EFFECT OF DIRECT INSTRUCTION PROGRAMS ON TEACHING READING

COMPREHENSION TO STUDENTS WITH LEARNING DISABILITIES

by

Jennifer Leigh Sarratt Parker

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this quasi experimental research study was to examine the effects of two direct

instruction programs, SRA Reading Mastery Signature and SRA Reading Success on reading

comprehension skill acquisition of middle school students who qualify as a student with a

specific learning disability. Furthermore, the study was used to compare the reading

comprehension achievement of students who participated in SRA Reading Mastery Signature

and students who participated in SRA Reading Success using the reading portion of the

Measures of Academic Progress (MAP) assessment. The treatment groups were located in a

moderate size school district in the Upstate region of South Carolina. After a 10-week

intervention period, post test scores from the literary text subtest, informational text subtest, and

vocabulary development subtest of the reading portion of the Measure of Academic Progress

assessment were compared using three separate ANCOVA. The pretest scores served as the

covariate. There were no significant differences found between the two treatment groups.

Practical and methodological implications and limitations are discussed and recommendations

for future research are included.

Keywords: Direct instruction, reading comprehension, specific learning disabled, middle

school students, SRA Reading Mastery Signature and SRA Reading Success

Dedication and Acknowledgements

This manuscript is dedicated to my family and friends. I would like to thank my family for always offering me support when I felt that I had reached the end of my rope. I am especially appreciative to my daddy who saw the potential in me that I could not always see in myself, and to my mama for her help and support throughout this process and any other endeavor I have taken on in life. I am thankful for my work family, as they provided guidance throughout this entire process, both academically and personally.

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List of Abbreviations

Free and Appropriate Public Education (FAPE)

Individuals with Disabilities Act (IDEA)

Individualized Education Program (IEP)

Institutional Review Board (IRB)

Informational Text (IT)

Learning Disability (LD)

Measures of Academic Progress (MAP)

National Dissemination Center for Children with Disabilities (NICHCY)

Rausch Unit (RIT)

Social Ecological Model (SEM)

Statistical Package for the Social Sciences (SPSS)

Science Research Associates (SRA)

Vocabulary Development (VD)

What Works Clearinghouse (WWC)

Zone of Proximal Development (ZPD)

CHAPTER ONE: INTRODUCTION

The number of students who qualify for special education as a student with a learning disability has grown dramatically over the last twenty years (Martin, Martin, & Carvalho, 2008). Of the number of students with a learning disability, reading disabilities are the most prevalent among these students. As indicated by Shippen, Houchins, Steventon, and Sartor (2005), "the ability to read efficiently and effectively has clear implications for a student's overall academic performance. Students who have difficulty mastering basic reading skills suffer long term academic consequences. Researchers believe that if children do not master basic reading skills and become efficient readers, including comprehension which is the end goal of the reading process, they will fall so far behind their peers that they will never be able to catch up (Prado & Plourde, 2011). Because students in special education programs represent a population of students who require individualized and specialized instruction, unique teaching methods must be implemented to meet the needs of this population. In addition, the Individuals with Disabilities Act of 2004 requires that instruction for students with disabilities be scientifically researched and proven effective. One teaching method that has been accepted as an effective way of teaching students with disabilities is the direct instruction model. Direct instruction has a long history of effective results for students with learning disabilities, especially when used as an intervention for older students (Shippen et al., 2005).

Background

"Reading difficulty is one of the most significant problems experienced by children with learning disabilities" (Swanson, 1999, p. 504). Among the population of students with learning disabilities, students with disabilities in one or more areas of reading account for the highest percentage. As noted by Sencibaugh (2007), 90% of students with learning disabilities

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demonstrate significant difficulties learning to read. Early elementary school students with learning disabilities often struggle with basic reading skills including phonemic and phonological awareness (Sencibaugh, 2007). Students who do not master early literacy skills often become older struggling readers who do not have the basic reading skills necessary for fluent reading and deep processing of text. As indicated by Martin et al. (2008) the reading process consists of five components; phonemic awareness, phonics, fluency, vocabulary, and comprehension. While all five components are important, the ability to comprehend read material is the end goal and purpose for reading, but without mastery of each of the five components, the ability to comprehend text effectively may not be attainable.

Because the number of specific students with learning disabilities who qualify for special education in reading is higher than any other subject area, emphasis has been placed on determining appropriate instructional strategies for this population of students. In addition, through the evolution of special education law, various changes in requirements for special education curriculums have occurred. As indicated by Kinder, Kubina, and Marchand-Martella (2005), "the Individuals with Disabilities Education Act of 1997 requires specially designed instruction for students with disabilities to meet their unique needs" (p. 1). Two critical elements that ensure that instruction is specially designed are individualization and validation. In 2004 through the reauthorization of IDEA, an increased focus was placed on "scientifically based instructional practices and programs and peer reviewed research" (Kinder et al., 2005, p. 1). Because of changes in special education law, teachers began to seek instructional strategies to effectively teach students. Because of this, the direct instruction model began to emerge as a viable method for effectively teaching special education students. Therefore, the purpose of this study is to compare two different direct instruction programs, the SRA Reading Mastery

Signature and SRA Reading Success, both used for reading comprehension instruction, and to determine which program is more effective in increasing a student's ability to comprehend read material.

Problem Statement

The acquisition of reading skills is a major goal of the education process. Even for typical students, attaining the basic reading skills needed for academic success can become a difficult task, but those students who demonstrate a reading disability have even more difficulty mastering the skills needed to become a fluent reader. Many struggling readers are a result of inadequate instruction in the early grades. While some of these students are able to catch up because of external factors such as tutors, parents teaching in the home, or even assistance from older siblings, many require "additional, sustained instruction in small, focused groups" (Roberts, Torgesen, Boardman, & Scammacca, 2008, p.63). When early literacy skills are not obtained, reading becomes a struggle for students, especially as they progress into adolescence. Middle school students who lack word recognition skills to read fluently are often unmotivated to read because it is a labored process. Because of this, "they miss countless opportunities for reading practice and for learning from what they have read" (Roberts et al., 2008, p. 63). As indicated by Watson, Gable, Gear, and Hughes (2012) "reading comprehension is the most critical skill students need to be successful in school. Deficiencies in comprehension; oral and written, can have a negative effect on a student's classroom performance" (p.80). Therefore, due to the scaffolding nature of the reading process, when children do not attain the early literacy skills needed to become efficient readers, their academic and career oriented successes are compromised (Fagella-Luby & Deshler, 2008).

