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Learning-Disabled Students: A Comparison of Achievement Scores of Students Receiving Services in Pull-Out Classrooms and Inclusion Classrooms

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A dissertation

presented to

the faculty of the Department of Educational Leadership and Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctorate of Education in Educational Leadership

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by

Gerilyn Toney Scalf

December 2014

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Dr. Virginia P. Foley

Dr. Donald W. Good

Keywords: Inclusion, learning-disabled, pull-out, special education

ABSTRACT

Learning-Disabled Students: A Comparison of Achievement Scores of Students Receiving Services in Pull-Out Classrooms and Inclusion Classrooms

by

Gerilyn Toney Scalf

The purpose of this study was to compare the achievement scores in reading/language arts and math of fourth and fifth grade special education learning-disabled students who received academic instruction in an inclusion classroom or a pull-out classroom. Student achievement scores from the 2012-2013 Tennessee Comprehensive Assessment Program (TCAP) and the Discovery Education Assessment (DEA) improvement scores were compared with regard to service location and analyzed for significant differences between the locations: inclusion and pull-out classrooms.
A quantitative study was used to find the differences in reading/language arts and math achievement scores for fourth and fifth grade special education learning-disabled students in an East Tennessee school district. Eleven research questions guided the study. The results of the analyses indicated significant differences in reading/language arts and math scores between the groups in all but 2 analyses. The inclusion students scored higher than the pull-out students. The fourth grade inclusion students scored significantly higher than the fourth grade pull-out students in TCAP reading/language arts, TCAP math, and DEA math but scored with similar results in DEA reading/language arts. The fifth grade inclusion students scored significantly higher

than the fifth grade pull-out students in TCAP reading/language arts, TCAP math, and DEA reading/language arts but scored with similar results in DEA math. This study supported the idea that learning-disabled students receiving academic instruction in an inclusion classroom score significantly higher on achievement tests than the students who received their instruction in the pull-out classroom.

DEDICATION

First and foremost I would like to dedicate this study to my family. I appreciate my husband Larry for the continuous encouragement to finish this project. For her writing expertise I thank my daughter Genna for the multitude of edits in my writing throughout the paper even while she herself was pursuing a degree in nursing. I also want to thank my son Grant and CrossFit Ktown for training me to provide the endurance I needed to complete this project. You all have been the continuous positive support I needed to achieve my lifelong academic goal.

I dedicate this study to my parents. My mother is gone now but she always told me that if it's your dream you can achieve it. My father instilled in me the love of learning and a desire for higher education. It is because of them both that I have achieved this pinnacle of my education.

I want to dedicate this study to Dr. Sandy Enloe. Without her encouraging words I may not have pursued this project. I respect her vast knowledge of special education and the encouragement to finish my study. She has always been a positive role model and a constant reminder of why we do what we do in special education.

I dedicate this study to my Watauga cohort members, fellow faculty, and friends who continually provided me with their encouraging words to never give up.

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I want to thank Dr. Donald Good, Dr. Virginia Foley, and Dr. Cecil Blankenship for their commitment to serve on my dissertation committee. I appreciate their endless input and suggestions to facilitate the completion of my dissertation.

I would like to express my appreciation to the rest of the ELPA faculty. You provided the foundation I needed to pursue this project. Throughout my coursework you were always available to assist me with any questions or concerns.

TABLE OF CONTENTS

LIST OF FIGURES

Figure Page

Figure Page

CHAPTER 1

INTRODUCTION

The first acknowledged special educator, Jean Marc Gaspard Itard, was a French physician best known for his work with a child found wandering the forests of France. A graduate student working under the direction of Itard experienced success in the field of special education when he designed methods to instruct people who suffered from cognitive disabilities. According to Waldron (1996) both men thought that despite differing cognitive ability levels of people, they all had the ability to learn .

The discrimination towards people with physical and mental disabilities has occurred in many cultures over thousands of years (Martin, Martin, & Terman, 1996). According to Skiba et al. (2008) special education was created as a result of the nation's Civil Rights Movement. Skiba et al. asserted that the U.S. Supreme Court ruling of *Brown v. Board of Education* (1954), which declared that separate is not equal, led to the landmark law PL 94-142, the Education for All Handicapped Children Act of 1975 that combined all previous legislation concerning students with disabilities. Special education became available to students with learning disabilities in public school systems across the nation as a result of PL94-142 (Waldron, 1996).

Initially school districts were afforded the option of refusing to enroll students considered unable to learn. In some districts inclusion of students with severe disabilities had not yet been realized. The reasons behind the lack of service varied from schools that were not organized to handle these students to classroom teachers who were not trained to teach students with varying disabilities (Osborne & Dimattia,

1994). Prior to legislation students with disabilities often were denied access to a public education. Some were denied access into the public schools while others received their education in segregated settings (Martin et al., 1996).

Yell, Mitchell, Rogers, and Rogers (1998) reported that in 1973 United States Senator Harrison Williams introduced a bill in the Senate to provide an education for students with disabilities based on two landmark cases. His bill was passed in 1975 and signed into law by President Gerald Ford. States received federal funding for the education of students with disabilities only after the approval of a plan committed to a free appropriate public education (FAPE) for these students.

Initially the goal of special education was to provide the students the opportunity of a public education. New laws required learning-disabled students to be exposed to the same curriculum as their nondisabled peers. Although they were to receive the same curriculum, the instruction needed to be based on their learning deficits. *How* the teacher presented the curriculum was of importance because learning-disabled students were identified based on their deficits in processing (Vaughn & Lenan-Thompson, 2003).

The reauthorization of PL 94-142 provided changes to the act including its title. This act became known as the Individuals with Disabilities Education Act (IDEA). IDEA consisted of four parts: A, B, C, and D. Part A spelled out the general intent of the Act. Part B contained the guidelines for the education of students ages 3-21. For states to receive federal funding they must have complied with the following six principles of the act: providing a FAPE; writing an Individual Education Plan (IEP); providing an appropriate student evaluation; providing the least restrictive environment (LRE);

allowing parent input; and providing procedural safeguards for parents. Part C pertained to the needs of children from birth to 2 years of age. Under Part C families were afforded four services: appropriate identification and interventions services; an Individualized Family Service Plan (IFSP); input to the plan along with consensual rights for its initiation; and parental entitlement to the timely resolution of any complaints regarding the evaluations or services of their child. Part D consisted of activities such as grants and resources to support programs to improve the education of children with disabilities (IDEA, 1997).

With the passage of No Child Left Behind (NCLB) in 2001 there was an increase in the number of school districts placing special education students in the general education classrooms. This policy is known as inclusion. The realization was that if this subgroup of students were required to score at the proficient level in reading and math on the statewide assessments then they needed to be exposed to the general curriculum (NCLB, 2001). In the 2003-2004 school year 99% of students with learning disabilities in Tennessee participated in the TCAP reading assessments. Of these students only 8% participated in an alternate reading assessment that measured below grade-level standards (NCLB, 2005).

A Response to Intervention (RTI) program was the result of the 2004 IDEA reauthorization. Originally a student was identified as having a learning disability based on a discrepancy between his or her intelligence quotient (IQ) and achievement level. This reauthorization allowed practitioners to use a RTI as an alternate method for identification. Districts were permitted to use up to 15% of their special education allocations to fund these early intervention programs to monitor the at-risk students in

their schools. A criticism of the IQ discrepancy was that the learning disability identification was unfairly withheld from low-achieving students who were not included because of their low socioeconomic status (Fuchs & Fuchs, 2006).

Statement of the Problem

Based on the emphasis by advocates for full inclusion of special education students, a determination of whether this type of service provided students with the opportunities required for academic access was of importance. Academic effectiveness and cost of pull-out versus inclusion programs were also important questions. Previous quantitative research on this topic was beneficial in providing crucial information to special education directors regarding school year planning purposes when faced with the acquisition of necessary staff and resources while operating within a yearly budget. With a fully inclusive school students were spread across multiple classrooms, which required more special education staff to meet individual student needs as opposed to one special education teacher for a resource classroom. A quantitative study would provide data and reveal the academic growth of students in both types of programs. Therefore, the purpose of this study was to compare the achievement scores of fourth and fifth grade special education learning-disabled students served in reading/language arts and math inclusion classrooms with those scores of special education learning-disabled students served in pull-out classrooms. Scores from the Tennessee Comprehensive Assessment Program (TCAP) and Discovery Education Assessment (DEA) for students in the pull-out classrooms were compared to those of students in the inclusion classrooms.

Research Questions

The following research questions were used to guide the study:

1. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in reading/language arts for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?
2. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in reading/language arts for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?
3. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in math for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?
4. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in math for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?
5. Do the mean 2012-2013 TCAP proficiency scores in reading/language arts for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

6. Do the mean 2012-2013 TCAP proficiency scores in reading/language arts for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?
7. Do the mean 2012-2013 TCAP proficiency scores in math for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?
8. Do the mean 2012-2013 TCAP proficiency scores in math for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?
9. To what extent do general education teachers support the inclusion of learning-disabled students in the general education classroom?
10. To what extent do general education teachers agree that learning-disabled students score higher on TCAP assessments than pull-out students?
11. To what extent do general education teachers agree they are professionally prepared to teach learning-disabled students in their classroom?

Significance of the Study

Inclusion of learning-disabled students in the general education classroom continues to be a topic of debate in the U.S. Part of the reason for this debate is based on the grounds that inclusion did not provide an appropriate education for the learning-disabled student as promised in PL 94-142 (Kloo, Volonimo, & Zigmond, 2009). Although inclusion services continued to increase, there was a lack of evidence that demonstrated whether the service had provided academic success for the learning-

disabled students. For special education administrators involved with financial planning, a quantitative study may provide data to assist with decision-making regarding funding for staff requirements. The results may also provide information to help administrators make decisions about how learning-disabled students are best served in all classrooms. This study may also benefit administrators of higher education with guidance in the development of future teacher preparation programs. Many general education teachers who are required to teach in an inclusive classroom express concerns that they are not properly prepared to handle the special needs of learning-disabled students in their classrooms. In a survey general education teachers rated their ability of understanding the inclusion program and how they affected students in an inclusive setting lower than the special education teachers rated themselves (Buell, Hallam, Gamden-McKorkle, & Scheer, 1999).

Definitions of Terms

The following definitions of terms used in this study are provided for understanding.

1. Adequate Yearly Progress (AYP) - the measure by which schools, districts, and states are held accountable for student performance under Title I of the No Child Left Behind Act. (NCLB Act, 2001)
2. Discovery Education Assessment (DEA) – assessment that measured academic growth within and across years and monitored progress on state standards and Common Core standards. Assessment was taken three times a year on the computer. (Discovery Education Assessment, 2012)

3. Inclusion – students with disabilities receive their education in general education classrooms with academic supports (Howard, 2004).
4. Individual Education Plan (IEP) – goals, strategies, and measures that met the individual learning needs of a student with disabilities (Waldron, 1996).
5. Learning Disability (LD) – a disorder in one or more of the psychological processes that affected language and manifested itself in the ability to listen, think, read, speak, write, or compute math calculations (Hallahan & Kauffman, 1994)
6. Least Restrictive Environment (LRE) – where students with disabilities are educated with children without disabilities to the maximum extent appropriate (Howard, 2004).
7. Pull-out – when a student left the general classroom environment to attend another classroom or area for instruction (Waldron, 1996)
8. Tennessee Comprehensive Assessment Program (TCAP) – a criterion-referenced assessment system that measured concepts, processes, and skills taught throughout the state using a series of interconnected assessments (CTB/McGraw-Hill, 2012).

Limitations, Delimitations, and Assumptions

This study is limited by the appropriateness of the theoretical framework in determining academic progress of students based on location of service and teacher perspectives on inclusion. It is assumed that both the student achievement scores collected and the teacher surveys were valid and reliable. It is assumed that the

methodology was appropriate in addressing all research questions and the statistical tests were appropriate for determining significant differences in the variables if differences were found. It was assumed that students in the inclusion group and the pull-out group had similar mean achievement scores. It is assumed the teachers responded to the survey honestly. This study is limited by teacher preparation in special education courses and years of teaching experience. This study is also limited by the value the results provide to all stakeholders. The difference between the sizes of the two groups and the small number of students in the pull-out group were also limitations.

This study is delimited to special education students certified as learning-disabled in the fourth and fifth grades focusing on reading/language arts and math. Special education students with certifications other than learning-disabled were excluded from this study. This study is also delimited to fourth and fifth grade teachers of inclusion in an East Tennessee school district with 0-21 plus years of teaching experience. Teacher perspectives on various factors of inclusion were measured on a Likert-type scale using a survey especially designed for this study. Generalizations of the survey results may be made to teachers of fourth and fifth grade inclusion students; however, because the focus of the study was only learning-disabled students, generalizations to all special education students may not be made.

Overview of the Study

This study was organized into five chapters. Chapter 1 included an introduction, the statement of the problem, research questions, the significance of the study,

limitations, delimitations, and definitions of key terms. Chapter 2 contained a review of the literature pertaining to special education inclusion and pull-out programs. Chapter 3 included the population, research design, instrumentation, method of data analysis used, and the method of data collection. Chapter 4 presented the analysis of the data and the results. Chapter 5 contained a summary of the findings, conclusions, recommendations for practice, and recommendations for further study.

CHAPTER 2

REVIEW OF LITERATURE

Prior to the enactment of PL 94-142, the Education for All Handicapped Children Act (1975), now commonly known as the IDEA, most special education students were sent to special schools or at the very least, special classrooms. The law ended what was known as exclusion based on ability (Itkonen, 2007). These students were excluded because the regular education system professionals thought they were unable to learn (Waldron, 1996). When this exclusion was viewed as discriminatory proponents began calling for the inclusion of all special education students (Smith, 2010). With the arrival of the 20th century, these students were now being admitted to schools; however, they were grouped by ability to be served separately in a resource classroom (Waldron, 1996).

With any educational system change is inevitable and special education was no stranger to the concept. The services available to learning-disabled students varied depending on the students' individual needs. With the reauthorization of IDEA in 2004, inclusion was not mandated; however, learning-disabled students were required to be placed in the Least Restrictive Environment (LRE) that was usually determined to be the general education classroom (Stout, 2007). While the advocates continued to push for inclusion of the learning-disabled students, inclusion remained a topic of debate across the nation. From parents to educational professionals, parties have voiced their opinions on the pros and cons of this type of service. Professionals were concerned

that the inclusion of the learning-disabled students in the regular classroom did not provide the individual services they required (Schumm & Vaughn, 1995).

According to Schumm and Vaughn (1995) many opinions regarding inclusion were based on personal feelings and beliefs. While there existed little empirical evidence for the effects of inclusion on students with learning disabilities, the evidence that was available suggested the learning-disabled students did not perform well academically in the inclusion programs. Although some research demonstrated benefits to special education students who were served through the inclusive classroom, many of these benefits were of a social nature. According to Klingner, Vaughn, Schumm, Cohen, and Forgan (1998) an increase in students' self-esteem was evident because the special education students did not feel stigmatized by their peers (Klingner et al., 1998).

Special Education Legislation

Education for All Handicapped Children Act (PL 94-142)

The passage of PL 94-142 provided learning-disabled students with opportunities, along with support, in the general education program. The law maintained that learning-disabled students would be provided an education in an environment similar to the norm while also meeting their individual needs (Schumm & Vaughn, 1995). Unfortunately this was not always the case because students in many school districts received their academic services by pull-out programs that were either self-contained classrooms or special education resource classrooms. Research

addressing the effectiveness of pull-out programs was almost nonexistent at this point (Schumm & Vaughn, 1995).

