. They provided feedback on the explicitness of the items and the amount of time required to complete the survey.

Participants

The population of this study were students from eight selected elementary public schools from a southeastern state. These schools are within six different county school districts. All schools are classified as level 4 schools, according to the Mississippi School Rating Level. A convenience sample was chosen to represent the northern and southern areas of Mississippi. Five schools are located in the northern portion of the southeastern state and three schools are located in the southern portion of the state. Each school size is relatively the same with student population. The number of inclusion and non-inclusion classes differed according to the number of special education students the school has enrolled. The majority of the eight schools have one inclusion classroom for grades 4 and 5 and a few schools have two inclusion classrooms for grades 4 and 5. The elementary schools range from kindergarten through eighth grade; however, the majority of the schools are classified as K-5 schools.

Table 1 outlines the percentage of ethnicity and gender for each public school. Each school is classified as A, B, C, D, E (northern schools), F, G, and H (southern schools). As Table 1 illustrates, the majority of the students' ethnicity is White and the percentage of gender is evenly distributed. The student demographics vary within each school district. The majority of the schools' grading scales are rated on a 9-week scale. However, two schools' grading scale is measured on a 6-week grading period. Therefore, the researcher gathered the first semester mathematics average for all of the students to accommodate for the difference in the grading scale.

Archival data, known as the Mississippi Criterion Reference Test 2 (MCT2), were gathered for the 2007-2008 school year from mathematics scores for students in grades 3 and 4. These data were measured to determine students' proficient level prior to the study. The researcher entered each student's scale score per classroom in mathematics in Statistical Package for Social Sciences (SPSS) to calculate an average of performance. Classroom data were measured that included each student's first semester grade for mathematics. The data included 192 regular education students in inclusion and 270 regular education students in non-inclusion for grades 4 and 5.

The grade level, classification of inclusion/non-inclusion, and number of students for each school are illustrated in Table 2. The regular education students in the experimental groups (inclusion) totaled 192. The regular education students in the control group (non-inclusion) totaled 270.

Archival data were retrieved for 462 regular education students for the 2007-2008 school year. The Mississippi Curriculum Test 2 (MCT2) scores for mathematics were gathered and analyzed. The school districts do not have the same grading scale; therefore,

Table 1

School Ethnicity

School	Asian	Black	Hispanic	Native American	White	Female	Male
A	0	11	7	0	82	47	53
B	0	5	1	0	94	48	52
C	0	54	1	0	44	51	49
D	0	5	1	0	94	54	46
E	1	8	1	0	90	50	50
F	0	14	1	5	80	47	53
G	2	75	3	8	20	47	53
H	0	14	0	0	86	48	52

Table 2

Number of Participants

Class	2008 Grade 4	2008 Grade 5	Total
General Education	137	133	270
Inclusion	108	84	192
Total Number of Participants			462

semester mathematics grades were gathered for the 462 participants. Student achievement was measured and compared per grade and classroom for these regular education students. The regular education students' academic performance in inclusion education was compared to regular education students in non-inclusion education. The researcher compared the report card grades of regular education students in inclusion with non-inclusion peers.

<div align="center">Data Collection and Procedures</div>

To collect the necessary data for this study, the researcher used the original PIS (Appendix A). After receiving permission from the Institutional Review Board (IRB) (Appendix B), the researcher began to gather data. Permission was granted to use the PIS for this study (Appendix C). Sections I-IV of the original PIS were included along with 10 Interview Questions (Appendix D).

To begin this project, the researcher secured permission from school superintendents (Appendix E), administrators (Appendix F), and parents (Appendix G). The researcher sent a cover letter to each principal explaining the study (Appendix H) and surveyed elementary principals via e-mail. A total of 15 surveys were sent to school e-mail addresses. The administrators should have been able to complete the survey, along with the open-ended interview questions, in 15-20 minutes. The participants were responsible for sending the survey back via e-mail within 2 weeks.

To measure student achievement and performance, the researcher collected MCT2 test scores for mathematics for all students in the study. All students' names were coded with numbers. The report card grades for each student were collected and analyzed. However, several school districts were on different grading scales; therefore, a semester

grade was recorded for each student. Therefore, comparisons were utilized between the control group and experimental group.

The researcher discussed and explained the study with the Curriculum and Instruction Coordinator and Guidance Counselor of each school concerning archival data for the 2008 MCT2 results. The Test Coordinator/Guidance Counselor was asked to remove names of students and assign each a number code in order to keep the students anonymous. MCT2 scores and gender were gathered for students in grades 4 and 5. A total mean score was analyzed for the regular education students in inclusion and the regular education students in non-inclusion. This allowed the researcher to analyze an average of mathematics performance prior to the school year. This information allowed the researcher an understanding of student growth and performance for the study concerning mathematics achievement to monitor student progress during the current school year.

The principals' responses were mechanically recorded and transcribed for further analysis. Field notes were gathered during each interview. Patton (2002) stated, "Consider the patterns and themes running through these metaphors" (p. 432). Therefore, the data were recorded to analyze emerging themes using the principals' own words. This allowed the participants to have a voice. The interviews ranged from 20-45 minutes in length. The researcher did not correct grammar in the transcriptions. The completed transcriptions were returned to each participant for further edits and comments. The participants' names were changed to ensure anonymity. Following the final defense, the participant tapes were destroyed. These data were used as qualitative data for this study concerning principals' perceptions of inclusion. The total survey consisted of 42 items across all five sections.

Data Analysis

Once all data were collected, the researcher entered the data into SPSS for data

analysis. Therefore, specific statistical procedures were run for analyses. The data from

the MCT2 and report cards were used to determine academic performance of regular

education students placed in an inclusion classroom compared to the regular education

students in a non-inclusion classroom. Independent two-tailed t tests were run to compare

the inclusion classroom with the non-inclusion classroom using MCT2 scores. The

researcher entered report card grades and run independent two-tailed t tests for

comparison. This procedure assisted in answering the following research questions:

1. Is there a significant difference in mathematics achievement of regular

    education students in inclusion classrooms and regular education students

    in non-inclusion classrooms?

2. Is there a gender difference in mathematics achievement of regular education

    students (a) in inclusion classrooms and (b) in non-inclusion classrooms?

To measure and compare regular education in inclusion education to regular

education students in general education, an independent two-tailed t test was run to

measure academic achievement. The MCT2 mean score of proficiency was used to

determine a pre-score measurement for all regular education students prior to the study.