Purpose Statement

The purpose of this quasi-experimental study is to test the theories of B.F. Skinner's operant conditioning and Vygotsky's zone of proximal development as they relate to the acquisition of reading comprehension skills among middle school students with specific learning disabilities. It is also intended to evaluate Chall's theory on the six stages of reading development as it relates to the direct instruction model. Through this study, two direct instruction programs, Reading Mastery Signature and Reading Success, will be implemented with middle school students with specific learning disabilities to determine which program is more effective in delivering reading comprehension instruction for students who qualify for special education in the area of reading at four middle schools in the upstate region of South Carolina. The first independent variable, Reading Mastery Signature, will generally be defined as a direct instruction program that can be used as either a supplemental or core reading program that focuses on the five components of reading including vocabulary development, literal comprehension skills, and inferential comprehension skills (Education Consumers Foundation, 2011). The second independent variable, Reading Success, will generally be defined as a direct instruction program that is used as a supplemental program that explicitly teaches comprehension skills (Benson, Marchand-Martella, Martella, & Kolts, 2007). The dependent variable, student achievement, will be generally defined as the participants' pre and post test scores on the reading subtest of the Measures of Academic Progress.

Significance of the Study

As indicated by Fagella-Luby and Wardwell (2011), "68% of fourth graders and 70% of eighth graders in public schools perform at or below the basic level in reading comprehension nationally" (pp. 35-36). Due to the alarming number of students who are performing below

grade level in reading comprehension, researchers and educators are seeking effective practices

for teaching reading comprehension to struggling students, specifically those students with

learning disabilities. While numerous research studies have previously indicated the

effectiveness of using the direct instruction model when teaching students with specific learning

disabilities, little research that compares specific direct instruction programs and their impact on

student achievement in the area of reading comprehension has been conducted. In addition,

while there are a multitude of studies focusing on elementary age students with specific learning

disabilities, there are few that explore the effectiveness of these programs when used with middle

school students. Fagella-Luby and Deshler (2008) noted that there has been significantly less

research conducted with older students as compared to younger students with disabilities. From

their research, they found that "explicit instruction improved the reading comprehension of

students with LD, students at risk for failure and typically achieving students" (Fagella-Luby &

Deshler, 2008, p. 72). From their study, evidence suggests that targeted strategy instruction,

when taught in an explicit manner, improves reading comprehension achievement among

adolescents (Fagella-Luby & Deshler, 2008). In addition, Antoniou and Souvignier (2007)

found that "explicit teaching and strategy use promote reading comprehension in students with

LD" (p. 52).

　　　　This research study will provide a more in depth look at the two direct instruction

programs, SRA Reading Mastery Signature and SRA Reading Success, and their impact on

student achievement in the area of reading comprehension. These two programs are widely used

with students with learning disabilities. Determining the effectiveness of each program has the

potential to impact choices made in special education curriculums. This study is especially

important to the district in which it is being implemented. Currently, this district utilizes both

programs; however, there have been no studies conducted to determine which program yields higher student achievement. Therefore, by conducting this study, the appropriate program can be implemented with students with reading comprehension difficulties in order to increase student achievement and positively affect student achievement in other academic areas as well.

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

This study will attempt to compare two direct instruction reading programs, SRA Reading Mastery Signature and SRA Reading Success. It seeks to discover which program has a more positive effect on reading comprehension achievement among middle school students with specific learning disabilities who qualify for services in the area of reading.

- Will there be a difference in the ability to comprehend informational text between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature, and those who participated in SRA Reading Success?

  - H01: There will be no significant difference in the ability to comprehend informational text as shown by the reading subtest of the Measures of Academic Progress between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature, and those who participated in SRA Reading Success.

- Will there be a difference in the ability to comprehend literary text between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature, and those who participated in SRA Reading Success?

o   H02: There will be no significant difference in the ability to comprehend literary text as shown by the reading subtest of the Measures of Academic Progress between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature, and those who participated in SRA Reading Success.

- Will there be a difference in the acquisition of vocabulary development between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success?

    o   H03: There will be no significant difference in the acquisition of vocabulary development as shown by the reading subtest of the Measures of Academic Progress between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature, and those who participated in SRA Reading Success.

Definition of the Terms

To clarify terms used in this study, the following definitions were provided. The definitions provided were obtained from the literature.

Definitions

Special education. Special education is instruction that is specially designed to meet the unique needs of a child with a disability. This means education that is individually developed to address a *specific* child's needs that result from the child's disability (National Dissemination Center for Children with Disabilities [NICHCY], 2010).

Specific learning disability. A specific learning disability means a disorder in one or

more of the basic psychological processes involved in understanding or in using

language, spoken or written, that may manifest itself in the imperfect ability to listen,

think, speak, read, write, spell, or to do mathematical calculations. The term includes

such conditions as perceptual disabilities, brain injury, minimal brain dysfunction,

dyslexia, and developmental aphasia. The term does not include learning problems that

are primarily the result of visual, hearing, or motor disabilities; of mental retardation; of

emotional disturbance; or of environmental, cultural, or economic disadvantage

(NICHCY, 2010).

FAPE. FAPE is an acronym for free and appropriate public education. FAPE

means special education and related services that (a) Are provided at public

expense, under public supervision and direction, and without charge; (b) Meet the

standards of the SEA, including the requirements of this part; (c) Include an

appropriate preschool, elementary school, or secondary school education in the

State involved; and (d) Are provided in conformity with an individualized

education program (IEP) that meets the requirements of IDEA. (NICHCY, 2010,

pp. 6-7)

IDEA. "IDEA is an acronym for the Individuals with Disabilities Education Act, our

nation's special education law. IDEA was first passed in 1975, where it was called the

Education for All Handicapped Children's Act" (NICHCY, 2010, p. 7). It has been

reauthorized or revised every few years (NICHCY, 2010).

IEP. IEP is an acronym for Individualized Education Program. It is a written plan for a child with a disability that is developed, reviewed, and revised in accordance with IDEA (NICHCY, 2010).