According to Zigmond (2003) there have been many research studies that addressed the issue regarding the best placement for students with disabilities. Despite the number of studies over the past 3 decades, the question remained as to the location of the supporting data for these studies. Researchers continued to question where the best placement was for students with disabilities, but the factor was not *where* but rather *how* they were educated. The Individual Education Program (IEP), a legal document, created an educational plan based on the individual needs of the student. The plan specified those needs requiring accommodations (Zigmond, 2003). Particular sections of the Education for All Handicapped Children Act were changed throughout the years after several reauthorizations.

United States Senator Harrison Williams was responsible for presenting the bill for this law to the Senate. Williams wanted all students with disabilities to be provided the right to a public education alongside their peers (Yell et al., 1998). In 1975 PL 94-142, the Education for All Handicapped Children's Act, set up the specifics regarding the identification of special education students and development of the IEP. This law also ensured the implementation of these services. Testing for identification of a special education student had to be free from bias and school personnel were required to use multiple assessments to determine need. The students had a right to be placed in the LRE that provided an educational setting as close as feasible and possible as that of their peers. The students' IEP was written appropriately for their specific needs and abilities and the student was protected by due process of the law in the implementation

of the IEP (Osgood, 2005). When this law came up for reauthorization in 1990, Congress addressed further issues concerning disabilities.

Individuals with Disabilities Education Act (IDEA)

With its reauthorization in 1990, PL 94-142 was renamed the IDEA and broadened the definition of disabilities to include autism and traumatic brain injury. Various related services were also added. In 1994 Congress addressed the reauthorization of IDEA and included students with disabilities in the regular classroom. When IDEA was again reauthorized in 1997 it included the protection of students with disabilities that may result in violent behavior. The reauthorization also improved parent participation and their relationships with the schools concerning special education.

When IDEA was originally enacted, Congress discovered many students with disabilities were not being included in the same environment with their peers. This reauthorization stressed the importance of inclusion (In-gov, 2004). The courts viewed the regular classroom as the LRE (Osgood, 2005). Students were permitted to be educated in the LRE that was now referred to as inclusion (Waldron, 1996). The LRE clause was added to end segregation of special education students. McLeskey and Pacchiano (1994) discovered there was little movement toward educating special education students in the regular classroom. Between 1979 and 1989 they found the trend to be educating these students in *more* rather than *less* restrictive settings. Many students with severe disabilities did not have the same access as the students with mild or moderate disabilities (Osborne & Dimattia, 1994).

According to Hagan-Burke and Jefferson (2002) one of the assumptions many educators make about the LRE is that it always means the general education setting. LRE is following certain procedures in determining which placement will best meet the needs of the student. When the student is automatically placed in the general education classroom a violation of a free and appropriate public education (FAPE) occurs because it may not necessarily be the most appropriate.

The U.S. Department of Education (ED) provides funding to school districts to assist with the support of educating students with disabilities. Section 504 of the *Rehabilitation Act* of 1973 required districts to provide a FAPE to all students with disabilities regardless of nature or severity. Students with disabilities as defined by IDEA are entitled to receiving a FAPE. For special education students the term *appropriate* refers to an education that meets their individual needs, an education with nondisabled students, a periodic reevaluation to determine continued need, and procedural safeguards allowing parents or guardians to challenge decisions (ED.gov, 2010).

In 2004 Congress reauthorized IDEA and renamed it the Individuals with Disabilities Education Improvement Act (IDEIA) (Daniel, 2008). IDEIA provided approximately six million students in public school systems the billions of dollars necessary for states to provide these students opportunities to be successful in their education. Students with disabilities were provided a FAPE by states in exchange for the federal funding.

Response to Intervention (RTI)

Fuchs and Fuchs (2006) reported that a major change of IDEIA was that it provided practitioners with an alternate method for identifying students with learning disabilities. The discrepancy between a student's intelligence quotient (IQ) and achievement score was used to determine a learning disability. This discrepancy was frequently criticized as atheoretical and allowed states to specify these discrepancies differently (Lyon, 1987; Willson, 1987). RTI provided another method for identification and allowed a means of providing early intervention to all children who were at risk for failure. After at-risk students were identified, a benchmark was developed by practitioners and how well the student responded to the instructional methods was measured. The students were assessed with a standardized achievement instrument. If they failed to reach the previously set benchmark, they were exposed to a more intense method of instruction. Fuchs and Fuchs also noted that the IQ-achievement discrepancy model had been criticized and often blamed for the rising special education enrollments. Two major criticisms were that students had to fail in order to qualify as learning-disabled and the label of learning-disabled may not be appropriate because the poor performance of the students could be blamed on poor teaching.

An investigation by McLeskey, Henry, and Axelrod (1999) used data from the *Reports to Congress* to compare the placement of learning-disabled students in inclusive settings across the U.S. The data from school years 1988-89 through 1994-95 indicated placement practices varied considerably across the U.S. To simplify data interpretation a Cumulative Placement Rate (CPR) was used. CPR was an index reflecting the number of learning-disabled students who are educated in a particular

setting per 1,000 school-age children in the U.S. When the data were interpreted, these investigators discovered for the state of Tennessee the CPRs were: 29 for general education classes; 27 for resource rooms; 8 for separate classes; and 1 for separate schools. In contrast, the state of Texas had CPRs of: 9 for general education classes; 45 for resource rooms; 10 for separate classes; and 0 for separate schools. The data from their investigation supported the view that learning-disabled students are being educated in less restrictive settings, but over this 6-year period separate class settings had increased (McLeskey et al., 1999).

No Child Left Behind Act (NCLB)

Signed into law in 2002 NCLB, a reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA), set high standards for all students, including those with disabilities. This federal law clearly stated that students with disabilities were required to meet the same high academic standards as their nondisabled peers. This law signed by President George W. Bush required all students, regardless of subgroup, to score in the "proficient" range on state standards in all subject areas by the year 2014. The result of this act was a push for full inclusion to prepare all students to reach proficiency, thus requiring changes in special education services. The NCLB act also mandated that students with disabilities participate in state assessments with accommodations as needed (Daniel, 2008). Along with the mandate, states were required to bring all students, disabled or not, to a proficient level of achievement. Supporters of disabled children were pleased with this mandate because it meant

students with disabilities were moved into the general education classrooms for more reasons than simply socialization (Daniel, 2008).

According to Daniel (2008) NCLB caused some confusion with regards to the interpretation of FAPE because the law required all students be held to high standards through assessments. The Supreme Court ruled against the complainant in a landmark case, *Board of Education of the Hendrick Hudson Central School District v. Rowley* (1982), regarding the interpretation of the Education for All Handicapped Children Act's mandate of an appropriate education. The court ruled in favor of the school district and interpreted the Act to mean students received free access to a basic education, resulting in some benefit from that opportunity (Hudgins & Vacca, 1995). As more parents challenged the meaning of FAPE in court, few cases have resulted in their favor. Little has changed in the interpretation of FAPE since the case of *Rowley* (Daniel, 2008).

Cole (2006) reported some schools did not make Adequate Yearly Progress (AYP) because the subgroup reported as students with disabilities failed to perform high enough on yearly assessments. Students with disabilities were one of the subgroups whose data must be disaggregated in the calculation of a school's AYP. If this subgroup failed to attain the AYP, the school did not make the AYP (NCLB Act, 2001). Cole (2006) addressed the possibility that NCLB conflicted with IDEIA and argued that NCLB focused on educational benefits of students with disabilities whereas IDEIA focused on their educational gains. The main argument was how NCLB forced students to participate in assessments based on standards for their grade level rather than their ability level. The students with disabilities could make progress toward grade-level

proficiencies over time but not at the same rate as their peers. Reder (2004) stated NCLB only recognized a completion of 4 years of high school as graduation success, whereas IDEA believed students would complete high school if they were allowed more time.

Reder (2004) found discrepancies when she compared NCLB with IDEA and criticized the proposals that could help IDEA fit neatly into the NCLB act. Parents, along with supporters of students with disabilities, were thankful their students were included by NCLB because they finally were considered part of the school. The authors of NCLB maintained that the law applied to all children but never considered IDEA that governed how students with disabilities were instructed and assessed for progress. Reder reported that the chief complaint by schools, after the first year of reporting assessment results, was the only reason they could not make AYP was because of the students with disabilities. According to Allbritten, Mainzer, and Ziegler (2004) when students with disabilities could not attain AYP, the school was punished. There was the distinct possibility that students with disabilities had become the scapegoats for the school's inability to reach AYP.

The authors of the NCLB act included students with disabilities into the act, but they failed to consider the issues of these students or the IDEA (Reder, 2004). NCLB had heightened the already negative attitudes toward special education. When students with disabilities required additional resources to attain AYP, some general education parents and educators viewed this as taking resources away from the general education population (Allbritten et al., 2004). Another issue with NCLB was the law was based on an old normative model school system. According to Allbritten until systems

switch to a student-centered model, the percentage of schools meeting the demands of AYP will not occur.

Thurlow (2004), a former director of the National Center on Educational Outcomes, stated she agreed schools should include these students in their yearly assessments and accountability. Thurlow testified before the Committee on Education and the Workforce in the House of Representatives regarding the inclusion of students with disabilities in the assessment and accountability provisions of NCLB. Thurlow (2004) testified that she had witnessed students with disabilities achieving large gains in both reading and math on state assessments. She further believed the issue did not lie in the assessment but rather in how the students received their instruction and support. According to Thurlow the way in which the students with disabilities received their accommodations and modifications in the classroom directly affected the academic progress they made.

Regular Education Initiative (REI)

The Regular Education Initiative (REI) was the nation's effort to combine regular education and special education into a single system for all children (Waldron, 1996). REI emerged in the late 1980s as a symbol to increase the integration of students with disabilities into the mainstream by restructuring the educational system and how it includes special education (Osgood, 2005). Forness and Kavale (2000) reported the LRE mandate brought change to the special education program when students were placed in the pull-out classroom for instruction. When at least half of the school day was spent in the general education classroom, the students were considered to be

mainstreamed. According to Osgood (2005) in the 1980s Madeleine Will, then Assistant Secretary for the Office of Special Education and Rehabilitation Services in the United States Department of Education, realized the mandate for excellence in our educational system stemmed from the report, *A Nation at Risk,* and began her fight for change. Will (1986) declared the education of students with disabilities was the responsibility of both the regular educator and the special educator.

When the REI attempted to make changes involving regular education and special education, the two groups most directly affected by this change, educators and students were the ones excluded from any discussions (Davis, 1989). According to Davis (1989) students continued to be the victims in the REI debate because the students had not failed; the educational system had failed the students. A major flaw in planning and implementation of instruction in a totally integrated classroom was failing to gain input from the regular classroom teachers. Most of the regular classroom teachers had little or no training in special education (Osgood, 2005). Despite the continued debate over the REI, a consensus has yet to be reached concerning where is the best setting for educating special education students (Hagan-Burke & Jefferson, 2002).

According to Kavale and Forness (2000) the REI was based on three assumptions of the educational systems. The first assumption was special education was not required in the educational system. Because students were considered more alike than different, the need for specialized instruction of these students was not required. The second assumption was that all of these students could be taught by good teachers and, as a result, be provided the quality education they deserved. The

third assumption was the general education classrooms could handle all students without segregation and, therefore, the segregated student would not be discriminated against or viewed as inequitable.

Hagan-Burke and Jefferson (2002) stated that REI supporters argued that pull-out services were not successful and that students with mild disabilities should be educated in the general education classroom. When gathering evidence for the REI, supporters used efficacy studies in which students with disabilities in pull-out classes were compared with those students in the general education classroom. Unfortunately, the validity of those findings were questioned because the students were not randomly selected, which is a major requirement to establish cause and effect (Kavale & Forness, 2000).

History of Inclusion

In the 1960s students with disabilities were served in separate classes or separate schools. However, in addition to the *Brown v. Board of Education* ruling that abolished segregation of students based on race, came the needed supports for those parents concerned about the segregation of students with disabilities (Schattman & Benay, 1992). After the passage of PL 94-142, the goal of the 1970s and 1980s was to successfully integrate students with learning disabilities into the regular education classrooms (McCleskey & Pacchiano, 1994). Data were reported from the United States Department of Education regarding implementation of programs where students with learning disabilities would be placed into one of the following three settings: the regular classroom to receive a majority of their instruction; a resource room with part-

time instruction in their regular classroom; or a separate class where the majority of their instruction took place (McCleskey & Pacchiano, 1994).

The term inclusion did not appear in education until the early 1990s, replacing the term “mainstreaming” that was so often used by educators and parents (Osgood, 2005). Under PL 94-142 inclusion meant the integration of students with mild disabilities into the regular education classroom; however, the present day term was “full inclusion” that meant all students regardless of the severity of their disability were educated in the regular education classroom (Mather & Roberts, 1995). Advocates for full inclusion including learning-disabled students, peers, parents, and teachers commented how nondisabled role models and higher expectations in the classroom were beneficial to students with learning disabilities. These experiences helped change their misconceptions of a full inclusion classroom (Osgood, 2005).

At the turn of the 21st Century the concept of inclusion continued to elicit strong opinions from both the supporters and the opposition. American educators and the public continued to debate their views on this topic. Inclusion had become a symbol of those attempting to break down the distinctions between the educational departments of regular and special education (Osgood, 2005).

State Approaches to Inclusion

State policies regarding the identification of students with learning disabilities varied greatly. Some states required their students to perform at a level one half below their grade level to qualify as learning disabled. Other states required their students to perform at a certain percentage of months behind their age. Yet, other states

considered students as learning disabled when they performed one standard deviation behind achievement level expectancy (Werts, Lambert, & Carpenter, 2009).

According to McLeskey, Hoppey, Williamson, and Rentz (2004) research indicated students with learning disabilities were educated in the general education classroom; however, there was little research data that explained the extent to which states have moved toward the implementation of this practice. As the inclusion debate continued, states surveys revealed a variety of results in their policies governing the practice of inclusion in their school districts. At this time 12 of the 50 states educated most of their learning-disabled students in the general education classroom (McLeskey et al., 2004).

The REI movement proposed for general and special education to be combined into a single department. Several professional organizations supported the idea of one department because this provided many positive aspects for students with learning disabilities. However, some organizations disagreed with the notion of one department because offering one service for learning-disabled students was not appropriate (Katsiyannis & Conderman, 1995).

Classroom Services Available to Learning-Disabled Students

For students with learning disabilities there was a continuum of services available to provide support to help achieve academic success. Possible services available were pull-out resource classrooms, self-contained classrooms, general education inclusion classrooms, and a combination of these services. Research studies compared students with disabilities in the pull-out classrooms with those in the self-contained classrooms

and found pull-out classrooms to be ineffective (Hallahan & Kauffman, 1994). Full inclusion was the practice of serving all students with disabilities in the general education classroom with support as needed. Those who advocated for full inclusion preferred the elimination of the continuum of services available to the students with disabilities (Hallahan & Kauffman, 1994). Studies addressed each type of service and indicated conflicting results regarding student achievement.

Pull-Out

The special education service referred to as pull-out was also known as the resource room. In this type of service the student left the general education classroom and received individualized academic instruction in a separate location that remediated the areas of deficiency (Waldron, 1996). When placed in a resource classroom the students received their special education instruction in this setting for 21% to 60% of the school day. In the 1983 publication, *A Nation at Risk*, critics stated that pull-out programs were ineffective (Kloo et al., 2009).

Advantages of Pull-Out. In the pull-out classroom students tended to receive more individualized instruction than in the general education classroom. Much of the instruction was supported by the special education teacher who may be more prepared than a general education teacher to teach the students with disabilities (Klingner et al., 1998). According to Vaughn and Klingner (1998), some students preferred the pull-out classroom. Some of these reasons were that they learned more, they could concentrate better, the work was easier, and that they enjoyed the fun activities.