The experimental group consisted of subjects who had been placed in inclusion

classrooms. The control group were subjects from the same grade and school who were

placed in the general education classrooms.

After the data were entered into SPSS from the semester report card grade mean

scores, independent t tests were constructed to answer the first two research questions for

this study. The independent *t* test was used for the comparison of academic achievement

using semester grades for each student. Depending on the results from the independent *t*

tests, follow-up post hocs such as Tukey were not necessary.

Statistical procedures such as independent two-tailed *t* tests, descriptives, and

frequencies were used to answer the following research questions:

3.   What are principals' perceptions regarding inclusion by gender?

4.   Is there a relationship between principals' perceptions regarding inclusion

and mathematics achievement of regular education students in inclusion

classrooms?

Descriptives were run using the Likert scale survey to answer the questions in this

study. Output tables were utilized to compare the results of the questionnaire. Frequencies

and percentages were calculated. Measures of central tendency such as mean, median, and

mode were analyzed. The measures of variation including range and standard deviation

were used to determine results. For answering these research questions, Pearson product

moment correlations and independent two-tailed *t* tests were run. To determine if there is

a relationship among gender, independent *t* tests were run. The results were used to

analyze the last two research questions. An alpha level of significance at $p < .05$ was used

to determine if the correlation was statistically significant.

5.   Qualitative data were used to investigate research question 5 (What are

principals' perceptions of inclusion?). Eight principals responded to 10 open-ended

questions. These responses were mechanically recorded and transcribed. The data were

coded to analyze emerging themes using the words from the principals. After analyzing

and recording the data, four emerging themes emerged from the data from the eight

participants in response to the 10 discussion questions.

CHAPTER IV

RESULTS

This chapter presents the results of the study. Results are presented for each of the four hypotheses. A total of 462 participants in fourth and fifth grades in the selected Mississippi schools constituted the sample. All students' scores are included in the data analysis. An alpha level of .05 was used for all statistical tests in the results. Regarding research question 5, qualitative data were used to investigate principals' perceptions of inclusionary practices.

Research Question 1: Is there a significant difference in mathematics achievement of regular education students in inclusion classrooms and regular education students in non-inclusion classrooms?

Quantitative

Hypothesis 1

The first null hypothesis stated that there is no significant difference in mathematics achievement of regular education students in inclusion classrooms and regular education students in non-inclusion classrooms. Means and standard deviations of the groups were calculated and are shown in Table 3. An independent two-tailed t test showed no significant difference in mathematics achievement of regular education students in inclusion classrooms ($t = -.134$, $df = 460$, $p = .89$) compared to regular education students in non-inclusion classrooms. The mean for inclusion was 87.08 (SD = 7.14) compared to a non-inclusion mean of 87.17 (SD = 7.19). No significant difference was found in mathematics achievement of regular education students in inclusion education, therefore, concluding that there is no difference in mathematics achievement

for regular education students in inclusion education. Furthermore, the null hypothesis was not rejected.

Research Question 2: Is there a gender difference in mathematics achievement of regular education students (a) in inclusion classrooms and (b) in non-inclusion classrooms?

Hypothesis 2

The second null hypothesis stated that there is no significant difference in mathematics achievement of regular education students in inclusion and non-inclusion classrooms by gender. Group means were calculated and are presented in Table 4 representing the inclusion classroom. Group means were calculated and are presented in Table 5 representing the non-inclusion classroom. There were 89 regular education boys and 103 regular education girls in the inclusion classrooms. In the non-inclusion classroom there were 132 regular education boys and 138 regular education girls. An independent two-tailed t test was calculated comparing the inclusion and non-inclusion classrooms according to gender. The independent t test showed no significant difference in mathematics achievement according to gender for the regular education students in inclusion or non-inclusion classrooms. Results of the independent t test indicated that gender was not statistically significant for mathematics achievement in the inclusion classrooms ($t = -.61$, $df = 190$, $p = .54$). Results of the independent t test for gender in the non-inclusion classroom were not statistically significant in mathematics achievement ($t = -1.44$, $df = 268$, $p = .15$). No significant difference in mathematics achievement was noted for gender of regular education students in either the inclusion or non-inclusion classroom. Therefore, the null hypothesis was not rejected at the .05 level of significance.

Table 3

Mean Mathematics Scores by Group

Class		N	Mean	Std. Deviation	Std. Error Mean
Avg	inclusion	192	87.08	7.14	.51
	non-inclusion	270	87.17	7.19	.43

Table 4

Mean Mathematics Scores for Regular Education Students in Inclusion Classrooms by Gender

Sex		N	Mean	Std. Deviation	Std. Error Mean
Avg	Boy	89	86.74	6.90	.73
	Girl	103	87.38	7.37	.72

Table 5

Mean Mathematics Scores for Regular Education Students in Non-Inclusion Classrooms by Gender

Sex		N	Mean	Std. Deviation	Std. Error Mean
Avg	Boy	132	86.53	7.19	.62
	Girl	138	87.79	7.15	.60

MCT2 scores for the inclusion and non-inclusion classrooms according to gender were calculated. Table 6 indicates the means and standard deviations of the group according to gender. An independent t test was calculated indicating no significant differences between inclusion ($t = -.55$, $df = 190$, $p = .58$) and non-inclusion ($t = 1.93$, $df = 268$, $p = .05$).

Research Question 3: What are principals' perceptions regarding inclusion by gender?

Hypothesis 3

The third null hypothesis stated that there is no significant difference in principals' perceptions regarding inclusions by gender. Fifteen principals completed the Principal and Inclusion Survey for the selected schools in Mississippi. The items used for this hypothesis were found in Section III - Attitudes Toward Inclusion of Students with Special Needs and Section IV - Most Appropriate Placements for Students with Disabilities. The items were rated on a Likert scale ranging from 1, representing *strongly agree*, to 5, representing *strongly disagree* for Section III. The items in Section IV were rated 1 to 6 concerning appropriate placement for students with disabilities. One was being most restricted to special education outside regular school to 6 being least restricted such as full-time regular education with support. Means and standard deviations of the principals according to gender are shown in Table 7. Descriptives were calculated for items 12-21 concerning attitude and are represented.