Reading comprehension. Reading comprehension is the process that exerts and, at the same time, creates meaning by having the student interact and be involved with written language (Watson et al., 2012).

Direct instruction. Direct instruction is a scripted approach with brisk paced instruction that enables students to learn systematically through steps and a sequence of well-organized assignments (Engelmann, Hanner, & Johnson, 2002).

Informational text. Informational text is a sub-category of non-fiction that's purpose is to provide information to the reader without the use of characters. It is characterized by special language such as general nouns and verbs, and lacks forms of literary elements found in fictional text (Duke & Bennett-Armistead, 2003).

Literary text. Literary text includes both fiction and non-fiction works that are recognized as having artistic value. The basic elements are the inclusion of character, setting, plot, and theme. Forms of literary text sometimes rely on the author's imagination and usually include various forms of figurative language (Duke & Bennett-Armistead, 2003).

Vocabulary knowledge. Vocabulary knowledge requires the person not only to know the word but also to apply it appropriately in context (Lerner, 2003).

Measures of Academic Progress. Measures of Academic Progress is a computerized test that takes each student's academic level into account when generating questions. It tests

math skills and reading abilities. The reading test is broken down into literary text,

informational text, and vocabulary development (Northwest Evaluation Association,

2013).

CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

This study, in examining two direct instruction programs that teach reading comprehension strategies to students with learning disabilities, attempted to build upon the body of research on students with learning disabilities and the most effective methods for teaching those students strategies that will assist them in comprehending reading material. A review of the important findings of previous research in the field of special education and reading comprehension will provide a foundation for this study. This chapter is organized into seven sections that begin with the theoretical framework for this study. Because reading comprehension is the end result of the reading process, the researcher found it was important to cover the five components of the reading process. Also, included is reading achievement among students with specific learning disabilities, middle school students with specific learning disabilities, and direct instruction and its importance in the special education classroom. Detailed explanations are included on both treatment programs, SRA Reading Success, and SRA Reading Mastery Signature. Finally, a review of related research is included in this chapter.

Theoretical Framework

The practice of direct instruction in the classroom is a systematic method for presenting material in small steps, stopping to check for student understanding, providing immediate feedback, and requiring participation from all students involved in the lesson. It employs a three step approach to teaching. The instructor first models for the students, leads the student by having them repeat the correct answers to the questions asked, and finally tests the students by providing them with immediate feedback and assessing their knowledge of information previously taught. Because of the nature of the delivery of a direct instruction lesson, this model of teaching is grounded in the behaviorist theory that is associated with B.F. Skinner. In

addition, this study is closely associated with the stage theory of reading development developed by Chall in the 1980's and Vygotsky's zone of proximal development.

Behaviorist Theory

There are two different types of conditioning that are found within the behaviorist approach, classic conditioning and behavioral or operant conditioning. Classic conditioning transpires when a natural reflex responds to a stimulus. It is the idea that humans are pre-wired to produce a particular response to a particular stimulus. In education, one of the most common occurrences of classic conditioning is the fear of public speaking and all of the involuntary symptoms that accompany that fear such as sweaty palms, hot flashes, upset stomach, and feelings of panic. Operant conditioning, which "occurs when a response to a stimulus is reinforced," is more directly related to the delivery of a direct instruction program ("Behaviorism," 2008). As indicated by B.F. Skinner (1968), through operant conditioning, "teachers arrange special contingencies which expedite learning, hastening the appearance of behavior which would otherwise be acquired slowly" (p. 65). In addition, operant conditioning can be utilized to ensure that the appearance of a behavior is present when it may not otherwise occur.

Operant conditioning can also be referred to as a simple feedback system. The reinforcement of a stimulus-response pattern results in the conditioning of an individual to respond to the stimulus appropriately. As indicated by Reynolds (1975), schedules of reinforcement have regular, orderly, and profound effects on a person's rate of response. The students' rate of response can be controlled through the manipulation of the reinforcer. The use of both positive and negative reinforcements are used to elicit a desired response. Each level of

reinforcement, either positive or negative, should occur according to some schedule in order to be effective (Reynolds, 1975).

The use of a feedback system can be found throughout each lesson that is included in a direct instruction program. Feedback is simple, intentional, and fast-paced. Only a small amount of time is devoted to providing feedback to students, although it is done continuously throughout the program. There are numerous opportunities during a lesson for the instructor to provide both positive and negative feedback. This feedback is offered to students frequently in order to elicit the desired response of the instructor. In essence, the instructor is utilizing both feedback and prompting to attain the correct response to the question asked to ensure mastery of the skill being taught. The direct instruction model of teaching is a type of operant conditioning and is used in classrooms to support the needs of struggling readers, especially those with learning disabilities in one or more areas of reading.

Stage Theory of Reading Development

Chall's stage theory of reading development expresses the need for intervention to literacy for struggling students to reduce the risks of failure (Beers, 2003). The theory states that reading should be taught through systematic and organized instruction and that reading is a staged and ongoing process (Weaver, 2012). Chall's stage theory of reading development grew out of her seminal research on the effectiveness of early intervention approaches, and the six stages are consistent with the stages of instruction that constitute the direct instruction model that both SRA Reading Success and SRA Reading Mastery Signature follow (Carnine, Silbert, Kame'enui, & Tarver, 2012).

Six stages of reading make up Chall's stage theory of reading development. Stage 0 is identified as a pre-reading stage that focuses on the children's growth in knowledge and use of

the spoken language. It includes children from birth to age six. Stage 0 includes control of

words and syntax. The acquisition of beginners' understanding of sound structures is evident,

and they begin to identify beginning sounds and ending rhyming sounds. Most children in Stage

0 will begin to acquire some knowledge of print sources and may begin to "pretend read"

(Carnine et al., 2012). During stage one, which should occur in grades one and two, children

will begin to learn the letters of the alphabet and start understanding the relationships between

letters and letter sounds. At the end of Stage 1, children will have a basic understanding of the

spelling-sound system. Direct instruction of decoding should begin during this stage to advance

the student's ability to read. Stage 2 should take place between grades two and three. In Stage 2,

children learn to recognize words that are composed of complex phonetic elements and students

should be able to read stories composed of equally difficult words. Oral reading of stories and

passages becomes more fluent and sounds will begin to come with automaticity (Carnine et al.,

2012). After the completion of stages one and two, a student should be reading with ease and

effort in decoding should be decreased. Stage 3 is broken down into two different phases. Phase

A which should occur between grades four and six and phase B occurring between grades seven

and eight. In stage three, students begin to learn new knowledge, information, and experiences

through the reading process. Growth in vocabulary development and background knowledge are

of high importance. Students begin to read a variety of material for a variety of purposes.