In an attempt to determine academic benefits of the pull-out classroom, Ito (1980) studied learning-disabled students at the elementary school level. The students were tested before they were placed in a pull-out classroom, after instruction in the pull-out classroom, and 1 year after being placed full-time in the general education classroom. The results revealed a significant difference in reading achievement. The findings indicated the pull-out classroom placement was effective with improved reading scores; however, the achievement rates were not maintained when the students were placed into the general education classroom.

Disadvantages of Pull-Out. Moody, Vaughn, Hughes, and Fischer (2000) reported the IDEA mandated that students with disabilities receive specific instruction designed to meet their unique needs. When this was mandated in 1975, schools pulled students with disabilities out of the regular classroom and addressed their specific needs in reading in the resource classroom. Unfortunately, these students often were instructed as whole groups rather than as individuals and thus did not receive the individualized intensive reading instruction they required. Moody et al. (2000) discovered that in a resource classroom students instructed in large groups had educational gains of less than satisfactory. Resource rooms cannot provide the individualized instruction that special education students need. The results of their study revealed little growth in the students' reading scores.

In a similar study Swanson and Vaughn (2010) asserted that the students in a resource classroom received a major portion of instruction as a whole group rather than as individuals, resulting in a lack of improvement in word reading or comprehension

scores. Because most students with learning disabilities in reading faced difficulty with phonological awareness, they required this type of individual instruction for improved reading ability. Although the resource classroom teacher implemented the use of individualized instruction, along with independent grouping instruction, no statistically significant differences among reading scores were found. The students made some improvement but not at the rate necessary to close the achievement gap between students with and without learning disabilities.

In a longitudinal study designed to determine the long-term effects of students who received services in a pull-out classroom, Bentum and Aaron (2003) discovered no improvement in reading scores of students over both a 3- and 6-year period. The reading scores revealed no significant differences in pre- and posttesting except for a significant loss in spelling achievement. According to Bentum and Aaron (2003) the results of the study were consistent with the results of other researchers.

Madeleine C. Will (1986), former Assistant Secretary for the Office of Special Education and Rehabilitative Services at the U.S. Department of Education, stated that there were limitations regarding the pull-out classroom. Will reported the pull-out classroom failed to meet the students' academic instructional needs and indicated they were placed there because they were unable to learn in the general education classroom. She also indicated that pull-out classrooms separated students from their peers, resulted in lower academic expectations and demonstrated poor academic performance and the students' inability to learn (Will, 1986). According to Brandts (1999) there are better ways to teach special education students than pulling them out of the regular classroom. When students leave the classroom for academics, they miss

valuable instruction that was an important part of community culture. Brandts (1999) stated that students progress just as rapidly when left in the regular classroom to learn as long as proper teacher and student supports are provided.

Inclusion

Inclusion is the placement of students with disabilities in the general education classroom with specialized services as support (Vaughn, Schumm, & Forgan, 1998). Because of the educational reform initiative that mandated students with disabilities meet competency testing requirements, an increased number of students with disabilities were placed in inclusion classrooms (Schmidt, Rozendal, & Greeman, 2002). The classroom teacher has full instructional responsibility as the teacher of record, while the special education teacher assisted in instruction. The students learned the same materials as their nondisabled peers but received assistance from the special education teacher.

Levels of Inclusion

Levels of Inclusion. According to Waldron (1996) there are four levels of inclusion available that were used with students with disabilities. Level I provided only students with mild disabilities participation in the general education classroom for the full school day. Level II allowed students with mild and moderate disabilities participation in the general education classroom. Level III provided for the least number of students to be excluded from the general education classroom by including all students with disabilities except for those with the most severe disabilities. Level IV included all

students with disabilities, from mild to the most severe, and provided teaching assistants and specialists to assist these students in the general education classroom.

Advantages of Inclusion. Vaughn, Schumm, Jallad, Slusher, and Saumell (1994) stated that a responsible inclusive program required certain resources for improved effects on students with disabilities. After interviewing teachers, resources such as additional personnel, computers, and books were discovered to be necessities in breaking the barrier of successful inclusion implementation. Vaughn et al. (1994) used targeted elementary schools in their study and implemented responsible inclusion programs with school-based models that included input from those directly involved. They noted students need not simply be placed in the general education inclusion program but that they should actively participate in the academic instruction that met their instructional needs. Vaughn et al. (1998) remarked that in an inclusion class the focus was on the student. The inclusion experience provided positive experiences for the student, which in turn improved self-esteem. Even though a student was working well below grade level, the social benefits were enough to justify the inclusion placement.

In the review of research on reading instruction in the inclusion classroom Schmidt et al. (2002) noted two factors that contributed to successful achievement of students with disabilities in this setting. The first factor was whether the teacher believed a classroom instructional strategy would work for students with disabilities. The second factor was the level of collaboration among the teachers and students. The programs in which classroom and special education teachers were afforded the time to

collaborate demonstrated successful inclusion programs. In respect to student collaboration, the use of peer tutoring improved student reading skills and the application of academic skills. The students became active participants in their own learning. Because school districts have limited school budgets, the cost of staffing was an additional topic of concern. When staffing costs associated with an inclusion classroom in a Washington school district were studied, Affleck, Madge, Adams, and Lowenbraum (1988) found special education saved thousands of dollars in teacher salaries when the inclusion classroom was implemented. Current inclusion programs were strongly linked to the effective schools research of 1983. Will (1986) reasoned that if the research could improve the general education students' scores, it should be beneficial for all students. She proposed to do away with special education completely and, as a result, all students would fall under one umbrella and thrive in a general education classroom. According to Wang and Baker (2001) students with learning disabilities who were placed in an inclusion classroom earned higher educational gains than those learning-disabled students placed in a pull-out classroom. Hogan-Young (2013) found special education students who received their academic instruction in an inclusion classroom scored higher on standardized testing than the students in the resource room. Additionally, Rea, McLaughlin, and Walther-Thomas (2002) detected the students in an inclusion classroom had higher academic grades and performed better overall on standardized tests than the pull-out students.

Because of the lack of consistent research, Richmond, Aberasturi, Abernathy, Aberasturi, and DelVecchio (2009) compared learning-disabled inclusion students, learning-disabled pull-out students, and their nonlearning-disabled cohorts in the

general education classroom. For overall reading they discovered no significant differences in the students' scores; however, the students in the pull-out classroom had higher achievement scores in their phonemic abilities. Math scores revealed no significant differences among all three groups of students. According to the study the learning disabled students progressed at the same rate regardless of setting but they remained below average in functioning ability. According to Hurt (2012) there is no significant difference in achievement for students with disabilities who were placed in the general education classroom.

When comparing progress in an inclusive setting and a pull-out setting, Waldron and McLeskey (1998) encountered that learning-disabled students participating in an inclusive program made significantly more progress in reading when compared to students served in a pull-out class. Those students with mild disabilities (mild mental retardation) in the inclusive program progressed at a rate comparable to those of the general education students. The investigation by Waldron and McLeskey (1998) confirmed that when students are instructed in a well-developed inclusion class, they can make academic progress comparable to or better than their grade-level peers. While examining severe learning-disabled students, they found the gains made did not differ between the two settings.

According to Affleck et al. (1988) research affirmed that learning-disabled students can spend the entire day, with appropriate academic supports, in the general education classroom. The students experienced academic achievements higher than the students served in a pull-out setting. They observed the integrated classroom was at least as effective as the pull-out classroom. When comparing the progress of

students without disabilities they found no significant differences between the groups. Their conclusion was that the integrated classroom did not have an adverse affect on the students without disabilities.

Disadvantages of Inclusion. As school districts moved toward full inclusion to meet federal and state mandates, some argued that student ability levels must be recognized and not all students with disabilities succeeded in a full-inclusion classroom. Individual ability levels should have been considered when educational programs were planned (Borthwick-Duffy, Palmer, & Lane, 1996). Some students were placed in full-inclusion classrooms based on success stories of previous students with disabilities who participated in a full-inclusion classroom. Borthwick-Duffy et al. (1996) noted that data alone were not provided for a simple conclusion about placement, but rather certain variables were needed to be considered before the student was placed in a particular setting. A full continuum of services needed to remain available for all students. These researchers discovered issues with the results of previous studies regarding full inclusion placement. Benefits were reported in some studies; however, most of the studies did not analyze the gains in achievement the students had obtained. Surveys were conducted with teachers and parents holding personal stakes in the inclusion debate. Generalization of the research results was difficult when the population surveyed was considered. The case studies of the students with disabilities who participated in full inclusion and experienced success should not be generalized to all students with disabilities.

Borthwick-Duffy et al. (1996) noted that one interpretation of full inclusion was for students to be placed in a general education classroom all day if this was appropriate based on their educational needs; however, the opposing view of full inclusion was for all students, regardless of the severity of their disability, be placed in the general education classroom all day. The latter view ignored the students' individual differences, which was one of the principles of PL 94-142.

Affleck et al. (1988) revealed no significant differences in student achievement scores in reading or language over a 3-year period when the same materials and methods were used in a pull-out classroom as well as an inclusion classroom. There were, however, significantly higher mean scores in math for the pull-out classroom students. Based on the significant differences discovered in the data, the inclusion classroom proved beneficial to students as an alternative setting; however, the program was not determined to be a more favorable program over the pull-out classroom.

Originally the goal of the special education pull-out classroom was to provide intensive instruction to remediate areas of student weaknesses and then reintegrate the student back into the general education classroom (Richmond et al., 2009). The pull-out classroom was deemed effective because of increased student achievement rates in reading, but when the students were returned to the mainstream, the reading rates were not maintained (Ito, 1980).

Though several studies indicated both the pull-out classroom and inclusion classroom have positive and negative effects on students with disabilities, Leinhardt and Pallay (1982) noted that students' success was not determined by the setting in which they were served but by what happened in that setting. Pallay stated that educators

needed to focus more on finding effective teaching methods and spend less time on the continued debate regarding which setting produced the higher student achievement.

Though few studies regarding inclusion existed, those that did reported negative effects on academic effectiveness for students with disabilities in the general education inclusion classroom. The reason for this could be blamed on teachers who felt they were not prepared to teach students with disabilities and their lack of time to collaborate with special education teachers (Schumm & Vaughn, 1995).

Opinions of Inclusion and Pull-Out Services

Teacher Opinions

The teaching culture in a school consists of beliefs, values, habits, and certain routines that affect the teachers' views of inclusion (Carrington, 1999). In addition to the school's culture, Carrington (1999) reported that school professionals must have considered the culture of their local community that affected the acceptance and implementation of inclusion settings. Semmel (1991) found that some teachers agreed with the law that students with disabilities had a right to an equal education; however, the teachers' feelings toward inclusion of the students in the general education classroom were negative (Center & Ward, 1987).

The student populations of classrooms had changed for older teachers with more years of experience who knew *how* to teach; however, these teachers discovered they were not prepared to teach this new group of students. The teachers had negative

feelings toward the inclusion of the students with disabilities in their classrooms based on their own feelings of inadequacies (Center & Ward, 1987).

In a study that compared special education service models of inclusion, pull-out, and combined, Marston (1996) discovered teacher opinions were varied. A few of the positive comments from the schools' special education resource teachers concerning the inclusion model were: students do not carry a label; more communications between special education teachers and classroom teachers; better student behavior; and improved student self-esteem. Negative comments included: the students' individual needs are overlooked; the lack of personnel to meet the needs of students; students are significantly behind; and the definition of collaborative roles are difficult to identify thus causing confusion between classroom teachers and special education teachers. Marston reported that the data showed the combined service model was most effective producing academic gains from the 15th to the 20th percentile. The inclusion and pull-out models showed no change. The data supported the idea of a continuum of services for special education students.

Administrator Opinions

Advocates for inclusion thought empirical data were not needed for justification of implementation that resulted in an increase in the number of students placed in inclusive settings (Stainback & Stainback, 1989). Over a 5-year period, from 1987 through 1992, the general education placements of learning-disabled students increased by 95% (Lerner, 1997). The general education teachers agreed with the concept of inclusion; however, they reported a lack of support, materials, and personnel

to successfully implement the program. The school administrator played a crucial role as a supporter to the teachers (Cook, Semmel, & Gerber, 1999).

According to Fullan (1991) an inclusion program succeeded only with the support of the school administrator. The administrator's feelings toward inclusion had a strong influence on implementation. Cook et al. (1999) reported that the results of a questionnaire provided to administrators revealed they had optimistic views of inclusion, but their views contrasted the results of empirical data. Although they agreed that inclusion was the best placement for students with learning disabilities, they also indicated their teachers were not prepared to meet the needs of these students.

While researching school principals' views of inclusion, Praisner (2003) discovered that principals who had more experience around students with disabilities held a more positive attitude toward inclusion. Principals who had received more in-service hours concerning inclusion along with more special education training credits had a more positive attitude toward inclusion of these students.

The results of her study indicated that one in five principals held a positive attitude toward inclusion, while most of them were uncertain. Whether principals agreed with inclusion depended heavily on how it was phrased. If generic and unregulated they agreed, but when it became specific and mandatory the principals disagreed with inclusion (Praisner, 2003).

Parent Opinions

According to Gottlieb and Leyser (1996) the results of an inquiry into parent opinions on whether or not they wanted their child with a disability included in the

general education classroom were mixed. For students with mild disabilities Simpson and Myles (1987) reported parents expressed positive feelings toward the placement of their child in the inclusion classroom as long as educational modifications were made. For students with learning disabilities Green and Shinn (1995) reported parents did not want their children included in the mainstream. Gottlieb and Leyser (1996) reported several variables affected the results when parents' opinions of inclusion were assessed. Some of the variables that affected the results were: whether the parent had a special needs child; whether the parent had a child enrolled in school; or whether the parent's child attended a school with an inclusion program. According to Gottlieb and Leyser (1996) parents expressed the main benefit of inclusion was socialization. It was Gottlieb and Leyser's conclusion that the main disadvantage was the teachers were not qualified; therefore, the students did not receive the individualized instruction as required by law.

In a three-part study of the academic progress of learning-disabled students in an inclusion class Banerji and Dailey (1995) discovered that parent opinions of the inclusion model were mostly positive. When surveyed parents commented that the learning-disabled students were treated the same as their nondisabled peers. Of those parents surveyed 93.1% were satisfied with the services in the inclusion class.

When comparing opinions of parents with learning-disabled students and parents of nondisabled students, Kelly (2001) found that both groups of parents had positive opinions about including the students with disabilities in the regular classroom. Kelly compared the opinions from a study during the 1997-1998 school year with a previous study from the 1996-1997 school year. Although the parents of learning-disabled

students rated inclusion more highly than the other parents, the parents of nondisabled students appreciated the teachers attending to the individual needs of all their students regardless of ability levels.

Student Opinions

With the continued debate over which setting was the most effective for students with disabilities, inclusion or pull-out, some studies focused on student preference regarding the setting. One study used trained interviewers to interview students at the end of the school year using questions developed by the team of researchers (Klingner et al., 1998). While the debate regarding which setting was more productive was highly discussed among professionals, Klinger et al. (1998) discovered students were less emotional regarding their placement. The students who were interviewed preferred the pull-out classroom over the inclusion classroom. Preferences for the pull-out classroom were based on their feelings that their work in this room was easier than the general classroom and therefore they experienced less frustration. According to Vaughn and Klingner (1998) these students also appreciated the quiet place so they could concentrate and the extra help they received in doing their work. This study also revealed that the age of the student had an influence on views of the type of service. The primary students preferred in-class support, whereas the intermediate students preferred the resource classroom. Secondary students preferred the resource room but did not like the negative stigma perceived with going to a resource room (Vaughn & Klingner, 1998).