According to the results, principals had the same perceptions for item 17 with a mean score of 1.67 regardless of gender. These responses were in regard to whether regular education students can profit from contact with severe/profound students. Male

Table 6

Mean MCT2 Scores by Group

Class		Sex	N	Mean	Std. Deviation	Std. Error Mean
Inclusion	MCT2	Boy	89	150.33	9.98	1.05
		Girl	103	151.12	9.76	.96
Non-inclusion	MCT2	Boy	132	149.02	10.61	.92
		Girl	138	151.29	8.60	.73

Table 7

Descriptive Statistics for Attitudes Toward Inclusion Students with Special Needs by Gender

	Gender	N	Mean	Std. Deviation
Item 12. Ext. Special ed. experienced teachers deal with students	Male Female	6 9	3.50 3.67	1.22 1.11
Item 13. Enhance learning experiences of students	Male Female	6 9	2.27 2.78	.75 .66
Item 14. Severe/Profound are too impaired for regular ed. activities	Male Female	6 9	4.00 3.56	.89 1.13
Item 15. Good regular educator can do a lot to help severe/profound	Male Female	6 9	1.83 2.33	1.16 2.42
Item 16. Severe/Pro. placed in special classes designed for them	Male Female	6 9	2.50 2.56	.54 1.01
Item 17: Reg. Ed. students can profit from contact with Sev/Prof.	Male Female	6 9	1.67 1.67	.51 .70
Item 18. Reg. Education should be modified to meet all students' needs	Male Female	6 9	2.83 2.56	1.16 1.01
Item 19. It is unfair to ask Reg. Ed. teacher to accept severe/prof.	Male Female	6 9	3.33 3.44	.51 1.33
Item 20. No discretionary financial resources should be allocated for integration	Male Female	6 9	3.67 3.89	.81 .60
Item 21. Policy and/or law severe/prof. integrated into regular ed. programs/activities	Male Female	6 9	2.83 2.89	1.47 1.05

and female principals responded as *strongly agree* and *agree*. The principals' responses were very similar for items 16 regarding students with severe/profound disabilities placed in special classes, and item 18 stating that regular education should be modified to meet the needs of all students. For item 16, the principals responded with *agree,* with male responses 2.50, and female response were 2.56. For item 18, the principals' responses were between *agree* to *uncertain*. Male responses were 2.83, and female principals responded with 2.56. The majority of the principals' responses were uncertain. This included items 12, 19, 20, and 21.

According to the placement of students, Section IV, both male and female principals responded the same with items 23 and 27, as indicated in Table 8. Item 23 concerned the appropriate placement for students with mental retardation. Male and female principals responded with a 2.67. This response would place the child in special classes for most or all of the school day. Item 27 concerned students with speech and language impairments. The principals, regardless of gender, responded with a 5.33. This placement would place those types of students in regular classroom instruction for most of the day. The principals' responses were very similar for most of the items, as indicated in Table 9. However, there was a large difference in item 26 concerning deafness or hearing impairments. Male principals responded with a 3.33 placing those students in part-time special education class, whereas female principals responded with a 5.00, indicating appropriate placement for those types of students with disabilities in regular classroom instruction for most of the day. For items 30, 31, and 32 most principals, regardless of gender, placed students with multi-handicaps, autism, or neurological

impairments in part-time special education classrooms. However, most principals felt positive concerning inclusion education.

An independent *t* test was used for Section IV - Most Appropriate Placements for Students with Disabilities comparing gender. There was a significant difference in two items at the alpha level of .05. Therefore, a difference was found in the item concerning Specific Learning Disability (t = -2.80, df = 8.0, p = .02) and the item concerning Blindness/Visual Impairment (t = -.24, df = 13, p = .03) among gender for the 15 principals. Table 8 represents the results of each item rated by gender. The mean for males concerning blindness/visual impairment was 3.17, whereas the mean for females was 5.00. Therefore, the six male principals' results indicated that the appropriate placement for students with blindness/visual impairment was part-time special education class. However, the nine female principals' results indicated the appropriate placement for students with blindness/visual impairment was regular classroom instruction for most of the day. The null hypothesis was rejected at the .05 level of significance based on the results of the descriptive in the areas of principal perceptions by gender.

Research Question 4: Is there a relationship between principals' perceptions regarding inclusion and mathematics achievement of regular education students in inclusion classrooms?

Hypothesis 4

The fourth hypothesis stated that there is no significant difference in the relationship between principals' perceptions regarding inclusion and mathematics achievement of regular education students in inclusion classrooms. The data were aggregated and a Pearson correlation statistical test was calculated. A new target variable

Table 8

Descriptive Statistics for Most Appropriate Placement for Students with Disabilities by Gender

	Gender	N	Mean	Std. Deviation
Item 22. Specific learning disability	Male	6	4.00	.57
	Female	9	4.78	.83
Item 23. Mental retardation	Male	6	2.67	1.03
	Female	9	2.67	.86
Item 24. Serious emotional distress	Male	6	2.17	.98
	Female	9	2.56	1.13
Item 25. Blindness/visual impairment	Male	6	3.17	2.04
	Female	9	5.00	.86
Item 26. Deafness/hearing impairment	Male	6	3.33	2.25
	Female	9	5.00	1.00
Item 27. Speech and language impairment	Male	6	5.33	1.63
	Female	9	5.33	.86
Item 28. Other health impairment	Male	6	4.83	1.16
	Female	9	4.89	1.05
Item 29. Physical disability	Male	6	4.50	1.64
	Female	9	5.33	1.00
Item 30. Multihandicap	Male	6	3.33	1.86
	Female	9	3.11	1.05
Item 31. Autism pervasive developmental disorder	Male	6	3.00	1,67
	Female	9	3.78	1.20
Item 32. Neurological impairment	Male	6	2.83	1.83
	Female	9	3.33	1.50

Table 9

Descriptive Statistics for Mathematics Achievement by Schools

School	Mean	N	Std. Deviation
A	88.86	22	6.08
B	86.44	34	6.17
C	88.11	37	6.60
D	85.93	15	9.55
E	89.24	21	5.77
F	90.88	16	3.34
G	84.22	27	7.39
H	83.75	20	9.48
Total	87.08	192	7.14

was computed concerning the data from the eight schools' mathematics average named "Avg." The average of mathematics achievement correlated with the principals' responses on the survey. Each of the 15 principals' responses on the survey and the average of the eight schools' data were used for this research question. Table 9 indicates the mean and standard deviation of the eight schools. Each of the eight schools is indicated by letters A-H.

Section III of the Principals and Inclusion Survey concerned attitudes toward inclusion. Items 12-21 for this section were computed for a new target variable named "opinion." A Pearson correlation coefficient was run to determine if a relationship between principals' perceptions regarding inclusion and mathematics achievement of regular education students in inclusion was present. According to the Pearson correlation, Table 10, no relationship was found. The coefficient -.02 is considered a weak correlation. Therefore, a weak correlation that was not significant was found (r (13) = -.24, $p > .05$).