Reading textbooks, magazines, encyclopedias, novels, and short stories are common. As

students move toward the conclusion of phase three they should begin to analyze what they read,

confront various viewpoints, and develop criticisms about the material read (Carnine et al.,

2012). Stage four of Chall's theory should occur throughout a student's high school career. In

this stage, readers should be able to deal with more than one viewpoint or topic simultaneously.

Reading topics are dealt with in greater depth during this stage and readers should be able to read more than one set of facts, competing theories, and multiple interpretations in order to acquire new viewpoints and to acquire more complex background knowledge about a given topic. One area of high importance during stage four is reading for the purpose of studying or reading to develop study skills. The final stage, Stage 5, occurs at age 18 and above. Stage 5 is the highest stage of reading development. Readers should be able to read materials at a level of completeness that is needed to serve the purpose. During this stage, readers choose their own material to read and should be able to analyze, synthesize, and make judgments about what they have read. Reading during Stage 5 is constructive in that the reader should be able to construct knowledge and understanding from reading what others have written (Carnine et al., 2012).

The Stage Theory of Reading Development relates to this particular study because the stage theory maintains the reading stages are not discrete, they are continuous and overlapping. It has important implications for individualized instruction upon which special education programs are built. Development at each stage of the Stage Theory is dependent upon mastery of the previous stages, thus, it is necessary for educators to ensure mastery of prior skills in order to move forward in reading instruction with individual students. This practice is evident in any direct instruction model that is taught with fidelity. Mastery of key comprehension skills is a key component of both the SRA Reading Success program and the SRA Reading Mastery Signature program.

Vygotsky's Zone of Proximal Development

The zone of proximal development can be defined as the "distance between the actual developmental level as determined by independent problem solving, and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (McLeod, 2012). Vygotsky's theory assumes that when students are in their own zone of proximal development, adequate assistance can give them enough of a boost to complete the task given. This practice of teaching is found in many regular education classrooms, but should be evident in all special education classroom settings. Through special education, students are viewed as individuals and their curriculum is individualized to meet their individual needs. Direct instruction, frequently found in special education curriculums, involves students in teacher-directed interactive instructional groups (Drecktrah & Chiang, 1997). This practice is rooted in Vygotsky's zone of proximal development. The ZPD is also referred to with the term scaffolding. Scaffolding is the process of providing strong support to a student who is attempting to complete a task that is initially beyond the learner's capacity. Gradually, the teacher begins to lessen the support provided until the student reaches mastery of the particular skill being taught. Ultimately, the teacher should remove all support, or the scaffold, so that the student is completing the task in an independent manner. Direct instruction programs are built upon this theory; thus, making Vygotsky's zone of proximal development pertinent to this particular study.

Students with Learning Disabilities and Reading Achievement

Reading difficulty among students with specific learning disabilities has been identified as one of the most significant problems with which this population of students is faced (Swanson, 1999). Students who qualify as learning disabled are those students who have normal

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intelligence, but exhibit a discrepancy between their intelligence quotient and their achievement level as measured by a valid and reliable achievement test. Students with disabilities experience the most difficulty with the acquisition of reading skills when compared to other subject areas. As indicated by Wei, Blackorby, and Schiller (2011), the skills that underlie proficiency in reading include foundational skills in phonemic awareness, word attack, vocabulary fluency and comprehension of read material. "For students with specific learning disabilities, acquiring one or more of these foundational skills is challenging" (Wei et al., 2011, p. 90). Reading difficulties among this group of students can be attributed to their genetic makeup and to life experiences and exposures or the lack there of (Martin et al., 2008). As noted by Swanson (1999), "a popular assumption that has emerged in the last few years is that children with learning disabilities have specific processing deficits that are localized in phonological processing, particularly at the word-recognition level" (p. 505). When compared to "typically developing students, children with learning disabilities have lower growth in working memory and less attentional resources, which is related to slower reading comprehension and vocabulary growth" (Wei et al., 2011, p. 91). Because of the student's lag in working memory, the child experiences a generally low or slow degree of change or success (Swanson, 1999). Although a slower degree of change or success, the growth curve of a student with a specific learning disability is similar to that of a typically developing peer (Wei et al., 2011). This deficit interferes with their ability to process the phonological aspects of language. Because of this, limitations to their success in the area of reading begin to surface, usually at an early age. This idea has been accepted in the field because of the high percentage of students with specific learning disabilities who exhibit reading and writing problems as opposed to math deficits. More specifically, research indicates that students with learning disabilities often lack the vocabulary needed to comprehend read material. The

lack of vocabulary skills is most likely related to the absence of books in the home before entrance to public education and the lack of communication between the child and other adults in the household (Martin et al., 2008). In addition, students with specific learning disabilities lack the strategies needed to determine the meanings of words using contextual clues. The importance of developing strong reading skills for all students is prevalent because reading underlies the student's performance in most other academic domains. Therefore, a student's inability to read on or above grade level often determines the student's ability to be successful in other academic classes. In addition to academics, deficiencies in reading skills also affect the student's ability to adjust to other school activities. According to Wei et al. (2011), "observers have linked reading skills to a range of important outcomes including success in the K to 12 and postsecondary education systems, the ability to compete in the labor market and even the health of the American democracy" (p. 89).

Essential Components of Reading

Through a summary of decades of research, the National Reading Panel Report found that there are five critical components to effective reading instruction. These components include phonemic awareness, phonics, fluency, vocabulary and comprehension. These areas were incorporated into the No Child Left Behind Act and the Reading First Initiative as essential components to effective reading instruction (Learning Point Associates, 2004). There are many different techniques to teaching these five critical skills. Whichever method is chosen, it is the responsibility of the teacher to effectively deliver instruction that will ensure that students master the skills in order to read and comprehend read material effectively.