Summary

This chapter presented a review of literature that provided an in-depth focus on research findings and writings relevant to the history of special education learning-disabled students' intervention services. Aspects reviewed included the history of special education legislation, past and current trends to intervention, the relationship between service provided and achievement rates, and opinions of special education services from students, parents, and teachers. The effectiveness of special education services available to students with learning disabilities was the focus of the review. Though many studies were cited, the lack of empirical data highlights a need for further research regarding student achievement in pull-out and inclusion classrooms.

CHAPTER 3

RESEARCH AND METHODOLOGY

The purpose of this study was to compare the achievement scores in reading/language arts and math of special education learning-disabled students who participated in a general education inclusion classroom with those of special education learning-disabled students who participated in a pull-out classroom. This chapter presents the research design, population, instrumentation, procedures, data analysis, and summary.

Research Design

This research was a quantitative, comparative study of data exploring relationships between groups of students. The study was conducted to determine if there were significant differences in the mean achievement scores of special education learning-disabled students served in general education classrooms as compared to special education learning-disabled students served in pull-out classrooms. Test scores, ex post facto, were compared to determine student progress. Discovery Education Assessment (DEA) scores were collected from student records before and after their participation in each type of special education service. Tennessee Comprehensive Assessment Program (TCAP) scores were collected from the 2012-2013 school year. In addition a Likert-type scale anonymous survey was distributed to fourth and fifth grade teachers with experience teaching students in the inclusion classrooms to gather teacher perspectives on various factors of inclusion.

Research Questions and Null Hypotheses

The following research questions and corresponding null hypotheses were used to guide this study:

1. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in reading/language arts for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

   $H_0$1: There are no significant differences in the 2012-2013 DEA reading/language arts improvement mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

2. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in reading/language arts for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

   $H_0$2: There are no significant differences in the 2012-2013 DEA reading/language arts improvement mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

3. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in math for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$3: There are no significant differences in the 2012-2013 DEA math improvement mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

4. Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in math for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

   $H_0$4: There are no significant differences in the 2012-2013 DEA math improvement mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

5. Do the mean 2012-2013 TCAP proficiency scores in reading/language arts for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

   $H_0$5: There are no significant differences in the 2012-2013 TCAP reading/language arts mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

6. Do the mean 2012-2013 TCAP proficiency scores in reading/language arts for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

   $H_0$6: There are no significant differences in the 2012-2013 TCAP reading/language arts mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

7. Do the mean 2012-2013 TCAP proficiency scores in math for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

   $H_0$7: There are no significant differences in the 2012-2013 TCAP math mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

8. Do the mean 2012-2013 TCAP proficiency scores in math for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

   $H_0$8: There are no significant differences in the 2012-2013 TCAP math mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

9. To what extent do general education teachers support the inclusion of learning-disabled students in the general education classroom?

   $H_0$9: General education teachers do not support the inclusion of learning-disabled students in the general education classroom.

10. To what extent do general education teachers agree that learning-disabled students score higher on TCAP assessments than pull-out students?

    $H_0$10: General education teachers do not agree that learning-disabled students score higher on TCAP assessments than pull-out students.

11. To what extent do general education teachers agree they are professionally prepared to teach learning-disabled students in their classroom?

$H_0$11: General education teachers do not agree they are professionally prepared to teach learning-disabled students in their classroom.

Population

The population for this study consisted of 138 fourth and fifth grade special education students certified as learning-disabled who participated in either a general education inclusion classroom or a special education pull-out classroom for academic lessons in math and reading/language arts. These special education students were identified as learning-disabled based on a discrepancy between their intelligence quotient (IQ) and their achievement scores. In the state of Tennessee districts were given the choice of using the IQ/Achievement Discrepancy Method of Identification for learning-disabled students or the Response to Intervention Method of Identification. The school district in this study used the discrepancy model to identify learning-disabled students. The IQ score was derived after being assessed with the Wechsler Intelligence Scale for Children (WISC). The students' achievement scores were the result of a Woodcock-Johnson Tests of Achievement Revised (WJ-R) one-on-one assessment to measure basic academic skills, fluency, and applications. Students were assigned to either inclusion or pull-out based on the decision of a multidisciplinary team (M-team) comprised of parents, school administrators, a psychologist, and teachers. The placement decision was based on the severity of the gap between the IQ and achievement scores and the student's unique needs. All of the students who participated attended rural schools from an East Tennessee school system. The scores in the study were from both male and female students. The population of teachers

surveyed in this study consisted of fourth and fifth grade teachers with experience teaching learning-disabled students in the inclusion classroom. The survey was strictly voluntary and responses were kept confidential.

Instrumentation

The TCAP exam was a timed multiple choice assessment that measured student performance in reading/language arts, math, science, and social studies. The TCAP tests were state mandated exams administered to students in grades 3-8 each spring. The tests were administered to students over a 4-day period, and all administrators adhered to the same test procedures. The TCAP tests provided criterion-referenced information that was measured against specific state standards. Each item on the test was linked to a performance indicator that corresponded with objectives from the state of Tennessee's curriculum standards. Answers were scanned and scored by machine and listed as a scale score as well as overall proficiency in each content area. Discovery Education Assessments (DEA) were administered by classroom teachers in September and May. The total of correctly answered items was compared in reading/language arts and math. Statistics describing the TCAP test and the DEA have determined each to be reliable and valid. DEA testing took place in the fall and spring of the 2012-2013 school year. The DEA assessment was administered to the students on the computer. The teacher survey consisted of 18 questions. The first 7 questions were to gather general teacher information and the next 11 were questions regarding inclusion using a 5-point Likert-type scale.

Data Collection

Approval for this study was first requested from the Institutional Review Board (IRB) at East Tennessee State University. When approval was received from the IRB, approval from the Director of Schools of the participating school system was requested and given. Scores from the DEA and TCAP tests were collected from online state databases after approval was granted by both parties. Student DEA and TCAP scores were collected from state database student profile reports for each special education student with a learning-disabled certification. To maintain score anonymity, DEA and TCAP scores and special education service locations were provided to the researcher by the school district without any identifying information. After approval by both parties was granted, teacher surveys were hand delivered to schools in a sealed envelope with instructions to give one to each fourth and fifth grade classroom inclusion teacher. When completed, the survey was sealed in an envelope and mailed to the researcher.

Data Analysis

TCAP (CTB McGraw-Hill, 2012) achievement scores in reading/language arts and math were compared using scores as reported from the end of the 2012-2013 school year. Improvement scores (posttest minus pretest) from DEA (Discovery Education Assessment, 2012) in reading/language arts and math as reported in September 2012 and May 2013 were compared. A series of one-sample *t* tests were used to address research questions 1 through 8 to determine if there were significant differences in reading/language arts and math TCAP mean proficiency scores, and reading/language arts and math DEA mean improvement scores with regard to location

of special education service. The independent variables were the types of service. The dependent variables were the TCAP proficiency scores and DEA improvement scores. The researcher used a one-sample *t* test using the pull-out mean score as the test value because one variable revealed a smaller number of students. A series of one-sample *t* tests were used to address research questions 9 through 11 to determine the extent general education teachers agree with inclusion and whether they are professionally prepared. Data were analyzed with the IBM-SPSS with all data analyzed at the .05 level of significance.

Summary

The methodology and procedures used in this study were presented in Chapter 3. The research design and population were also described. Data from the State report of TCAP tests and DEA were evaluated for comparison.

CHAPTER 4

FINDINGS

The purpose of this study was to compare the differences in TCAP mean proficiency scale scores and DEA improvement scores for fourth and fifth grade learning-disabled students in reading/language arts and math who received academic services in an inclusion setting or a pull-out setting. The dependent variables were the TCAP proficiency scale scores and the DEA improvement scores. The independent variables were the locations where the students received their academic instruction. A one sample *t* test was conducted for research questions 1-8 using the mean scores for pull-out special education students as the test value.

The researcher also surveyed fourth and fifth grade inclusion teachers to gain a perspective on the extent that they agree or disagree with various factors of inclusion. The researcher sent 82 surveys to teachers who met the criteria for the study. Thirty-four of the 82 surveys were returned. A one sample *t* test was conducted for research questions 9-11 using the mid score on the Likert-type scale survey as the test value.

The students who participated in this study attended rural schools from an East Tennessee school system. The scores used in the study were from 138 male and female special education students certified as learning-disabled. The population consisted of 67 fourth grade students and 71 fifth grade students. Of the fourth grade students 61 were served in an inclusion classroom and 6 were served in a pull-out classroom. Of the fifth grade students 64 were served in an inclusion classroom and 7 were served in a pull-out classroom. All of the students have IQs in the average range. That is their ability level. The achievement scores from the WJ-R indicate where they

perform academically. All members of the M-team discuss and decide which location would be most beneficial to the student. Because of the difference in the size of the two groups and other limitations noted in Chapter 1, the results should be interpreted with caution.

Research Question 1

Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in reading/language arts for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$1: There are no significant differences in the 2012-2013 DEA reading/language arts improvement mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion DEA improvement scores to determine whether their mean was significantly different from 31, the mean for pull-out DEA improvement scores. The sample mean of 42.60 (SD = 52.65) was not significantly different from 31, $t(57) = 1.68, p = .10$. The 95% confidence interval for the inclusion DEA improvement mean ranged from 28.76 to 56.45. The effect size *d* of .22 indicates a small effect. The results indicate the learning-disabled students performed with similar results regardless of location of special education service. Figure 1 shows the distribution of fourth grade learning-disabled inclusion students' DEA reading/language arts improvement scores.

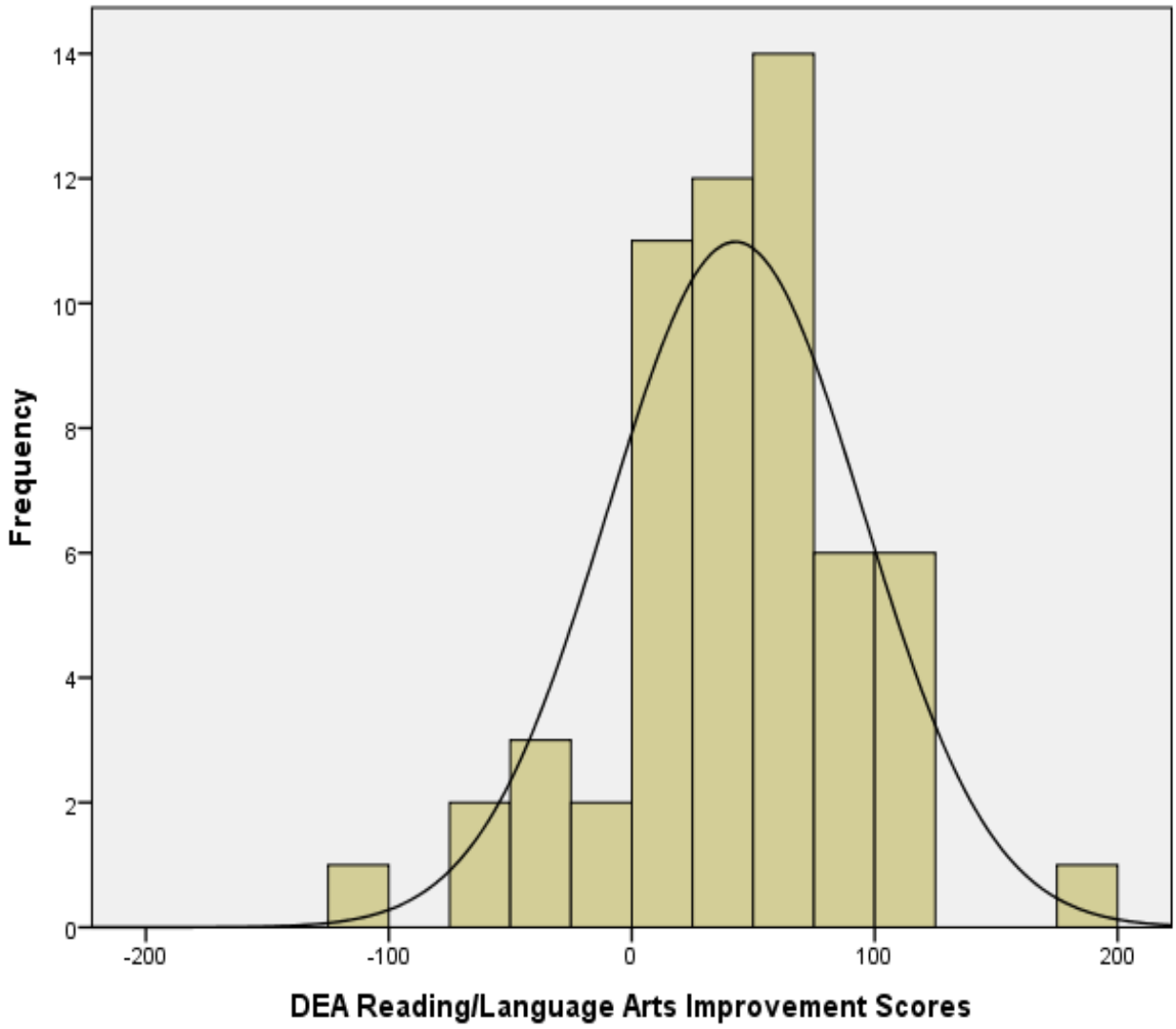

Figure 1. Distribution of DEA Reading/Language Arts improvement scores for fourth grade learning disabled inclusion students

Research Question 2

Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in reading/language arts for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$2: There are no significant differences in the 2012-2013 DEA reading/language arts improvement mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion DEA improvement scores to determine whether their mean was significantly different from -23, the mean for pull-out DEA improvement scores. The sample mean of 6.78 (SD = 50.86) was significantly different from -23, $t(57) = 4.46, p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval for the inclusion DEA improvement scores mean ranged from -6.60 to 20.15. The effect size *d* of .59 indicates a medium effect. The results indicate the learning-disabled students in the inclusion setting performed significantly higher than the students in the pull-out setting. Figure 2 shows the distribution of fifth grade learning-disabled inclusion students' DEA reading/language arts improvement scores.