Research Question 5: What are principal perceptions of inclusion?

Qualitative data were used to investigate the fifth research question. Eight principals responded to 10 open-ended questions. These responses were mechanically recorded and transcribed. The data were coded to analyze emerging themes using the words from the principals. One participant could not commit to the amount of time previously arranged. His interview lasted approximately 20 minutes. Therefore, a varying amount of length took place. The majority of the participant interviews lasted approximately the agreed amount of time which was 30 minutes. However, two interviews lasted approximately 45 minutes. Therefore, the principal interviews ranged

Table 10

Correlations

		Avg	Opinion
Avg	Pearson Correlation	1	-.02
	Sig. (2-tailed)		.93
	N	15	15
Opinion	Pearson Correlation	-.02	1
	Sig. (2-tailed)	.93	
	N	15	15

between 20-45 minutes. The participants included Linda, Charlie, John, Timmy, Susie, Kevin, Rita, and Amy. The participants' names were changed to provide anonymity. Each interview took place in the office of each principal and ranged from 20-45 minutes. The participants included Linda, Charlie, John, Timmy, Susie, Kevin, Rita, and Amy. The participants' names were changed to provide anonymity.

Qualitative

Table 11 shows the categories of themes and principals' responses. The data indicated four themes identified by the participants as (a) roles and relationships of teachers in inclusionary practices, (b) parental involvement, (c) administrators' responsibilities in the conflicting nature of inclusionary practices, and (d) physical environment inclusive to learning.

The first theme to emerge from the data was the roles and relationships of the teachers who are involved in the inclusionary practices. Two teachers are required by law to provide instruction in the inclusion classroom. A highly qualified teacher and a special education teacher provide instruction in inclusion education. As the eight participants expressed their feelings, ideas, and knowledge, a theme that reoccurred through various questions focused on these two teachers. The first open-ended interview question involved the successful components of an inclusion program. According to the participants, the two teachers are the primary components in order to have a successful inclusion program. Participants responded that the regular education teacher and the special education teacher were vital in inclusion education. Their role and relationship is ultimately important for all students in their classroom. Planning time and co-teaching are responsibilities that influence inclusion. Kevin stated, "Number one, success component

Table 11

Qualitative Principal Interview Responses by Gender, Length of Interview, Theme, Number, and Frequency

			Frequency of Themes n (%)			
Principal	Gender	Length of Interview (minutes)	Teachers' Role and Responsibility	Parent Involvement	Administrator's Responsibilities	Physical Environment
P1	F	45	6(0.04)	4(0.02)	5(0.03)	8(0.05)
P2	M	40	5(0.03)	5(0.03)	4(0.02)	7(0.05)
P3	M	20	4(0.02)	30.02)	2(0.01)	3(0.02)
P4	M	30	4(0.02)	5(0.03)	4(0.02)	4(0.02)
P5	F	30	5(0.03)	3(0.02)	3(0.02)	5(0.03)
P6	M	45	5(0.03)	4(0.02)	5(0.03)	5(0.03)
P7	F	30	5(0.03)	3(0.02)	4(0.02)	6(0.04)
P8	F	30	3(0.02)	3(0.02)	4(0.02)	4(0.02)
			Total: 37	Total: 30	Total: 31	Total: 42

N = 140

would be proper planning between the regular education teacher and the inclusion teacher ensuring that both are involved in the planning in the classroom, to ensure that differentiated instruction for both groups of children are included in the planning session for that class." These principals mentioned that their teachers identify the Individual Education Plan (IEP) for the special needs students and make sure they meet their needs. As Charlie stated, "They [students] all have different needs and you can't put them in the same category as one thing fits everyone, so to speak." He explained that the two teachers co-teach and make a joint effort to become a team. They work with the regular education students and address their needs as well as special needs students. Interview question 3 addressed the most important people in making inclusion successful for all students. Amy's response was in regards to the effectiveness of the teachers. She stated that the most important factors in successful inclusion are "Good teachers, both the special education teacher the regular education teacher." These teachers plan instruction to meet the needs of all students. These teachers co-teach and work together as a team. Rita's statement, "I think you [teachers] have to look beyond or think outside of the box when they think about our inclusion children; what they need, what their needs are." As she clearly pointed out, children have different learning styles and abilities. Effective teachers work collaboratively in order to meet the needs of the special education students and the regular education students. She also added that the role and responsibilities of these teachers affect the placement of special needs students. Her statement, "They [teachers] teach, they both know each other well enough that they know when to fall in, when not to fall in; how to make that work because where you couldn't tell the inclusion teacher from the regular teacher" is evidence of the strong positive relationship that teachers share in

an inclusion classroom. These teachers' role and responsibilities are key components and favorable for inclusion.

Another theme that emerged was parental involvement. The principals noted that the parents of both the special needs students and the regular education students are pertinent for inclusion. Their knowledge and respect for inclusion is vital in order for the program to be successful for all who are involved. Along with the role of teachers, parents' efforts are evident in the success of inclusion. Linda's response, "Working with that [inclusion] teacher would be the parents who will be very open and accepting of their child being placed within an inclusion program." Some parents, as indicated, may be resistant to inclusion. Linda goes on to add, "Many parents become a little bit resistant when you begin talking about being placed in an inclusion classroom and we have to make sure that this group is knowledgeable knowing that these children are going to get the same type of objectives." Parents and teachers must work in a joint effort to make inclusion successful. Charlie mentioned this point in his response. He shared, "What you do at school has to match kind of what's going on at home." When teachers inform parents of the skills, concepts, and objectives that they are addressing, parents become more supportive and in favor of a win/win situation for everybody involved. Five out of the eight participants clearly stated that parents were ultimately important in inclusion education. Their guidance, knowledge, and concern play a vital role in the education of their child who has been placed in inclusion. This also is evident for the regular education students' parents as well. Those parents have developed an understanding and tolerance of inclusion and support the concept of inclusion. As Linda stated, "Making sure that you sold the parents on the concept of an inclusion classroom" is vital. The majority of the

participants clearly mentioned that parents are very responsible in their child's education. The principals expressed that the parents' role is clearly pertinent to the needs, strategies, and success for inclusion education.