Phonemic Awareness

"Phonemic awareness is commonly defined as the understanding that spoken words are made up of separate units of sound that are blended together when words are pronounced" (Learning Point Associates, 2004, p. 4). As indicated by Grossen (2012), phonemic awareness is a prerequisite to learning phonics. Tasks associated with phonemic awareness do not require the children to be involved in actual reading. Phonemic awareness is important in learning to read languages that are based on an alphabet system and is often a predictor of how well a student will learn to read. Acquiring phonemic awareness should allow children to learn to isolate, blend, discriminate phonemes, and identify individual letters (Grossen, 2012). As indicated by the National Reading Panel Report (National Institute of Child Health and Human Development [NICHHD], 2000), the degree of phonemic awareness needed to contribute maximally to a child's reading development does not come from incidental learning or instruction. Grossen (2012) noted that recent research on phonemic awareness has found that rhyming, blending spoken sounds into words, word-to-word matching, counting phonemes, segmenting spoken words into sounds, and deleting sounds from words has assisted in the acquisition of phonemic awareness. "The lack of phonemic awareness seems to be a major obstacle for some children in learning to read" (Grossen, 2012, p.3). Therefore, teachers must focus on the objective of teaching the skills that contribute to phonemic awareness in order to effectively deliver instruction.

Key components to teaching skills that contribute to phonemic awareness include:

- Assess the types of phonemic awareness tasks students are able to complete and plan the instruction accordingly.

- Focus on one or two phonemic awareness skills at a time.

- Introduce each new letter sound correspondence explicitly.

- Select and sequence letter sound correspondence carefully.

- Designate an adequate amount of time to devote to teaching phonemic awareness skills.

- Emphasize breaking words down into phonemes.

- Incorporate small group instruction with two to three students to focus on phonemic awareness skills.

- Connect phonemic awareness instruction to reading, writing and spelling instruction already taking place in the classroom

- Use manipulatives and tactile teaching techniques to teach phonemic awareness skills.

- Emphasize the importance of being aware of the way the mouth changes when pronouncing words, specifically phonemes that make up each word.

Phonics

Phonics can be defined as "a set of rules that specify the relationship between letters in the spelling of words and the sounds of spoken language (Learning Point Associates, 2004, p.12). Effective phonics instruction leads to a student's ability to decode words. It allows a student to understand the relationship between phonemes and graphemes which enables the student to read and spell accurately and rapidly. Phonics instruction paired with phonemic awareness provides a strong foundation for using alphabetic principles to learn to read.

Fluency

Fluency can be defined as "recognizing the words in a text rapidly and accurately *and* using phrasing and emphasis in a way that makes what is read sound like spoken language"

(Learning Point Associates, 2004, p. 17). A student's ability to read fluently is the skill most closely related to reading comprehension. As noted by Roberts et al. (2008), reading fluency does not directly cause comprehension difficulties, but does play a facilitative role. Some readers struggle though text because they lack automaticity of words and while fluency is a major component of comprehending a text, automaticity alone does not ensure comprehension (Beers, 2003). Often students who have a low reading fluency rate also show difficulty understanding read material. Students with reading disabilities and low fluency levels tend to read less frequently, which results in a lower sight word vocabulary and ultimately the inability to understand what is read (Roberts et al., 2008). This relationship between fluency and comprehension is explained in this way in the National Reading Panel's Report (NICHHD, 2000):

Why do problems with reading accuracy, speed, and expression interfere with comprehension? To answer this question, we need to examine the reading process in terms of two basic cognitive tasks. The reader must recognize the printed words (decoding) and construct meaning from the recognized words (comprehension). Both decoding and comprehension require cognitive resources. At any given moment, the amount of cognitive resources available for these two tasks is restricted by the limits of memory. If the word recognition task is difficult, all available cognitive resources may be consumed by the decoding task, leaving little or nothing for use in interpretation. Consequently, for the non-fluent reader, difficulty with word recognition slows down the process and takes up valuable resources that are necessary for comprehension. Reading becomes a slow, labor-intensive process that only fitfully results in understanding. (NICHHD, 2000, p. 3).

Vocabulary

According to Roberts et al. (2008), "fluently and accurately identifying words in text is critical to successful reading. Knowing the meanings of those words is no less essential; particularly in relation to reading comprehension" (p. 65). Lerner (2003) noted that reading vocabulary is crucial to the comprehension process and that children are helped by direct instruction of vocabulary. Vocabulary can be defined as the words we need to know in order to communicate with others (Learning Point Associates, 2004). There are four types of vocabulary; speaking, listening, reading and writing. Speaking can be described as words that we use when we talk to others. Listening is the words we understand when others talk to us. Reading is words that we know when we see them in print and writing are the words that we use when we compose written material. Vocabulary is an important component of word recognition as well as reading comprehension.

The National Reading Panel Report (NICHHD, 2000) suggests the following as recommendations for vocabulary instruction:

- Vocabulary should be taught through direct instruction.

- Repeated exposure to new vocabulary is important in vocabulary development.

- Vocabulary that is found in grade level text should be emphasized during vocabulary instruction.

- Active engagement with vocabulary enhances learning.

- Utilize restructuring activities to promote vocabulary development.

According to Lerner (2003), vocabulary instruction leads to gains in comprehension; however, the methods used must be age and ability appropriate.

Research indicates that teachers should engage in long-term, ongoing vocabulary instruction, and should also pre-teach vocabulary words before assigning a difficult reading assignment (Learning Point Associates, 2004). As indicated by Beers (2003), some students need and will benefit from a direct vocabulary study in addition to direct and explicit comprehension strategy instruction. Beers (2003) recognized that most words may not be learned through direct instruction, but in a more indirect manner such as through the listening of general conversations taking place around them. However, the lack of a strong vocabulary directly and negatively affects one's ability to comprehend reading material. Methods that encourage students to actively construct meanings, as opposed to looking up and copying definitions from a dictionary, help students to learn words and retain the word meanings for a lengthened period of time (Beers, 2003).