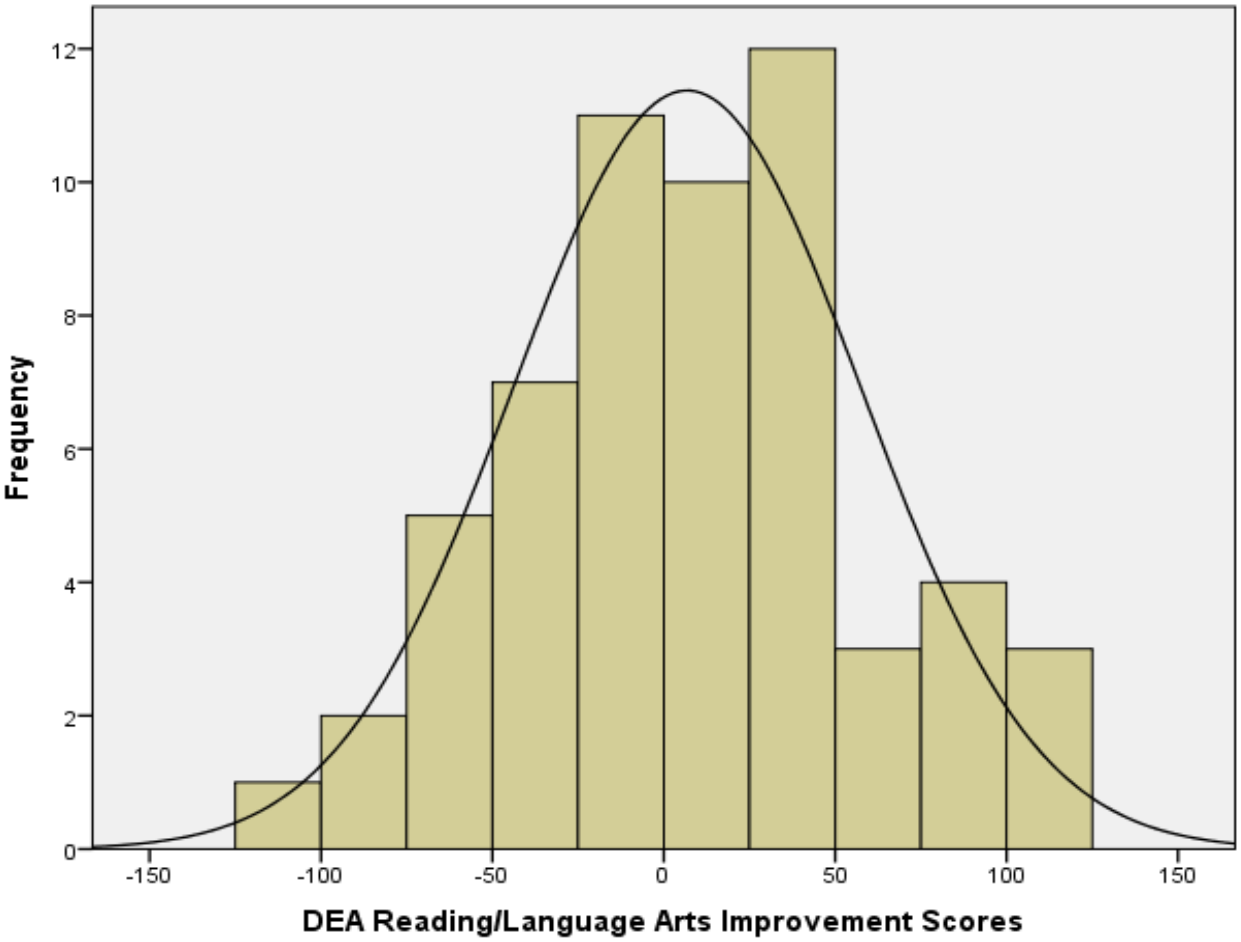

Figure 2. Distribution of DEA Reading/Language Arts improvement scores for fifth grade learning-disabled inclusion students

Research Question 3

Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in math for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$3: There are no significant differences in the 2012-2013 DEA math improvement mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion DEA math improvement scores to determine whether their mean was significantly different from 37, the mean for pull-out DEA math improvement scores. The sample mean of 81.50 (SD = 54.62) was significantly different from 37, $t(58) = 6.21, p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval for the inclusion DEA math improvement mean ranged from 67.14 to 95.86. The effect size *d* of .81 indicates a large effect. The results indicate the learning-disabled students in the inclusion setting performed significantly higher than the students in the pull-out setting. Figure 3 shows the distribution of fourth grade learning-disabled inclusion students' DEA math improvement scores.

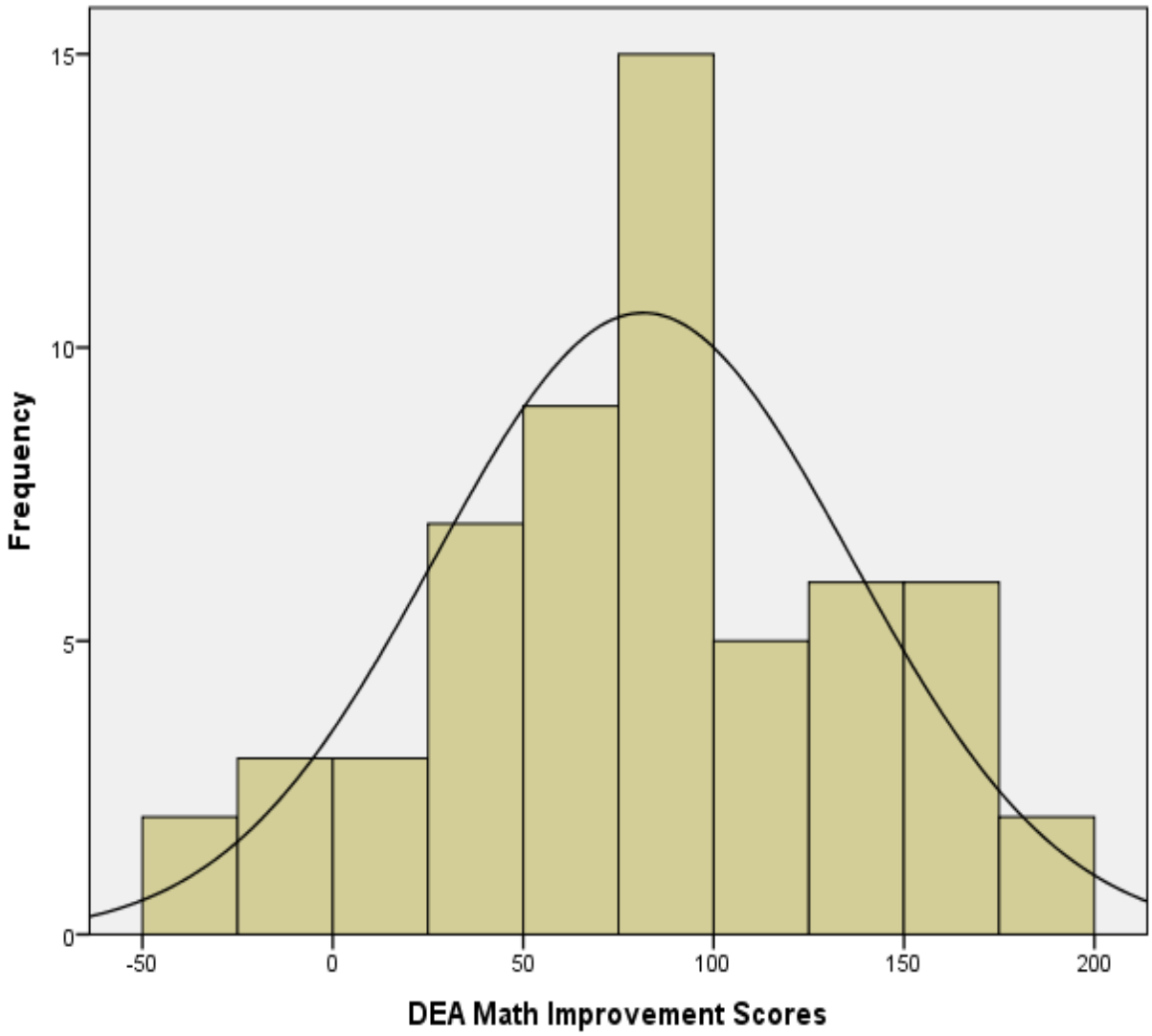

Figure 3. Distribution of DEA Math improvement scores for fourth grade learning-disabled inclusion students

Research Question 4

Do the mean 2012-2013 DEA improvement scores (posttest minus pretest) in math for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$4: There are no significant differences in the 2012-2013 DEA math improvement mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion DEA improvement scores to determine whether their mean was significantly different from 62, the mean for pull-out DEA improvement scores. The sample mean of 61.16 (SD = 60.94) was not significantly different from 62, $t(56) = -.10, p = .92$. The 95% confidence interval for the inclusion DEA improvement mean ranged from 44.99 to 77.33. The effect size *d* of -.01 indicates a small effect. The results indicate the learning-disabled students performed with similar results regardless of location of special education service. Figure 4 shows the distribution of fifth grade learning-disabled inclusion students' DEA math improvement scores.

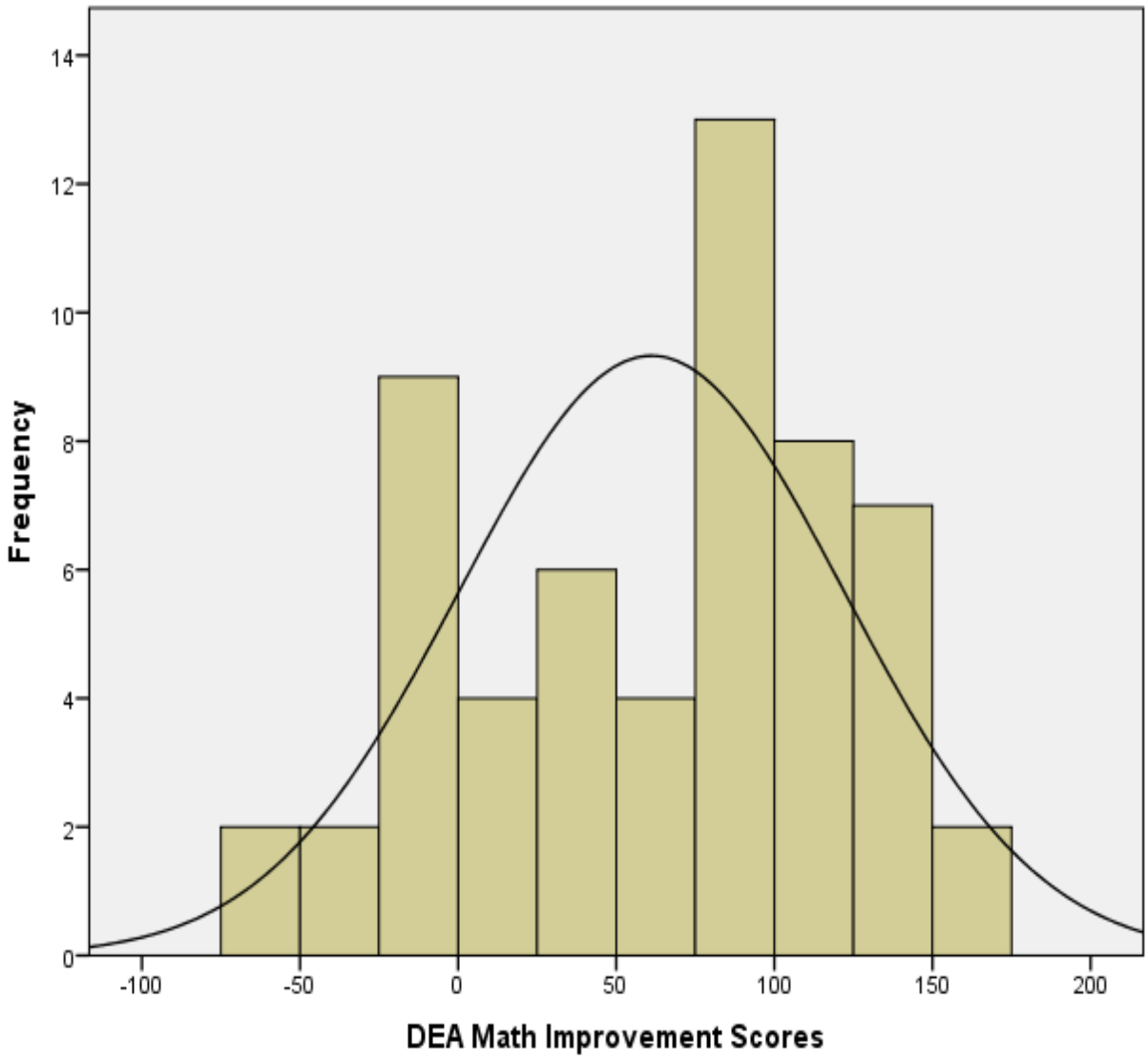

Figure 4. Distribution of DEA Math improvement scores for fifth grade learning-disabled inclusion students

Research Question 5

Do the mean 2012-2013 TCAP proficiency scores in reading/language arts for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$5: There are no significant differences in the 2012-2013 TCAP reading/language arts mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion TCAP reading/language arts scores to determine whether their mean was significantly different from 465, the mean for pull-out TCAP reading/language arts scores. The sample mean of 669.61 (SD = 151.76) was significantly different from 465, $t(60) = 10.53, p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval for the inclusion TCAP reading/language arts mean ranged from 630.74 to 708.47. The effect size *d* of 1.35 indicates a large effect. The results indicate the learning-disabled students in the inclusion setting performed significantly higher than the students in the pull-out setting. Figure 5 shows the distribution of fourth grade learning-disabled inclusion students' TCAP reading/language arts scale scores.

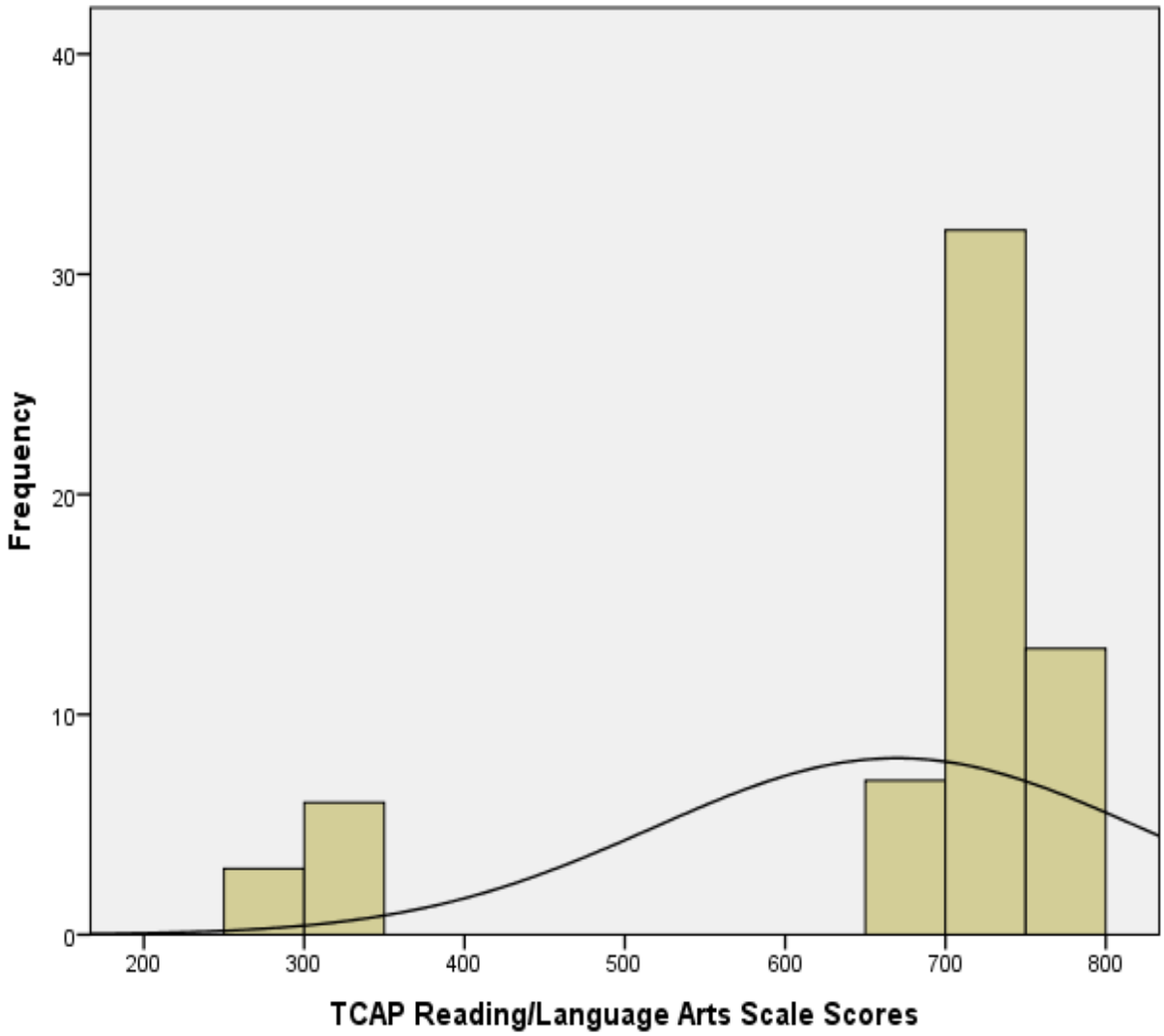

Figure 5. Distribution of TCAP Reading/Language Arts scale scores for fourth grade learning-disabled inclusion students

Research Question 6

Do the mean 2012-2013 TCAP proficiency scores in reading/language arts for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$6: There are no significant differences in the 2012-2013 TCAP reading/language arts mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion TCAP reading/language arts scores to determine whether their mean was significantly different from 539, the mean for pull-out TCAP reading/language arts scores. The sample mean of 669.80 (SD = 148.09) was significantly different from 539, $t(63) = 7.07, p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval for the inclusion TCAP reading/language arts mean ranged from 632.81 to 706.79. The effect size *d* of .88 indicates a large effect. The results indicate the learning-disabled students in the inclusion setting performed significantly higher than the students in the pull-out setting. Figure 6 shows the distribution of fifth grade learning-disabled inclusion students' TCAP reading/language arts scale scores.