Another reoccurring theme focused on the primary responsibilities of administration in the conflicting nature of inclusionary practices. This theme emerged throughout the entire interview process. The principal plays a vibrant role in inclusion from many facets. As indicated by these eight participants, their relationship between teachers, parents, and students needs to be persistent and positive. This theme emerged exclusively among the participants. The leadership qualities that exist throughout the success of the inclusion program are dependent upon the principal. They influence and structure the program through their guidance and leadership qualities. They provide teachers with the necessary components they need such as guidance, encouragement, professional development, and needed resources. Linda mentioned that her role in providing reassurance to her staff and students is necessary. As she stated, "I need to be a help to a teacher who is needing that extra encouragement as well as the location of instructional supplies and techniques, procedures that will help them achieve, and the students achieve within the classroom." She clearly pointed out that she is vital for the teachers and students in the inclusion program. Charlie and John also stated that they were responsible in providing and making the necessary resources available. Susie mentioned, "I have to make sure the teachers are appropriately paired and that they receive the needed professional development and support." As she noted, the principal's role is also important in pairing the regular education and special education teachers together as well as appropriately placing the students in the "right" classrooms. Timmy

was eager to say, "My primary role is basically supporting effective teachers who have the expertise and knowledge in this area and helping them pull together those necessary proponents for this process to work." The principal has a major role in the process of placement for students and teachers. The proper teachers paired together are very important in inclusion education. As Kevin stated, "When two people come in it [inclusion], if it's done right it is a major successful situation." Their role in working collaboratively with teachers and parents is a key in promoting and structuring inclusion. The communication between the principal and parent is a key concept of inclusion. It needs to be a joint endeavor, as Charlie mentioned. They need to make good and favorable decisions as a team effort. This would involve as many stakeholders as possible such as community, parents, students, and teachers. Acceptance of the program is pertinent within the school culture and community. Susie mentioned, "I think all stakeholders must be involved in all phases." It was evident that the principal leads and guides inclusionary practices in education. Therefore, the role and responsibilities of the principal in inclusion are ultimately factors in the success of the program.

The last theme involved the physical environment inclusive to learning for inclusion. After analyzing the data, a theme concerning the classroom climate was noted. A great impact of inclusion is appropriately placing the students in the proper classrooms. Within an inclusion classroom, individual needs are met and students are academically achieving, as one participant noted. Rita stated, "To make sure that it [inclusion] is an environment that is inclusive and yet non-inclusion, that it helps them to be comfortable." She went on to express that children need to feel comfortable within the classroom and feel they belong and are accepted. The classroom and school environment should be

positive and accepting. The inclusionary practice is evident in the culture and climate of the school. Rita expressed that, "To maintain an environment that is, you know, comfortable, physically, emotionally, socially, and adaptable for children; you wouldn't be able to tell which is the teacher or the inclusion teacher." This theme was relevant in all the participants' perceptions. John stated, "I feel like you need to make sure the inclusion students are given a fair chance to be successful in the regular education classroom." Differentiated instruction and planning are very important in making the inclusion classroom successful. Each participant mentioned that the classroom environment should be positive and comfortable for learning to take place. The inclusion classroom should be relevant for both the regular education students and the special education students. All participants recognized the varying ability of students with and without disabilities. Charlie explained that all types of students with various learning styles and motivations are within each classroom. They are categorized as high, medium, or low achieving students. He stated, "If you're called to be a teacher, you are not going to care what the needs are of the students in your classroom, you're going to teach them and give them everything you have." The classroom conducive to learning is very relevant in inclusion education. There have been some cases of inclusion where the special education child outperformed the regular education child. One participant, Tim, mentioned that a blind child in his school was out-performing three regular education children. He clearly described that the classroom environment is pertinent to the outcomes and expectations for all students. The participants expressed that within inclusion education students are more apt to take risks and are eager to work cooperatively. Susan stated, "I think that students learn from each other whether they are

disabled or not." The relationship within the inclusion environment is tolerant and accepting of differences. The teachers teach the entire group of students, as Rita expressed. She went on to say, "Some [students] learn at a faster pace or slower pace; we need to make sure that we are taking our time to monitor those students and making sure they are given the best education possible." Placing students in the right classroom where the environment is conducive to learning is appropriate. The least restrictive environment (LRE) is a key to inclusion education. Students learn differently and exhibit various learning and the inclusion classroom can accommodate their needs. Therefore, placing them in the right environment is necessary and expected. Linda expressed that she feels that inclusion benefits the social aspects and aids in academic success. She stated that her idea of a perfect inclusion classroom "is where an outsider, or someone who would be a visitor, would walk into the classroom and would not have any idea whatsoever as to which children are inclusion and which ones are not." The classroom environment aids in students blended together as a family classroom and team. Therefore, it is necessary for everybody involved to assist in making the inclusion classroom conducive and comfortable for learning.

Reoccurring themes were echoed by the participants. These themes were relevant in the participants' responses to the 10 Interview Questions regarding inclusion. The themes noted by principals included (a) roles and relationships of teachers in inclusionary practice, (b) parental involvement, (c) administrators' responsibilities in the conflicting nature of inclusionary practices, and (d) the physical environment inclusive to learning.

CHAPTER V

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

This chapter presents conclusions and discussion of the results of the study.

Recommendations relate to school leaders and educators. Recommendations for further

research are presented. Limitations of the study are also included in this chapter.

The purpose of this study was to determine if there was a difference in

mathematics achievement of regular education students in inclusion and non-inclusion

classrooms, and, secondly, if there was a difference in mathematics achievement for these

students based on gender. Principal perceptions for the 462 participants were investigated

regarding inclusion education and by gender. Eight semi-structured, face-to-face

interviews were conducted regarding principals' perceptions of inclusion. Lastly, this

study sought to determine if there was a relationship between principals' perceptions

regarding inclusion and mathematics achievement of regular education students in

inclusion and non-inclusion classrooms.

Conclusions

The findings of this research suggest that inclusion education did not significantly

affect mathematics achievement of regular education students in fourth and fifth grades.

There was also no significant difference for the students' mathematics achievement

regarding gender. The principals' perceptions of inclusion were both positive and

negative. Based on gender, concerning appropriate placement of students with

disabilities, two responses indicated significant differences. According to the results,

students with specific learning disabilities and students with visual impairments showed

significant differences concerning appropriate placement. There was no relationship

found between principals' perceptions regarding inclusion and mathematics achievement for these students. Qualitative data were another factor in investigating principals' perceptions of inclusion. Fifteen principals completed the Principals and Inclusion Survey. Of those 15, eight participated in face-to-face interviews concerning 10 open-ended questions regarding their perceptions of inclusion. There were four themes that emerged from this qualitative component. Those themes centered on their responsibilities, roles, and understanding of (a) principals as leaders, (b) parents' role in child's education, (c) teachers' roles and responsibilities in inclusion, and (d) the inclusive environment.