Comprehension

Comprehension can be defined as "constructing meaning that is reasonable and accurate by connecting what has been read to what the reader already knows and thinking about all of this information until it is understood" (Learning Point Associates, 2004, p. 30). "The National Reading Panel views comprehension as an active process that requires an intentional and thoughtful interaction between the reading and the text" (Lerner, 2003, p. 417). While phonemic awareness, phonics, reading fluency, and vocabulary development are all essential components to reading, they should be considered prerequisites to strong reading comprehension skills. Skills that must be mastered in order to effectively comprehend read material are clarifying, comparing and contrasting, connecting to prior experiences, making inferences, predicting, questioning the text, recognizing the author's purpose, seeing causal relationships, summarizing, and visualizing (Beers, 2003). "Comprehension is both a product and a process, something that

requires purposeful, strategic effort on the reader's part, anticipating the direction of the text (predicting, seeing the action of the text (visualizing), contemplating, and then correcting whatever confusions we encounter (clarifying), connecting what's in the text to what's in our mind to make an educated guess about what's going on (inferencing)" (Beers, 2003, pp. 45-46).

Reading Comprehension and Students with Learning Disabilities

According to Watson et al. (2012) "reading comprehension has been defined as the process that excerpts and, at the same time, creates meaning by having the student interact and be involved with written language" (p. 79). It is known as the essence of reading and requires the reader to make connections with the text and with the reader's prior knowledge. As indicated by Roberts et al. (2008), "many older struggling readers are victims of poor early reading instruction" (p. 63). These students were insufficiently taught at least one of the five components of reading which ultimately lead to the inability to process read text. Difficulties in reading comprehension present as complex problems that may be associated with inadequate vocabulary development, lack of conceptual knowledge, weak reasoning skills and the inability to apply active comprehension skills (Roberts et al., 2008). Students with specific learning disabilities who qualify in the area of reading comprehension often have difficulty "associating meaning with words, recognizing and recalling specific details, making inferences, drawing conclusions, and predicting outcomes, which are often attributed to a lack of metacognitive skills (Sencibaugh, 2007). For students with specific learning disabilities, problems in reading comprehension are sometimes related to inadequate decoding skills, but are often more closely related to a limited working memory, inhibitory problems, prior knowledge, misconceptions, text structure knowledge, planning and language difficulties (Watson et al., 2012).

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Defining Direct Instruction

"The practice of direct instruction in the classroom is a systematic method for presenting material in small steps, stopping to check for student understanding, providing immediate feedback and requiring participation from all students involved in the lesson" (Parker, 2011, p. 6). A three step approach to teaching which includes modeling, guided practice, and independent practice are employed in direct instruction. Direct instruction allows for students to focus on one reading problem at a time until the student reaches mastery of that skill. The direct instruction model requires mastery of skills though explicit teaching. Teachers follow highly detailed lesson plans that rely on continuous reinforcement to learn increasingly more complex material. Direct instruction emphasizes fast-paced, scripted, sequenced, rule based, and highly focused lessons (Shippen et al., 2005). Direct instruction allows teachers to teach more in less time and to control the detail of what happens (Gregory, McLaughlin, Weber, & Stookey, 2005).

Direct instruction is best instructed in a small group setting where students feel confident responding both independently and chorally to the instruction. A typical classroom where a direct instruction program is taught "involves 8 to 12 students actively responding to scripted teacher instruction for 30 to 45 minutes" (Kim & Axelrod, 2005). Direct instruction has shown to provide positive educational experiences within the classroom and increase self-esteem for struggling learners (Weaver, 2012). Immediate feedback throughout the lesson is pertinent to the success of the program. In addition, a specific correction procedure is utilized to ensure that students understand the mistake made but do not feel threatened or as though they have failed. Components of the program include: scripted lessons, choral student responses, the use of clear signals to elicit student response, providing correction procedures for incorrect responses, and modeling skills or guiding students by responding with them (Flores & Ganz, 2007). Direct

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instruction is a teacher directed model that is "intense, explicit, and delivered over an extended period of time to allow for generalization" (Martin et al., 2008, p. 115).

Direct Instruction and Special Education

As indicated by Kinder et al. (2005), the Individuals with Disabilities Education Act of 1997 requires that all students who are identified as having a disability receive specially designed instruction to meet their unique needs. Instruction must be individualized and validated. As suggested by Kinder et al. (2005), instruction for special education students must be aligned with their individual needs, and as those needs change, the instruction provided to the student must change to meet those needs. More recently, IDEA has increased the focus on the use of scientifically based practices and programs (Kinder et al., 2005). Research on effective teaching has shown that teachers should directly and explicitly teach students what they need to know (Rupley, Blair, & Nichols, 2009). Direct instruction has been proven to be an effective means of teaching the major components of the reading process. In addition, Baumann and Duffy (1997) suggest that direct instruction has the potential to foster lifelong readers by providing instruction in a systematic and explicit way (Rupley et al., 2009).

Middle School Students with Learning Disabilities and Direct Instruction

Swanson and Deshler (2003) suggest that "adolescents with learning disabilities are a heterogeneous group" (p. 124). Because of this characteristic, no one particular general instructional model can be recommended for use with all students. While the recommendation of one program cannot be made, studies indicate that some common general principles for teaching adolescents with learning disabilities have emerged (Swanson & Deshler, 2003). While these practices may present differently in various environments, they underlie effective remediation programs for adolescent students with learning disabilities. While various

instructional factors, when implemented on a consistent basis with fidelity, have proven effective; Swanson and Deshler (2003) found that the use of advance organizers and explicit instruction and practice brought about significant gains.

Middle school students who are inefficient readers require intense, direct instruction in an attempt to close the reading achievement gap. Because the middle school curriculum is content-driven, the problems that a struggling reader faces are multiplied and the frustration that these students face becomes more severe; therefore only making the reading problems more evident. As indicated by Swanson and Hoskyn (2001), "the challenges faced by adolescents with LD increase as they face the curriculum and learning demands of middle and high school. Further, the gap between academic performance of students with and without LD continues to increase across adolescence" (p. 109). However, it is not too late to provide interventions to remediate the reading skills that these students lack. The middle school level is an opportune time to provide intense reading instruction to students in an effort to shrink or close the achievement gap. Carnegie units are not earned at the middle school level; thus, allowing the special education teacher to focus on intense reading instruction during the resource class period as opposed to utilizing that time to ensure that the students are passing Carnegie unit courses required at the high school level. In addition, students at the middle school level who are frustrated, struggling readers will be more motivated to complete a program such as SRA Corrective Reading to improve their reading skills. As students mature, they are better able to understand the importance of developing reading skills as well as the implications that the lack of reading skills can have on their futures.