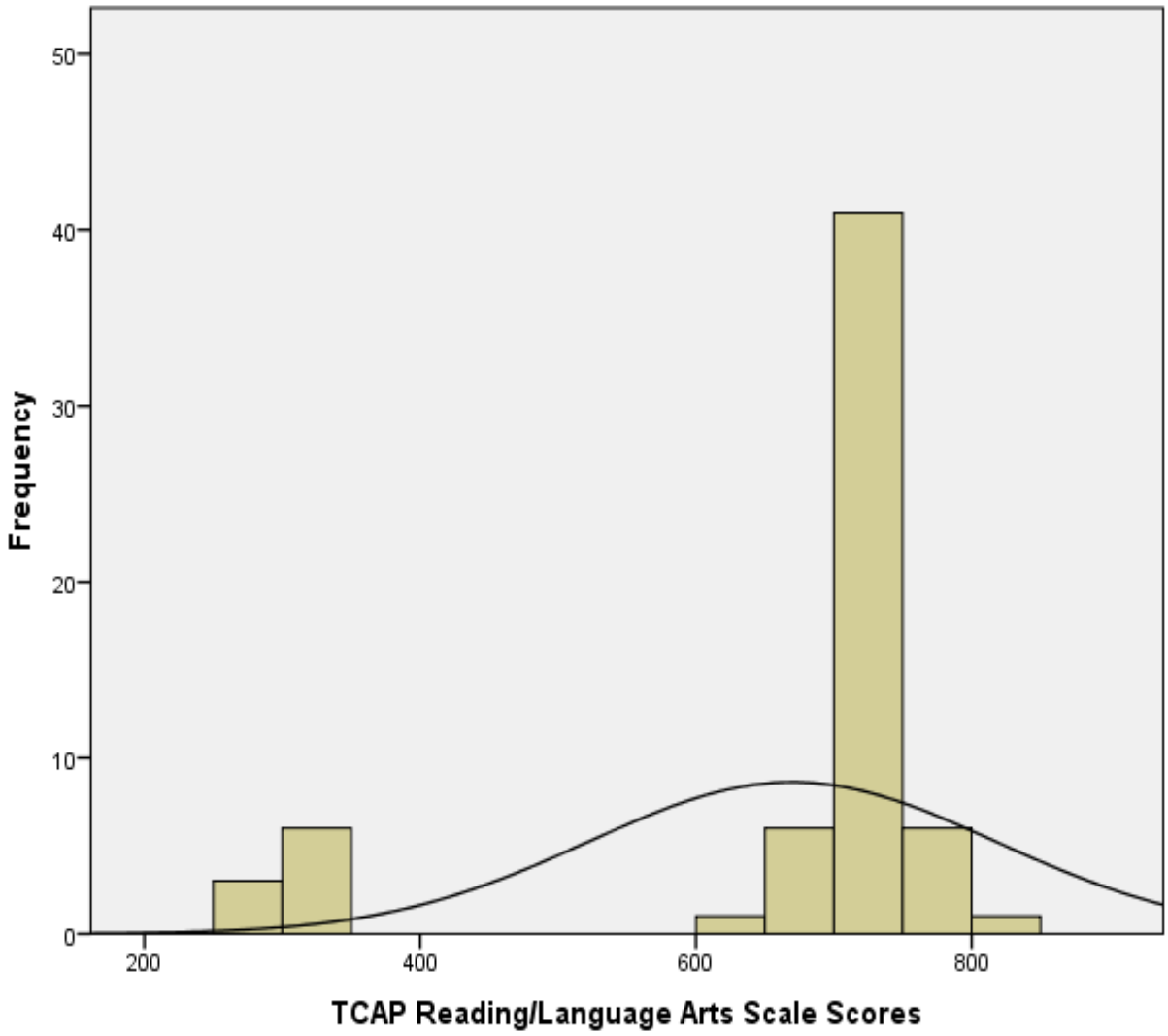

Figure 6. Distribution of TCAP Reading/Language Arts scale scores for fifth grade learning-disabled inclusion students

Research Question 7

Do the mean 2012-2013 TCAP proficiency scores in math for special education learning-disabled fourth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$7: There are no significant differences in the 2012-2013 TCAP math mean scores of special education learning-disabled fourth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion TCAP math scores to determine whether their mean was significantly different from 451, the mean for pull-out TCAP math scores. The sample mean of 662.34 (SD = 150.78) was significantly different from 451, $t(60) = 10.95, p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval for the inclusion TCAP math mean ranged from 623.73 to 700.96. The effect size *d* of 1.40 indicates a large effect. The results indicate the learning-disabled students in the inclusion setting performed significantly higher than the students in the pull-out setting. Figure 7 shows the distribution of fourth grade learning-disabled inclusion students' TCAP math scale scores.

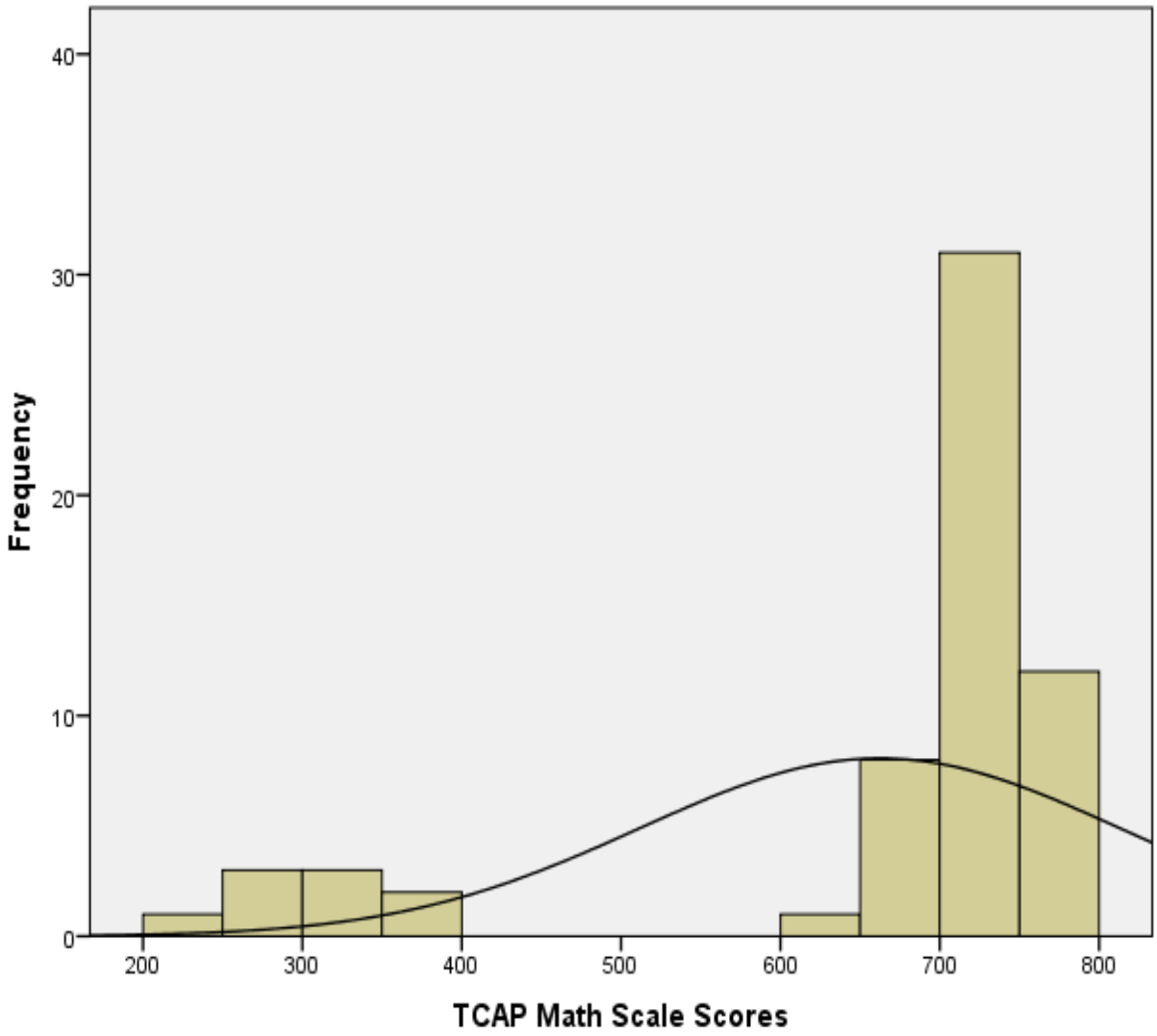

Figure 7. Distribution of TCAP Math scale scores for fourth grade learning-disabled inclusion students

Research Question 8

Do the mean 2012-2013 TCAP proficiency scores in math for special education learning-disabled fifth grade students differ significantly with regard to location of special education service (inclusion or pull-out)?

$H_0$8: There are no significant differences in the 2012-2013 TCAP math mean scores of special education learning-disabled fifth grade students with regard to location of special education service.

A one-sample *t* test was conducted on the inclusion TCAP math scores to determine whether their mean was significantly different from 535, the mean for pull-out TCAP math scores. The sample mean of 679.95 (SD = 149.64) was significantly different from 535, $t(63) = 7.75, p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval for the inclusion TCAP math mean ranged from 642.57 to 717.33. The effect size *d* of .87 indicates a large effect. The results indicate the learning-disabled students in the inclusion setting performed significantly higher than the students in the pull-out setting. Figure 8 shows the distribution of fifth grade learning-disabled inclusion students' TCAP math scale scores.

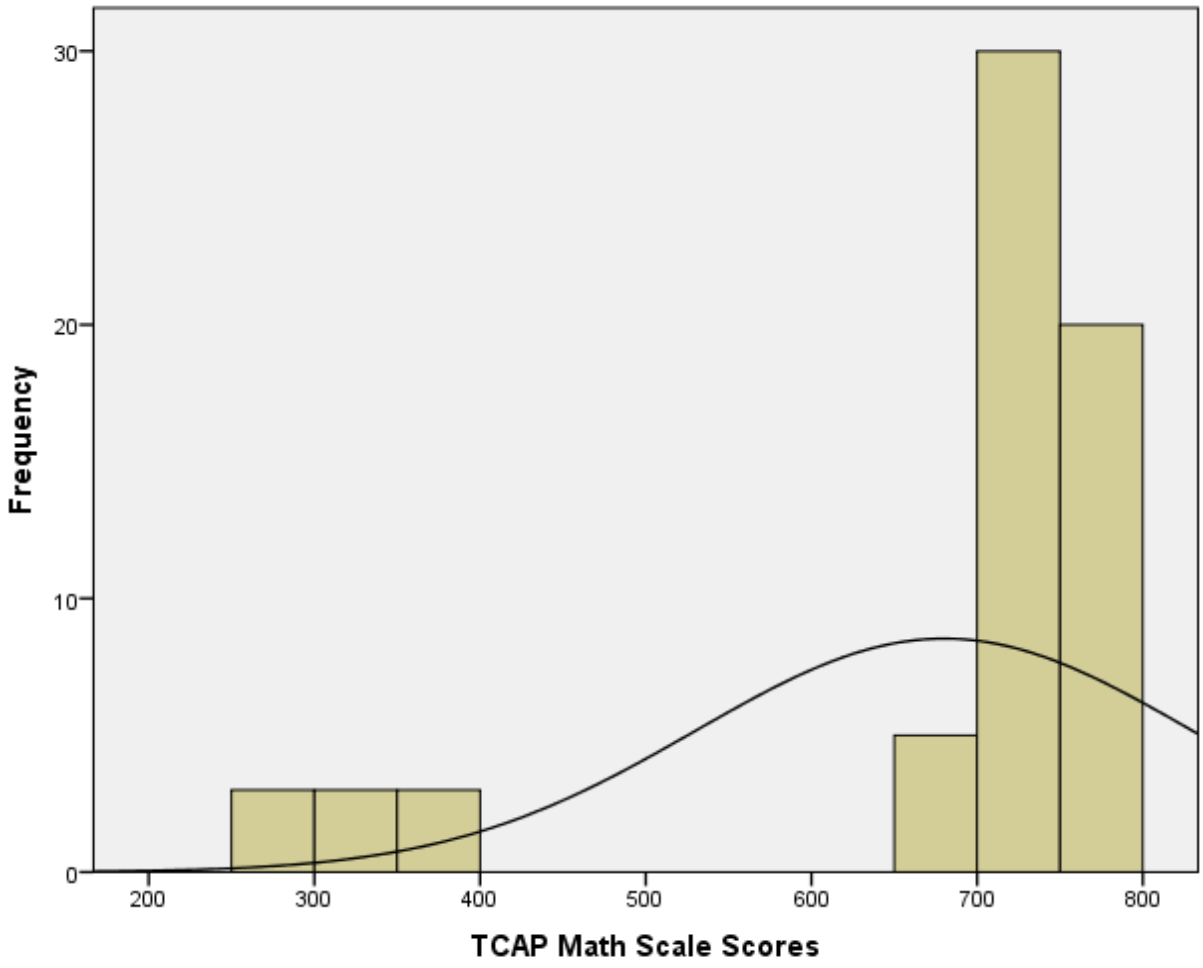

Figure 8. Distribution of TCAP Math scale scores for fifth grade learning-disabled inclusion students

For research questions 9-11, a score greater than 3 indicated support for inclusion by general education teachers and a score less than 3 indicated a negative perception of inclusion.

Research Question 9

To what extent do general education teachers support the inclusion of learning-disabled students in the general education classroom?

$H_0$9: General education teachers do not support the inclusion of learning-disabled students in the general education classroom.

A one-sample *t* test was conducted on the teacher survey responses to determine whether their mean was significantly different from 3, the mid score on the Likert-type scale. The sample mean of 3.83 (SD = .89) was significantly different from 3, $t(28) = 5.01$, $p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval of difference was .49 to 1.17. The effect size $\eta^2 = .21$ indicates a large effect. The results indicate the general education teachers agree that learning-disabled students should be included in the general education classroom. Figure 9 shows the distribution of teacher responses that indicate the extent they support the inclusion of learning-disabled students in the general education classroom.