The conclusions of the study supported the findings of a study conducted by Liddiard (1991). Liddiard's study indicated that inclusion did not have negative effects on students' academic achievement. Both studies did not indicate any significant gains in academic performance or exposure to inclusion as negatively affecting their mathematics performance. This study was also consistent with Moore et al. (1998). That study indicated that regular education students in inclusion revealed no negative impacts concerning performance and achievements.

Discussion of Results

This study lasted for a period of 10 months. Five null hypotheses were examined in this study. The following paragraphs provide a discussion of the findings based on each hypothesis and a general discussion of findings as they relate to the review of literature.

In the first hypothesis, the study focused upon significant differences in mathematics achievement of fourth and fifth grade regular education students placed in inclusion compared to regular education students placed in non-inclusion. In contrast to

Fishbaugh and Gum (1994), this study did not indicate significant differences in mathematics performance measured by their test data. Thus, the exposure of being placed in inclusion education indicated no differences in mathematics performance compared to regular education students in non-inclusion classrooms.

In the second hypothesis, the study examined significant differences in mathematics performance of regular education students in inclusion and regular education students in non-inclusion by gender. Consistent with findings by Sharpe et al. (1994), no significant difference in performance was found between regular education students in inclusion compared to regular education students in non-inclusion. Their study used a pretest and posttest to measure performance. This study used a pretest known as the Mississippi Criterion Reference Test 2 (MCT2) and posttest (mathematics average). The findings of this study were consistent with Sharpe et al., which indicated no significant differences between inclusion and non-inclusion mathematics performance. There were no significant differences in mathematics achievement according to gender for the inclusion students or the non-inclusion students. The girls' mean score was slightly higher than the boys', but no significant differences were determined.

Research suggested that teachers are vital in inclusion education. This study was consistent with Pugach and Wesson (1995), Salend (1999) and Carpenter and Dyal (2007) concerning the role of teachers in inclusionary practices. The principal perceptions indicate that the teachers' role in inclusion is vital for the success of the program. Co-teaching, planning, and meeting individual needs are responsibilities and roles of both teachers within the inclusion classroom. This study indicated that the number one success component would be effective teachers in inclusion. Differentiated classroom instruction

in the proper environment was necessary. This was the second emerging theme within the study.

The third theme, according to the principals' perceptions, focused on the learning environment. This study was consistent with Stanovich et al. (1998) and Pawlowicz (2001). Effective teachers providing quality instruction in an inclusion environment that meets the needs of all students are essential in inclusion. Stanovich et al.'s (1998) study revealed the same concept. This study was consistent with both Pawlowicz and Stanovich. Designing and establishing an inclusion environment that meets individual needs of the students is a necessary component of inclusion practices. The school climate and environment are important in creating and maintaining an effective inclusion program. As this study indicated, many principals' perceptions regarding teachers' role and inclusive environments were strongly supported as key factors in inclusionary practices.

This study revealed that parents' roles were important and vital for a successful inclusion program. As Kochhar et al. (2000) and Sharpe (2001) indicated, most parents were supportive and positive concerning inclusion education. This study revealed that principals' perceptions indicated that most parents support inclusion education. The principals' responses indicated that parents accept inclusion and are positive concerning inclusionary practices. As this study indicated, a team effort should be established and maintained between parents, school leaders, teachers, and students. The principals clearly suggested that working consistently and collaboratively with parents should be an on-going factor in inclusionary practices to maintain a positive learning environment.

The third hypothesis indicated that principals' perceptions regarding inclusion by gender were similar. Fifteen principals completed the survey and indicated similar responses. The majority of the participants' responses were neutral. However, in regard to placement of students with disabilities, nine female and six male principals indicated different perceptions. There were significant differences in response to students with specific learning disabilities and blindness. The appropriate placement for students with specific learning disabilities to receive instruction is in the regular and resource rooms, whereas the appropriate placement for students with visual impairments to receive instruction is in part-time special education classrooms and regular education classrooms.

In the fourth hypothesis, the study focused upon mathematics achievement and principals' perception of inclusion. Praisner (2000) and Cox (2008) suggested that principals are held accountable for student success and academic performance in their schools. They are also responsible for making decisions providing the best available programs for students' success. However, the study indicated no correlation between mathematics achievement and principal perceptions of inclusion.

This study focused upon principals' perceptions regarding inclusion. Qualitative data were used to analyze research question 5. Face-to-face interviews were conducted with eight principals in this study. The data were gathered and analyzed for themes to emerge from the study. Four recurring themes were relevant in the data. One was consistent with Cox (2008) and Praisner (2000) in regards to principals and their implications. This study, similar to Cox's and Praisner's indicated the roles of administrators in inclusionary programs are positive and supportive of inclusion. All three studies indicated that principals and their leadership qualities are important in every

aspect of inclusion. They are leaders and visionaries for inclusion practices and strongly determine the success of the program. Principals are known to structure and guide their school and community. They provide the vital resources, encouragement, and support necessary in achieving a successful inclusion program. This study indicated that the principals' perceptions toward inclusion are positive and they are ultimately important for the success of the program. Their role in inclusion is highly regarded in the effectiveness of the program.

Recommendations and Limitations

Schools are now experiencing and re-defining inclusion education. Program reform should carefully consider the research that is used to validate needed programs. Public schools are recommended to determine their school's needs and how specific programs may be affected. Most schools exhibit different needs; therefore, individual schools should recognize and identify the needs of students, instructional resources, and personnel. Likewise, adequate resources and quality instruction should be recognized.

A child-centered curriculum, cooperative groups, and inclusive environment may benefit inclusion programs. Professional development and the proper pairing of teachers can be vital in the success of an inclusion program. Collaboration with parents is essential in promoting success for students. This study identified teachers and parents as key success components of inclusion education. Therefore, schools are recommended to provide and convey the necessary knowledge to the stakeholders involved in inclusion education. Long-term research is needed to determine the success of inclusion programs on various content areas of academics.