Because so many students with specific learning disabilities do not respond to traditional reading instruction, many schools and districts are beginning to rely on direct instruction

programs because these programs are supported by research and consistently show positive

results when implemented correctly (Donlevy, 2010). Swanson and Hoskyn (2001) found that

"educational intervention for adolescent students with LD produces positive effects and specific

instructional components account for a substantial proportion of this positive outcome" (p. 116).

Numerous studies have been conducted that document the superiority of direct instruction in

promoting reading achievement (Stockard, 2010). Because of the long history of proven results,

especially with older, struggling readers, direct instruction programs, when used with fidelity, are

possible solutions to reading skill deficits that learning disabled, middle school students face.

SRA Reading Success

Reading Success is a sixty-lesson reading comprehension program designed as a

supplement to the regular reading program that is already being taught within the classroom.

Reading Success is designed for students of any age who decode at a low-mid third grade level

or higher, but who struggle with reading comprehension skills. According to Dixon, Boorman,

and Muti (2008), the effectiveness of the Reading Success program can be contributed to three

key elements; explicit strategy instruction, scaffolding, and review. Strategy instruction is

essential for students who are unlikely to be able to figure out sophisticated reading strategies

independently. According to the National Reading Panel's report, "readers who are given

cognitive strategy instruction make significant gains on measures of reading comprehension

when compared to students who are trained with conventional instructional procedures" (2000).

Scaffolding is present throughout the Reading Success program through the way in which the

program is taught. Students are supported as they learn new strategies. Most of the strategies

learned are taught through a step by step process. After initial teaching of the new strategies is

completed, the teacher continues to prompt students liberally. Gradually, over time, the scaffold

is removed and the intention is that the students will use the strategy automatically and will become independent. The final essential component of the Reading Success program is review. This program reviews targeted skills continuously. All topics taught are reviewed daily for several lessons and then approximately once every other day after. The reviews found in the program are cumulative and varied. The reviews are distributed evenly so that the review happens often enough to ensure mastery of the concept or skill being taught. The intention of the practice is to ensure broad generalization and transference of the skills to various reading passages presented to students in the general education classroom setting as well as assessments and other comprehension tasks that students are likely to encounter outside of the special education classroom (Dixon et al., 2008). Through the Reading Success program, a variety of comprehension skills are taught (Dixon et al., 2008). These skills and a brief explanation of each are outlined in the following chart:

Table 1

Explanation of Skills Taught

Specific Comprehension Skill	Explanation of Skill
Vocabulary	The target words presented to students are words that are grade level words, but they are words that can be defined with more common words. Students practice the new words in a variety of tasks and the new vocabulary learned is recurrent in later reading passages. The focus of the vocabulary component is to teach students to learn to comprehend the new words when the word is presented in a reading passage.
Asking Questions	Students who have difficulty with reading comprehension often struggle remembering what they have read. A strong emphasis in Reading Success is about getting students to use self-questioning while reading. Students are required to ask themselves questions as they read and this skill is extended into a "contest" every fifth lesson that requires the students to get into teams and compete to come up with questions for one another.
Memory Techniques	Several exercises in Reading Success are geared at building students' ability to remember what they have read. One way that Reading Success does this is by learning acronyms as a mnemonic device.
Literal Comprehension	Many aspects of deeper comprehension are built upon the understanding and the ability to remember literal facts and opinions from text. Reading Success primarily focuses on higher level comprehension skills; however, it continues to offer ongoing practice on the fundamental concept of literal comprehension.
Reading Content	Content in Reading Success is focused on both remembering literal facts and content, but goes on to teach students strategies to understand content area texts.
Details, pronouns, classification and main idea	Students in Reading Success are first required to identify details found within a passage. After mastery of that skill, they go on to classify the details found within the passage. Pronouns become an important part of this program because in order to fully understand the main idea of the passage, a student must be able to identify the pronoun and the person, place, or thing in which it renames. Understanding the main idea of a passage is essential because it is a vital skill for reading comprehension as well as frequent questions found on reading comprehension assessments. (continued)

Table 1

Explanation of Skills Taught

Specific Comprehension Skill	Explanation of Skill
Parts of a Story	Comprehension requires that students remember the temporal order in which events occur. Students must recall the events that happened in the story in order to answer cause and effect questions and other questions found on reading comprehension assessments
Making Inferences	Prediction and making correct inferences are a major component of the reading process. Students must be able to predict what might happen next in a story and be able to check the prediction to either void it or verify it. This skill also helps students make connections among the events in a story, thus making it easier for students to remember the sequence of events in a story
Review	Most of the skills taught in Reading Success are taught in isolation. These skills are later incorporated into review exercises that are frequent to ensure mastery and retention. The review exercises are the exercises that are most comparable to a passage that a student would see in the regular education classroom or on a reading comprehension assessment. They require the student to read a passage and answer a variety of different question types and include the skills that have been previously taught in completed lessons.
Bonus Terminology	Every five lessons a bonus term is presented to the students. The bonus terms are words that the students do not necessarily have to know in order to comprehend well.

SRA Reading Mastery Signature

Reading Mastery Signature is a research based reading program that is broken down into various levels that can be taught consecutively over the course of several years. The research based sequences have been thoroughly field-tested and revised based on the performance of teachers and students (Engelmann et al., 2002). After completion of the Reading Mastery Plus series, students should have solid decoding skills, a relatively large reading vocabulary, and a good working knowledge of word meanings. The most beneficial skill that students should

obtain after completion of the program is the ability to read to learn. This program allows

students practice opportunities to learn new concepts and to glean new information from the

various texts that they read.