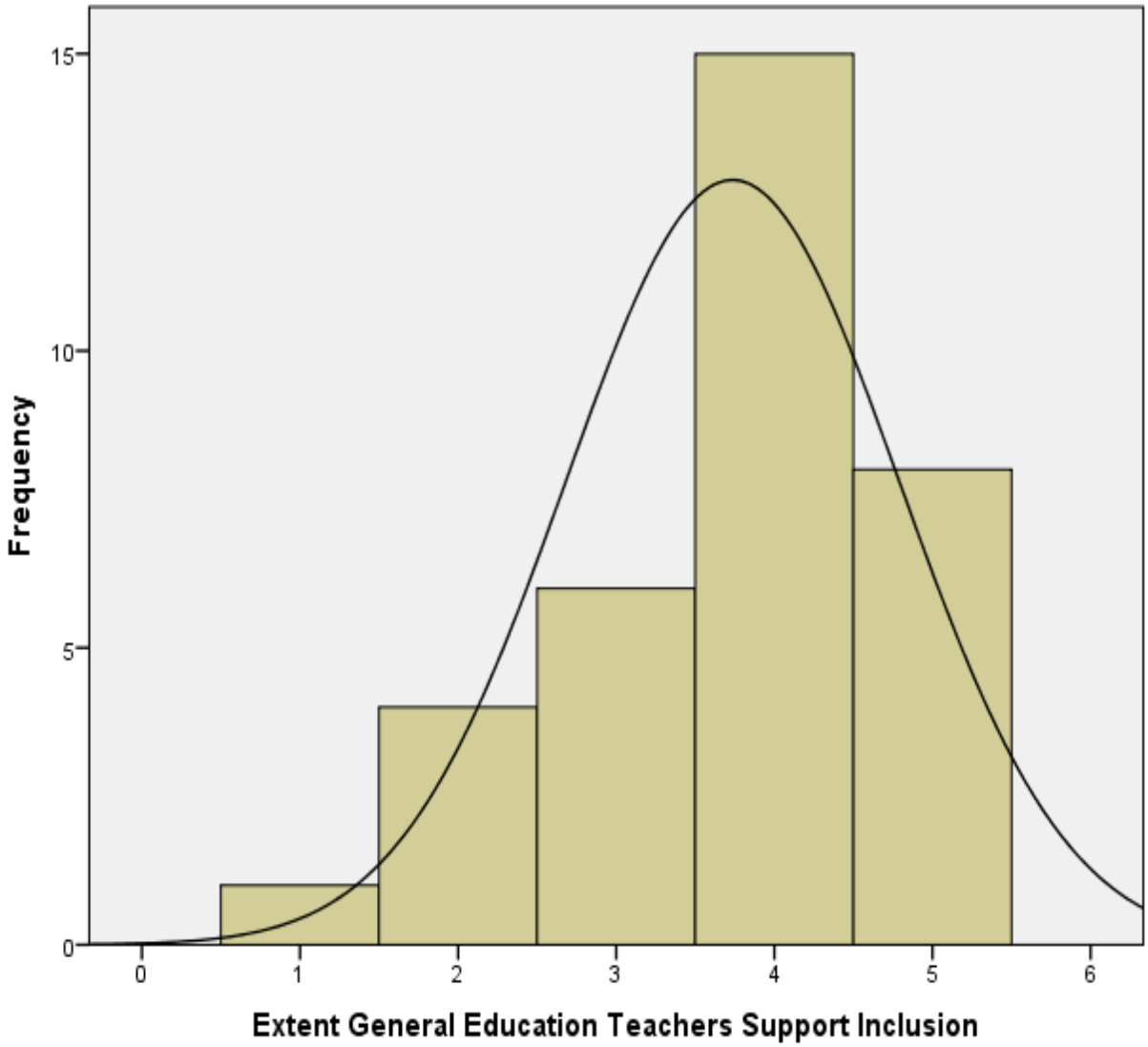

Figure 9. Distribution of general education teacher responses that indicate the extent they support the inclusion of learning-disabled students in the general education classroom

Research Question 10

To what extent do general education teachers agree that learning-disabled students score higher on TCAP assessments than pull-out students?

$H_0$10: General education teachers do not agree that learning-disabled students score higher on TCAP assessments than pull-out students.

A one-sample *t* test was conducted on the teacher survey responses to determine whether their mean was significantly different from 3, the mid score on the Likert-type scale. The sample mean of 2.63 (SD = .63) was significantly different from 3, $t(26) = -3.06$, $p < .01$. Therefore, the null hypothesis was rejected. The 95% confidence interval of the difference was -.62 to -.12. The effect size $\eta^2 = .26$ indicates a large effect. The results indicate the general education teachers agree learning-disabled students score higher on TCAP achievement tests than pull-out students. Figure 10 shows the distribution of teacher responses indicating the extent they agree learning-disabled students score higher on TCAP assessments.

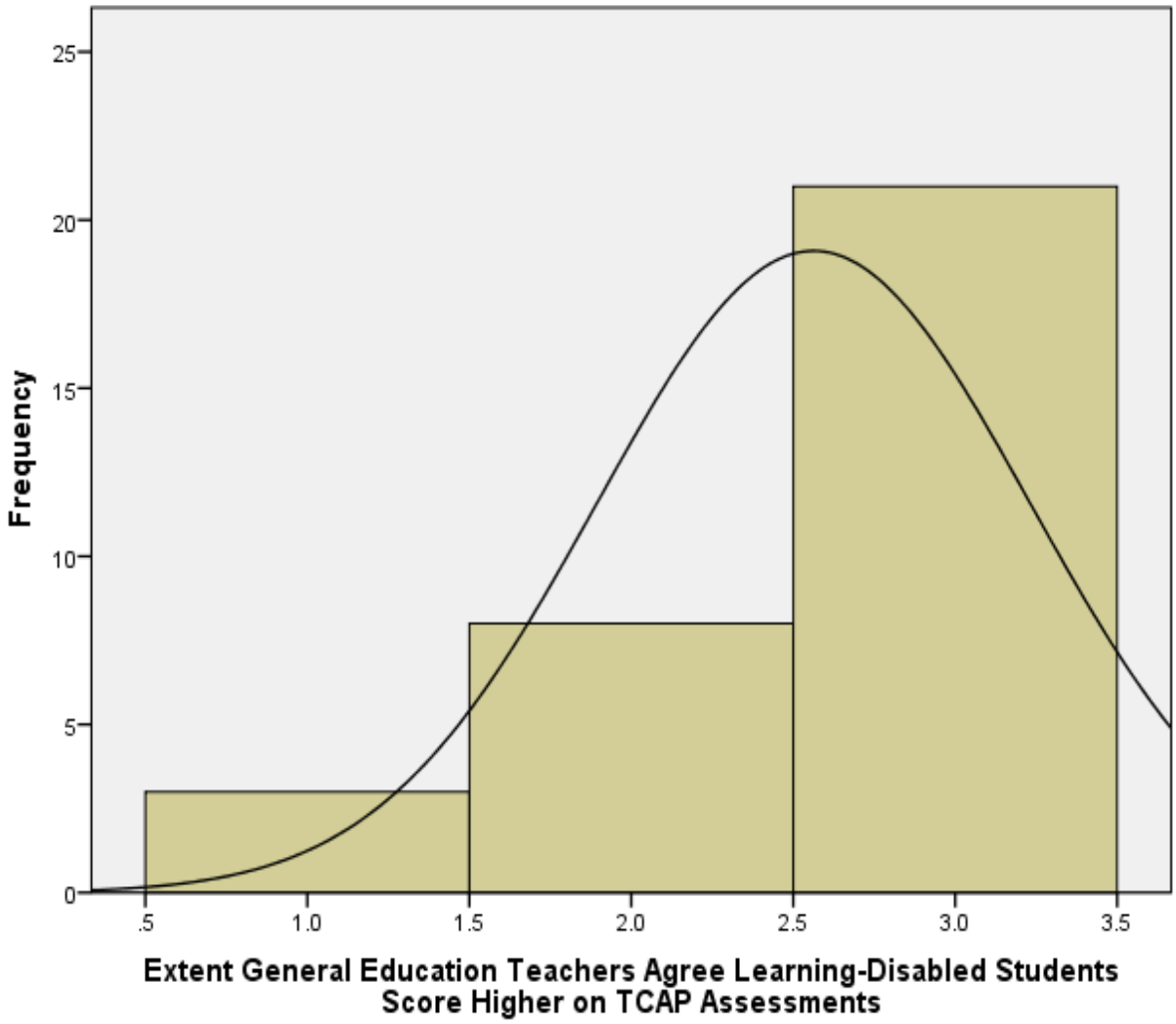

Figure 10. Distribution of general education teacher responses indicating the extent they agree learning-disabled students score higher on TCAP assessments

Research Question 11

To what extent do general education teachers agree they are professionally prepared to teach learning-disabled students in their classroom?

$H_0$11: General education teachers do not agree they are professionally prepared to teach learning-disabled students in their classroom.

A single-sample *t* test was conducted on the teacher survey responses to determine whether their mean was significantly different from 3, the mid for the Likert-type scale. The sample mean of 3.55 (SD = .95) was significantly different from 3, $t(28) = 3.13$, $p < .01$ Therefore, the null hypothesis was rejected. The 95% confidence interval of difference was .19 to .91. The effect size $\eta^2 = .26$ indicates a large effect. The results indicate the general education teachers feel professionally prepared to teach learning-disabled students in their classroom. Figure 11 shows the distribution of teacher responses indicating the extent they feel professionally prepared to teach learning-disabled students.

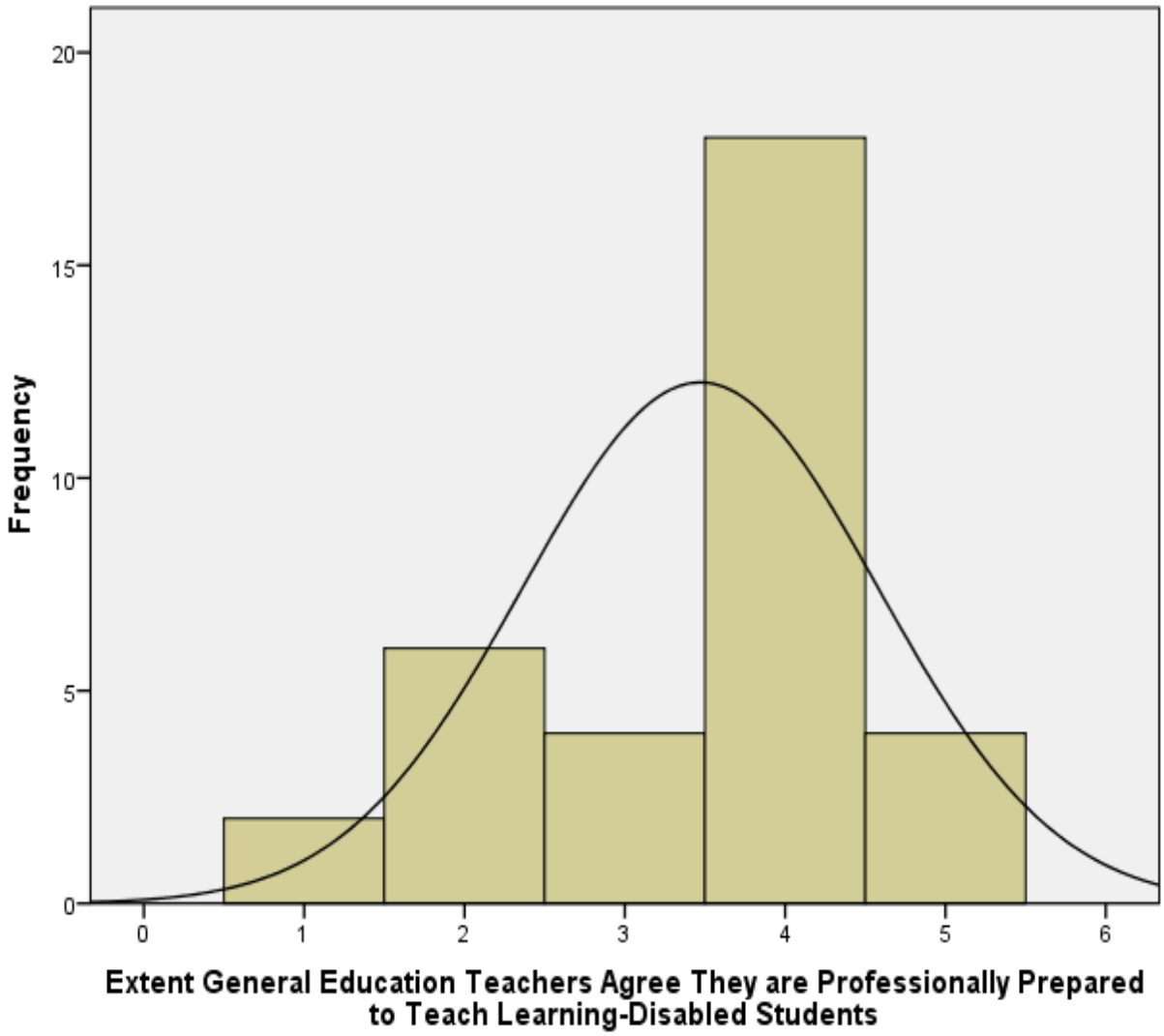

Figure 11. Distribution of general education teacher responses they agree they are professionally prepared to teach learning-disabled students in their classroom

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter summarizes the findings in relation to instructional placement for special education learning-disabled students. The IEP M-team determines the appropriate placement for learning-disabled students in the participating school system. The placement decision is based on ability level and individual student needs. This is based on input from all team members including parents, school officials, teachers, school psychologist, and others involved with the student's education.

This study found significant differences in DEA improvement scores and TCAP scale scores of fourth and fifth grade learning-disabled students who received academic instruction in an inclusion classroom and a pull-out classroom. The students receiving instruction in the inclusion classroom scored significantly higher in all areas except for the fourth grade DEA Reading/Language Arts and the fifth grade DEA Math. The dependent variables in the study were the Tennessee Comprehensive Assessment Program scale scores and the Discovery Education Assessment improvement scores. The independent variables were location of student instruction (inclusion or pull-out).

The data analyses are based on eight research questions tested at the .05 level of significance. The sample for this research was 138 fourth and fifth grade learning-disabled students who participated in the TCAP and DEA assessments. The data collected were from the 2012-2013 school year. The students attended rural schools in an East Tennessee school system.

Summary of Findings

A series of single sample *t* tests were conducted to determine whether a significant difference existed between the TCAP and DEA scores of fourth and fifth grade learning-disabled students receiving their academic instruction in an inclusion classroom and a pull-out classroom in reading/language arts and math.

A single sample *t* test was used to determine if location of service impacts the DEA improvement scores in reading/language arts of fourth grade learning-disabled students. This sample consisted of 67 students. There was no significant difference in the reading/language arts improvement scores of fourth grade students in an inclusion classroom versus a pull-out classroom. The students in the inclusion classroom scored similar to the students in the pull-out classroom.

A single sample *t* test was used to determine if location of service impacts the DEA improvement scores in reading/language arts of fifth grade learning-disabled students. This sample consisted of 71 students. There was a significant difference in the reading/language arts DEA improvement scores of fifth grade students in an inclusion classroom versus the pull-out classroom. The fifth grade students who received their academic instruction in the inclusion classroom scored significantly higher than the students who received their academic instruction in the pull-out classroom.