Future research is recommended. Consideration should be given on students' ability prior to inclusion education. Evaluating student progress on a yearly basis in various subjects would be recommended. Maintaining and sustaining the same inclusion teachers per grade is also recommended. Therefore, comparisons of students on a long-term scale are recommended at various levels of performance with the same co-teachers of inclusion. Thus, more research is needed to determine if inclusion education is the appropriate place for regular education students. Another future recommendation would be to investigate all students within the inclusion classroom. These recommendations are the basis for possible further research studies.

The data in this study indicated that female principals placed blind/visual impairment students in a less restricted environment compared to male principals. The data also indicated no statistical significance in mathematics achievement of regular education students in inclusion education. Based on this study, no negative impacts were noted regarding mathematics achievement for gender of regular education students in inclusion. Therefore, administrators may continue to include students with disabilities in inclusion education. The data indicated female administrators' responses indicated a less restricted learning environment for students with disabilities compared to male principal responses. Future studies may find female administrators being more empathetic than male administrators. Therefore, further research concerning gender of principals and inclusion education is recommended.

Additionally, inclusion education includes regular and special education students receiving instruction together. This study investigated regular education students in

inclusion education. Therefore, research is needed to determine if mathematics performance gains of all students are affected.

Further, research involving the role of the teacher and parents is another important area for study. Comparisons of students who receive mathematics assistance from parents and those who receive no assistance or little assistance would be recommended.

There are limitations of this study that may influence the results. The Principal and Inclusion Survey (PIS) was used to gather data for the principal participants. The sample size of principal participants is considered a small sample. Therefore, the results of this study may be limited due to small sample size. Fifteen principals completed the PIS and eight of those principals were interviewed.

Another limitation may be the length of interview time and the interviews. The nature of the eight brief interviews provided a glimpse in time at a specific moment. Therefore, this may be another limitation of this study. Four themes emerged from the data concerning the principal interviews which addressed research question 5. Additional research is recommended regarding principals' perceptions of inclusion education. Lastly, research in the area of inclusion and the most appropriate placement of regular education and special education students is considered.

APPENDIX A

PRINCIPALS AND INCLUSION SURVEY

The purpose of this survey is to determine the opinions of elementary principals toward the inclusion movement and to gather information about the types of training and experience that principals have. There are no right or wrong answers so please address the questions to the best of your knowledge and provide us with what you believe.

****

SECTION I- Demographic Information

The following information will be only be used to describe the population being studied.

1. Approximate number of all students in your building:
   0-250   251-500   501-750   751-1000   1000 or more

2. Average class size for all students:
   0-9   10-19   20-29   30-39   40 or more

3. Approximate percentage of students with IEPs in your building: (*Do not include gifted*)

   0-5%   6-10%   11-15%   16-20%   21% or more

4. Approximate number of students with IEPs in your building that are included in regular education classrooms for at least 75% of their school day: (*Do not include gifted*)
   0-20%   21-40%   41-60%   61-80%   81-100%

SECTION II- Training and Experience

1. Your age:
   20-30   31-40   41-50   51-60   61 or more

2. Gender: Male   Female

3. Years of full-time regular education teaching experience:
   0   1-6   7-12   13-18   19 or more

4. Years of full-time special education teaching experience:
   0   1-6   7-12   13-18   19 or more

5. Years as an elementary school principal:
   0-5   6-10   11-15   16-20   21 or more

6. Approximate number of special education credits in your formal training:
   0   1-9   10-15   16-21   22 or more

7. Approximate number of inservice training hours in inclusive practices:
   0   1-8   9-16   17-24   25 or more

8. Mark the areas below that were included in your formal training such as courses, workshops, and/or significant portions of courses **(10% of content or more).**

    Characteristics of students with disabilities
    Behavior management class for working with students with disabilities
    Academic programming for students with disabilities
    Special education law
    Crisis intervention
    Life skills training for students with disabilities
    Teambuilding
    Interagency cooperation
    Family intervention training
    Supporting and training teachers to handle inclusion
    Change process
    Eliciting parent and community support for inclusion
    Fostering teacher collaboration
    Field based experiences with actual inclusion activities

9. Are you certified in special education?   No   Yes

10. Does your school have a specific plan to deal with crisis involving students with special needs?   No   Yes

11. Do you have personal experience with (an) individual(s) with a disability outside the school setting, i.e. family member, friend, etc.?   No   Yes
    If yes, please indicate relationship to you.

Self	Immediate family member	Extended family member
Friend	Neighbor	Other: _____

12. Does your school district's mission statement include a **vision** for the inclusion of students with disabilities?   No   Yes

13. In general, what has your experience been with the following types of students in the school setting. Mark one level of experience for each disability category.

Disability Type	Negative Experience	Somewhat Negative Experience	No Experience	Somewhat Positive Experience	Positive Experience
Specific learning disability					
Mental retardation					
Serious emotional disturbance					
Blindness/visual impairment					
Deafness/hearing impairment					
Speech and language impairment					
Other health impairment					
Physical disability					
Multihandicap					
Autism/pervasive developmental disorder					
Neurological impairment					

SECTION III- Attitudes Toward Inclusion of Students with Special Needs

Please mark your response to each item using the following scale:

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

[illegible shaded row — item 1]

2. Schools with both students with severe
and profound disabilities and students
without disabilities enhance the learning
experiences of students with
severe/profound disabilities.

[illegible shaded row — item 3]

4. A good regular educator can do a lot to
help a student with a severe/profound
disability.

[illegible shaded row — item 5]

6. Students without disabilities can profit
from contact with students with
severe/profound disabilities.

[illegible shaded row — item 7]

8. It is unfair to ask/expect regular
teachers to accept students with
severe/profound disabilities.

[illegible shaded row — item 9]

10. It should be policy and/or law that
students with severe/profound disabilities
are integrated into regular educational
programs and activities.

SECTION IV- Most Appropriate Placements for Students with Disabilities

Although individual characteristics would need to be considered, please mark the placement that, in general, you believe is most appropriate for students with the following disabilities:

Specific Learning Disability
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Mental Retardation
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Serious Emotional Disturbance
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Blindness/visual impairment
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Deafness/hearing impairment
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Speech and language impairment
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Other health impairment
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Physical Disability
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Multihandicap
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Autism/pervasive developmental disorder
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Neurological impairment
Special education services outside regular school
Special class for most or all of the school day
Part-time special education class
Regular classroom instruction and resource room
Regular classroom instruction for most of day
Full-time regular education with support

Thank you for taking the time to answer all of the questions on this survey. We appreciate your assistance with this study!

APPENDIX B

INSTITUTIONAL REVIEW BOARD PERMISSION

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 29042302
PROJECT TITLE: Mathematics Achievement of Regular Education Students by Placement in Inclusion and Non-Inclusion Classroom and Their Principals' Perceptions of Inclusion
PROPOSED PROJECT DATES: 02/01/09 to 02/01/10
PROJECT TYPE: Dissertation or Thesis
PRINCIPAL INVESTIGATORS: Loretta Hartfield
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Educational Leadership & Research
FUNDING AGENCY: N/A
HSPRC COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 06/15/09 to 06/14/10

_____   ____6-15-09____
Lawrence A. Hosman, Ph.D.   Date
HSPRC Chair

APPENDIX C

PERMISSION TO USE SURVEY

Loretta-
You have my permission to use the Principals and Inclusion
Survey. Please note however that Section III was adapted
from the work of George Stainback. You may need to speak to
your advisor on how to handle permission for this section.
I've attached a copy of the Instrument section of my
dissertation which describes the development of the survey.
Best Wishes,
Cindy Praisner

APPENDIX D

INTERVIEW QUESTIONS

1. What are the success components of an inclusion program?

2. What is your primary role in administrating an effective inclusion program?

3. Who do you think are the most important people in making inclusion successful for all students?

4. How would you address a regular education teacher who is resistant to working with special education students in her classroom?

5. Do you believe inclusion benefits the students who are disabled and their peers?

6. Does *No Child Left Behind* provide the best program for handicapped students?

7. Do you feel that SLDs, who are severely learning disabled students, need to be pulled out for individual tutoring?

8. Is inclusion the best placement for students with special needs?

9. Are achievement levels affected by inclusion?

10. Do you personally know someone who is currently teaching or has taught special education? If so, do you feel that connection relates to your opinion in regard to inclusion?

APPENDIX E

LETTER TO SUPERINTENDENTS

January 7, 2009
██████, Superintendent of Education
██████ County Public School District

Dear ██████

My name is Loretta Hartfield and I am a Doctoral student enrolled in The University of Southern Mississippi. I am interested in conducting research in your school district. I am investigating 4th and 5th grade inclusion in the subject, math, and Principal's perception of inclusion (please exclude special education and gifted and talented students; only include regular education students). I am enclosing a permission letter, an outline of the data needed, information concerning human subject protection, which outlines my proposed project, and the Principal's Questionnaire.

I teach 5th grade in the Pontotoc County School District. However, if permission is granted, I can assist in retrieving the data when it is convenient for you and your schools. My Principal and Superintendent are informed and supportive of my research. If best for you, the data could also be emailed to my school email. I will not need any principal, teacher or student names. Your school district will not be mentioned in my research. Also, I will be more than glad to share the results to you and/or your school. Your cooperation and assistance will be greatly appreciated.

Thank you,

Loretta Hartfield

662-316-4350 (cell phone)
lhartfield@pcsd.k12.ms.us
662-488-9162

I, _____, give permission for Loretta Hartfield to collect and analyze data in my school district. However, I also understand the possible risks and potential benefits that Mrs. Hartfield has explained in regards to this type of research. I understand that she will number code student's names in order to insure student privacy. Mrs. Hartfield has been advised to follow school policies and procedures.

APPENDIX F

LETTER TO ADMINISTRATORS

April 8, 2009

██████, Principal
██████ Public School District

Dear ██████

My name is Loretta Hartfield and I am currently a Doctoral Student enrolled in The University of Southern Mississippi. I am conducting research to compare 4th and 5th grade regular education students' math ability in inclusion classrooms compared to their peers in non-inclusion classrooms. I would like to collect data in the ██████ Public School District. I am also surveying administrator's perceptions of inclusion. I will be using student's previous MCT2 math scores, the current school year Math Semester average for first semester, and Principal Questionnaire. I am requesting permission to have access to the scores of your student and to conduct this research in your school. Numbers will be given to the students to insure the anonymity of each student. Your assistance is greatly appreciated. Thank you.

Sincerely,

Loretta Hartfield

I, _____, give permission for Loretta Hartfield to collect and analyze data in my school. However, I also understand the possible risks and potential benefits that Mrs. Hartfield has explained in regards to this type of research. I understand that she will number code student's names in order to insure student privacy. Mrs. Hartfield has been advised to follow school policies and procedures.

APPENDIX G

LETTER TO PARENTS

February 2, 2009

Dear Parents/Guardians, and Students,

My name is Loretta Hartfield and I am currently a Graduate Student enrolled in the University of Southern Mississippi. I have been a 5th grade teacher for the past 12 years; and as Administrative Intern for one year.

From February this year, 2009, until February next year, 2010, I will be conducting research involving some students in grades 4th and 5th. My desired amount of time for this study is approximately 5 months. I will be analyzing test scores from the MCT2 and this year's report card grade for mathematics. By signing yes to this form, you give me consent to utilize your child's data.

This information will be confidential to the public. My study is to compare regular education students enrolled in inclusion compared to regular education students enrolled in non-inclusion. I will measure the last year's mathematics MCT scores for the students and will compare and contrast their results. All students' names will be removed and numbers will be assigned. The information will be held strictly confidential in my school Counselor's office. Your child's name will be anonymous in my research findings. After the research is done, I will provide feedback to any parent that request.

The participation is voluntary and there is no identifying information in this study. You may withdraw from the study at any time without penalty or prejudice. I plan to publish the findings in a book for future reference. "This project has been reviewed by the Human Subjects Protection Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, and (601)266-6820." Thank you for your cooperation and support. Feel free to contact me, Loretta Hartfield, at any time at 662-489-5613.

Thank you,

Loretta Hartfield

_____ **Yes,** you have permission to use my child's (_____) data or findings in your research.

_____ **No,** you do not have permission to use my child's (_____) data or findings in your research.

APPENDIX H

COVER LETTER TO PRINCIPALS

Cover Letter to Principals

February 2, 2009

Dear Dr. ██████, Principal
██████ Elementary School

Dear Dr. ████,

I am writing in regards to the survey, Principal and Inclusion Survey, that I mentioned to you a few weeks ago when I visited your school. You have been selected to participate in this study and your assistance will be greatly appreciated. I will be sending this survey to your school e-mail this week. Please take 15-20 minutes to complete the survey and send it back to me via e-mail at lhartfield@pcsd.k12.ms.us . The information that you will provide will remain confidential and will be very useful for my research.

Thank you,

Loretta Hartfield
Ed. D. Candidate
Contact Number 662-316-4350

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