A single sample *t* test was conducted to determine if location of service impacts the DEA improvement scores in math of fourth grade learning-disabled students. This sample consisted of 67 students. There was a significant difference in the math DEA improvement scores of fourth grade students in an inclusion classroom versus the pull-out classroom. The fourth grade students who received their academic instruction in

the inclusion classroom scored significantly higher than the students who received their academic instruction in the pull-out classroom.

A single sample *t* test was conducted to determine if location of service impacts the DEA improvement scores in math of fifth grade learning-disabled students. This sample consisted of 71 students. There was no significant difference in the math DEA improvement scores of fifth grade students in an inclusion classroom versus a pull-out classroom. The fifth grade students who received their academic instruction in the inclusion classroom scored similar to the students in the pull-out classroom.

A single sample *t* test was conducted to determine if location of service impacts the TCAP reading/language arts proficiency scores of fourth grade learning-disabled students. This sample consisted of 67 students. There was a significant difference in the TCAP reading/language arts proficiency scores of fourth grade students in an inclusion classroom versus the pull-out classroom. The fourth grade students who received their academic instruction in the inclusion classroom scored significantly higher than the students who received their academic instruction in the pull-out classroom.

A single sample *t* test was used to determine if location of service impacts the TCAP reading/language arts proficiency scores of fifth grade learning-disabled students. This sample consisted of 71 students. There was a significant difference in the TCAP reading/language arts proficiency scores of fifth grade students in an inclusion classroom versus the pull-out classroom. The fifth grade students who received their academic instruction in the inclusion classroom scored significantly higher than the students who received their academic instruction in the pull-out classroom.

A single sample *t* test was conducted to determine if location of service impacts the TCAP math proficiency scores of fourth grade learning-disabled students. This sample consisted of 67 students. There was a significant difference in the TCAP math proficiency scores of fourth grade students in an inclusion classroom versus the pull-out classroom. The fourth grade students who received their academic instruction in the inclusion classroom scored significantly higher than the students who received their academic instruction in the pull-out classroom.

A single sample *t* test was used to determine if location of service impacts the TCAP math proficiency scores of fifth grade learning-disabled students. This sample consisted of 71 students. There was a significant difference in the TCAP math proficiency scores of fifth grade students in an inclusion classroom versus the pull-out classroom. The fifth grade students who received their academic instruction in the inclusion classroom scored significantly higher than the students who received their academic instruction in the pull-out classroom.

A series of single sample *t* tests were conducted to determine whether a significant difference existed between the general education teachers' responses and the test value 3, the Likert-type scale survey mid score.

A single-sample *t* test was conducted to determine the extent general education teachers agree that learning-disabled students should be included in the general education classroom. This sample consisted of 34 teachers. There was a significant difference in the teacher response mean score and the Likert-type scale test value. The general education teachers agreed that learning-disabled students should be included in the general education classroom.

A single sample *t* test was conducted to determine the extent general education teachers agree learning-disabled students score higher on TCAP assessments than pull-out students. This sample consisted of 34 teachers. There was a significant difference in the teacher response mean score and the Likert-type scale test value. The general education teachers agree that learning-disabled students score higher on TCAP assessments than the pull-out students.

A single sample *t* test was conducted to determine the extent general education teachers feel professionally prepared to teach learning-disabled students in their classroom. This sample consisted of 34 teachers. There was a significant difference in the teacher response mean score and the Likert-type scale test value. The general education teachers agree they are professionally prepared to teach learning-disabled students in their classroom.

Conclusions

The focus of this study was a comparison of the TCAP proficiency and DEA improvement scores between learning-disabled students in different academic service locations. This study provided some support that learning-disabled students served in an inclusion classroom earned higher TCAP proficiency and DEA improvement scores than the learning-disabled students served in a pull-out classroom. The results of this study are similar to research by Rea et al. (2002) who noted that students served in an inclusion classroom achieved higher scores on standardized testing.

Cook et al. (1999) reported results from an administrator questionnaire indicated although the administrators agreed inclusion was the best placement their teachers

were not prepared to meet the needs of the students. According to Schumm and Vaughn (1995) the few studies that reported negative views of inclusion could be blamed on the teachers who felt they were not prepared to teach special education students. In contrast to these studies, this study provided survey data from teachers that they are professionally prepared to teach learning-disabled students in their classroom. The survey provided data that teachers agreed learning-disabled inclusion students score higher on achievement tests than pull-out students and they should be included in the general classroom. Previous studies supported the thought that if teachers raised their expectations and believed in the inclusion program these students would be successful. According to Watnick and Sacks (2006) the teachers with positive attitudes and the desire to participate in an inclusive classroom play a key role in the success of the inclusion program. The results of this study should be interpreted with caution because of the difference in the size of the two groups.

Recommendations for Practice

This study supported previous studies that found when learning-disabled students received academic instruction in an inclusion classroom their proficiency scores were higher than the learning-disabled students in a pull-out classroom. When learning-disabled students are included in the general education classroom they are exposed to the state curriculum standards for which they will be responsible to know on the TCAP assessment. Teachers should raise the expectations for these students in the general education classroom and collaborate with the special education teacher about teaching methods to reach these students. Inclusion programs that allowed

general and special education teachers the time to collaborate were most likely to be successful (Schmidt et al., 2002).

There are several recommendations for future practice with learning-disabled students in the inclusion classroom.

1. The general and special education teachers should be provided the necessary common planning time to work together on required student accommodations and modifications as outlined in the IEP.
2. Professional development opportunities should be provided for general and special education teachers to attend together and learn techniques used in an inclusion program.
3. Educational materials and time to review them should be provided to general education teachers in order to properly implement alternative materials in the lessons.
4. Postsecondary education programs should require general education teacher students to earn additional training in special education courses to better prepare them for teaching a more diverse population of learners in their classroom.
5. School personnel should focus on each student's individual needs when determining educational placement.

Recommendations for Further Research

The purpose of this study was to determine if there is a difference in TCAP scale scores and DEA improvement scores for special education learning-disabled students based on location of academic service. The study revealed the learning-disabled

students in the inclusion classroom scored higher than the students in the pull-out classroom. There are several recommendations for further research.

1. The first recommendation for further research is to replicate this study using a larger population of special education learning-disabled pull-out students. Using a larger sample may provide more significant results.
2. The second recommendation for further research is to replicate this study comparing scores of all special education students regardless of disability. Students other than learning-disabled may prove to be successful as well in the inclusion location.
3. The third recommendation for further research is to replicate the study comparing the scores based on gender and socioeconomic status.
4. The fourth recommendation for further research is to perform a longitudinal study of student progress over several grades. Tracking students over time may provide different results in achievement and aid in educational programming.
5. The fifth recommendation for further research is to examine the ability level of learning-disabled students who might qualify for inclusion if the school offered it and compare it to the ability level of the students served in an inclusion class.

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APPENDICES

Appendix A

Permission to Conduct Research

Gerilyn T. Scalf
Special Education Teacher
Seymour Intermediate School
212 North Pitner Road
Seymour TN 37865
865-609-0030

April 12, 2013

Dr. Debra Cline
Assistant Superintendent
Curriculum and Instruction
226 Cedar Street
Sevierville TN 37862
865-453-4671

Dear Dr. Cline:

I am presently working on my dissertation at East Tennessee State University. I request your permission to collect achievement scores for special education students from the special education department. The data will be collected without any identifying information of these students. The purpose of the study is to determine if location of special education service is a factor in the achievement of learning-disabled students. The study will analyze DEA and TCAP achievement scores. No students will be identified in this study.

Thank you for your time and support of my study.

Sincerely,

Gerilyn T. Scalf

Gerilyn T. Scalf

I hereby give Gerilyn T. Scalf permission to collect DEA and TCAP achievement scores for research in the Sevier County School System in pursuit of her doctoral study as long as no identifying information of these students is revealed.

Debra Cline 4/19/13

Dr. Debra Cline
Assistant Superintendent
Curriculum & Instruction
Sevier County School System

SEVIER CO SCHOL SYSTEM Fax:18657744562 Apr 19 2013 8:05 P.02

Appendix B

Permission to Conduct Research

Gerilyn T. Scalf
Special Education Teacher
Seymour Intermediate School
212 North Pitner Road
Seymour TN 37865
865-609-0030

October 17, 2013

Dr. Debra Cline
Assistant Superintendent
Curriculum and Instruction
226 Cedar Street
Sevierville TN 37862
865-453-4671

Dear Dr. Cline:

In April 2013 you granted me permission to collect achievement scores in order for me to complete my dissertation at East Tennessee State University (see attached). I have reached a point in my study which requires the collection of additional data to complete the dissertation and request permission to collect this data using an anonymous teacher survey of general and special education inclusion teachers which will provide me with the quantitative data necessary to complete my study. No identifiable information will be collected.

Thank you for your time and support of my study.

Sincerely,

Gerilyn T. Scalf

Gerilyn T. Scalf

I hereby give Gerilyn T. Scalf permission to collect quantitative data with an anonymous teacher survey for research in the Sevier County School System in pursuit of her doctoral study as long as no identifying information of these teachers is revealed.

Debra Cline 10/24/13

Dr. Debra Cline
Assistant Superintendent
Curriculum and Instruction
Sevier County School System

Appendix C

IRB Approval

East Tennessee State University
Office for the Protection of Human Research Subjects • Box 70565 • Johnson City, Tennessee 37614-1707
Phone: (423) 439-6053 Fax: (423) 439-6060

April 10, 2013

Gerilyn Scalf
607 Catalpa St
Seymour, TN 37865

Dear Gerilyn Scalf,

Thank you for recently submitting information regarding your proposed project "Learning-Disabled Students: A Comparison of Achievement Scores of Students Receiving Services in Pull-out Classrooms and Inclusion Classrooms."

I have reviewed the information, which includes a completed Form 129.

The determination is that this proposed activity as described meets neither the FDA nor the DHHS definition of research involving human subjects. Therefore, it does not fall under the purview of the ETSU IRB.

IRB review and approval by East Tennessee State University is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are human subject research in which the organization is engaged, please submit a new request to the IRB for a determination.

Thank you for your commitment to excellence.

Sincerely,
Chris Ayres
Chair, ETSU IRB

APPENDIX D

IRB Approval

East Tennessee State University
Office for the Protection of Human Research Subjects • Box 70565 • Johnson City, Tennessee 37614-1707
Phone: (423) 439-6053 Fax: (423) 439-6060

IRB APPROVAL – Initial Exempt

January 22, 2014

Gerilyn Scalf

RE: Learning-Disabled Students: A Comparison of Achievement Scores of Students Receiving Services in Pull-out Classrooms and Inclusion Classrooms
IRB#: c1213.15e
ORSPA#: n/a

On **January 20, 2014**, an exempt approval was granted in accordance with 45 CFR 46. 101(b)(2). It is understood this project will be conducted in full accordance with all applicable sections of the IRB Policies. No continuing review is required. The exempt approval will be reported to the convened board on the next agenda.

- xform New Protocol Submission; Survey Letter; Survey Questions; References; CV

Projects involving Mountain States Health Alliance must also be approved by MSHA following IRB approval prior to initiating the study.

Unanticipated Problems Involving Risks to Subjects or Others must be reported to the IRB (and VA R&D if applicable) within 10 working days.

Proposed changes in approved research cannot be initiated without IRB review and approval. The only exception to this rule is that a change can be made prior to IRB approval when necessary to eliminate apparent immediate hazards to the research subjects [21 CFR 56.108 (a)(4)]. In such a case, the IRB must be promptly informed of the change following its implementation (within 10 working days) on Form 109 (www.etsu.edu/irb). The IRB will review the change to determine that it is consistent with ensuring the subject's continued welfare.

Sincerely,
Chris Ayres, Chair
ETSU Campus IRB

Full AAHRPP Accreditation

Accredited Since December 2005

APPENDIX E

Teacher Survey

Educator Questionnaire

The following questions are part of a research study regarding the inclusion of learning-disabled students in the general education classroom. Participation in this questionnaire is completely voluntary and anonymous. Should you choose to participate, please be assured all data collected will be kept strictly confidential and used for the researcher's dissertation.

Place a check next to the answer of your choice.

1. Which grade level(s) do you currently teach?
   - ____ 3
   - ____ 4
   - ____ 5

2. What position do you hold in your school?
   - ____ general education teacher
   - ____ special education teacher

3. What is the highest educational degree you possess?
   - ____ Bachelor of Science/Arts
   - ____ Master of Science/Arts
   - ____ Educational Specialist
   - ____ Doctorate of Education
   - ____ Other (specify) _____

4. As an educator in your school, which subject(s) do you teach?
   - ____ Reading/Language Arts
   - ____ Math
   - ____ Social Studies
   - ____ Science
   - ____ Other (specify) _____

5. How many complete years of teaching experience do you possess?
   - ____ 0-5
   - ____ 6-10

____ 11-15
____ 16-20
____ 21 or more

6. Are you responsible for teaching learning-disabled students in your class(es)?
____ yes
____ no

7. How many years of experience do you have teaching learning-disabled students in your classroom?
____ 0-5
____ 6-10
____ 11-15
____ 16-20
____ 21 or more

For the following statements, circle one of the five answer choices to indicate your attitude regarding the statement.

SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree.

8. My administrators support the inclusion of learning-disabled students in the general education classroom.

1	2	3	4	5
SD	D	N	A	SA

9. I support the inclusion of learning-disabled students in the general education classroom.

1	2	3	4	5
SD	D	N	A	SA

10. I am professionally prepared to work with learning-disabled students in the general education classroom.

1	2	3	4	5

SD	D	N	A	SA

11. In-service activities teaching methods on how to teach learning-disabled students are available to me.

1	2	3	4	5
SD	D	N	A	SA

12. I participate in in-service activities regarding the inclusion of learning-disabled students.

1	2	3	4	5
SD	D	N	A	SA

13. The learning-disabled students benefit academically from inclusion.

1	2	3	4	5
SD	D	N	A	SA

14. Inclusion of learning-disabled students affects my ability to meet the needs of my other students.

1	2	3	4	5
SD	D	N	A	SA

15. General education teachers are provided planning time to collaborate with special education teachers.

1	2	3	4	5
SD	D	N	A	SA

16. Learning-disabled students receiving instruction in an inclusion classroom experience higher academic achievement scores than those served in a pull-out classroom.

1	2	3	4	5
SD	D	N	A	SA

17. Alternative materials for learning-disabled students to use in the general education classroom are available for my use.

1	2	3	4	5
SD	D	N	A	SA

18. Typically achieving students benefit from the inclusion of learning-disabled students.

1	2	3	4	5
SD	D	N	A	SA

VITA

GERILYN TONEY SCALF

Education:

Ed.D. Educational Leadership
East Tennessee State University, Johnson City, Tennessee 2014

Ed.S. Administration and Supervision, Lincoln Memorial University, Harrogate, Tennessee 1999

M.A. Special Education, The University of Tennessee, Knoxville, Tennessee 1997

B.S. Business Administration, The University of Tennessee, Knoxville, Tennessee 1993

A.S. Business Management, Computer Technology, Roane State Community College, Harriman, Tennessee 1983

A.S. Business Administration, Accounting, The Pennsylvania State University, DuBois, Pennsylvania 1979

Public Schools, DuBois, Pennsylvania

Public Schools, Rochester, Michigan

Professional Experience:

Special Education Teacher, Seymour Intermediate School; Seymour, Tennessee, 1998-present

Special Education Teacher, Seymour Primary School; Seymour, Tennessee, 1995-1998

Professional Organizations:

Delta Kappa Gamma International Society for Key Women Educators, Gamma Iota Chapter
Chapter Vice President, 2012-2014

Professional Educators of Tennessee

Licensed as Beginning Administrator, State of Tennessee

Honors and Awards: National Deans List, 1983-84