Reading Mastery Signature is intended for any student who is reading at a fourth grade

level. A placement test is provided to assess each student to determine the correct placement for

that individual child. Program components include two presentation books that provide specific

teacher instruction for presenting every activity in the program and an answer key book. It also

includes a teacher's guide that provides a complete explanation for the program and how to teach

it. It provides suggestions for teaching critical skills and discusses the in-program tests

identifying ways to correct students who do not perform acceptably or reach mastery on the

included tests. A literature guide is provided that specifies the 17 literature selections, the new

vocabulary in each selection, and the comprehension questions and expansion activities that

accompany each selection. Also included is a language arts guide that provides direction for the

further development of selected reading-related skills. Finally, a section named activities across

the curriculum is provided that includes 33 additional activities that can be used throughout the

program to extend and reinforce the skills that the students are acquiring throughout the program

(Engelmann et al., 2002). The students in the program will have access to textbooks that include

color illustrations, vocabulary lists, stories, and information passages that students read as part of

every reading lesson. Also included in the textbook are comprehension items for the stories and

the information passages presented in the lessons. Students have access to worksheets for daily

lessons that provide additional comprehension activities which are coordinated with the textbook

stories, a literature anthology which is used during the 15 literature lessons as a way to reinforce

skills students should acquire during the reading program, and a blackline master which includes

reproducibles for fact-game activities, literature lesson activities, and other selected reading related skills.

In regards to the scheduling of lessons, this program includes daily reading lessons starting with lesson one and going to lesson 140. Reading Mastery Signature also includes project lessons and literature lessons that are intended to be taught intermittently. The daily reading lesson requires 35 to 40 minutes and addresses core reading skills which include decoding, comprehension, and skills in reading to learn. Students should complete one lesson per day. Another component of the daily reading lesson is the daily independent work period which requires about 20 to 30 minutes each. Students require this time to complete the independent work that is presented in the daily reading lesson. Project lessons and literature lessons, which are only taught at specified times throughout the program, require 40 to 80 minutes each (Engelmann et al., 2002). The following chart outlines the time requirements for teaching Reading Mastery Signature Edition Effectively:

Table 2

Time Requirements for Reading Mastery Signature

Time Needed	Lesson Type	How Often
40 minutes	Reading Lesson	Daily
Up to 30 minutes	Independent work	Daily
10 minutes	Work Check	Daily
40-80 minutes	Project Lesson	For every major story sequence
10-60 minutes	Activity lesson	From time to time
40-80 minutes	Literature lesson	Every 10 lessons

Reading Mastery Signature 4, which will be used for this study, has seven lesson types. Some of the lessons are main lessons while others are identified as supplemental lessons. Only the main reading lessons are to be presented on a regular basis during the students' regularly scheduled academic skills class. All other lesson types; literature, language arts, activity, and special project lessons are to be scheduled on days that the resource teacher sees an opportunity to include the lesson into the daily schedule without disruption of the main reading lesson schedule. In order to fully understand the program, the various lesson types should be examined in more detail. The three specific lesson types that will be used as part of this study are the reading lesson, literature lesson and special project lesson (Engelmann et al., 2002).

The 140 reading lessons are numbered lessons that fall into three different categories. The regular reading lesson is the most common and consists of work attack, vocabulary instruction, and a reading selection that students are responsible for reading during their academic skills class followed by comprehension questions that accompany the selection. The second lesson type is a regular reading lesson that is accompanied by a reading checkout. The reading checkout requires students to individually read a 100 word passage to check reading fluency. The third type of the reading lessons is the test lesson. This occurs every tenth lesson and assesses the students' performance on content presented in the preceding nine lessons as well as their reading fluency.

The literature lessons present stories, poems, and dramas. These lessons also occur every tenth lesson and generally require an additional class period to complete. During the literature lessons, students read a selection, respond to comprehension questions about the literary selection, and complete extension activities that may require the student to conduct further research or to take part in a class project.

There are 12 special project lessons included in Reading Mastery Signature. They occur intermittently, usually when the students complete a major story sequence in the reading program. The skills required in each special project lesson are skills that the students have mastered as part of the previous lessons completed. The special projects expand on the themes of each of the story sequences and provide student experiences with cooperative learning, independent work, and student activities that promote self-expression.

Reading Mastery Signature Comprehension Emphasis

Each lesson in Reading Mastery Signature is designed to emphasize two things; decoding and comprehension. The word attack presentation component deals with not only decoding, but it is designed to develop the understanding of key words. Like the decoding component, the comprehension component which is made up of a comprehension passage and a main story is designed so that decoding skills are embedded throughout. The comprehension emphasis can be found throughout each daily reading lesson and the supplemental lessons. Skills that are taught during the comprehension component of the daily lessons include literal comprehension skills, identifying relevant details, main idea, information recall, sequencing, cause and effect, fact vs. opinion, context clues, viewpoint, character development, map skills and reference book skills (Engelmann et al., 2002).

The comprehension emphasis is broken down into vocabulary model sentences, word attack, comprehension-passage reading, main story reading activities, independent work applications, daily work check, a tenth lesson fact game, and tenth lesson tests. During the vocabulary model sentences, selected vocabulary words appear in sentences and students learn what each sentence means and respond to tasks about the meanings of specific words found within the sentence. During the word attack presentation, critical vocabulary items are pre-

taught through teacher modeling. The comprehension passage focuses on the presentation of specific comprehension tasks that the students respond to orally (Engelmann et al., 2002). As part of the main story reading activities, the students read the story as the teacher presents specific comprehension tasks including recalling information from the text, making inferences based on specific facts, and making inferences based on information about different characters. Responses to the tasks are completed orally. Following the main story reading activities, the students engage in independent work applications. During this phase of the lesson the students independently write answers to items that are presented to them in the form of worksheet questions as well as questions found within the textbook. The items that are presented to students derive from the main story, the comprehension passage, and information from earlier main stories or comprehension passages. All of the comprehension skills that are taught throughout the program are embedded in this component of the program. After completion of the independent work applications, a daily work check is completed by the teacher. This allows the students to receive immediate feedback on their independent work performance. The final components of the comprehension emphasis are the tenth lesson fact game and the tenth lesson tests. The fact game allows students to respond orally to comprehension items in the form of a game. These comprehension items cover key concepts and facts from lessons previously taught. Following each fact game is a test that assesses the student's ability to respond to specific comprehension tasks (Engelmann et al., 2002).

<div align="center">**Related Research**</div>

Schieffer, Marchand-Martella, Martella, Simonsen, and Soler (2002) conducted an analysis of the Reading Mastery Program. Their analysis included a research review of 25 published studies and two large-scale research reviews. They found that the use of Reading

Mastery results in "positive reading outcomes for general education students, general education remedial students, and special education students" (Schieffer et al., 2002, p. 110). When compared to other reading programs, direct instruction programs were found to be more effective in improving the reading performance of students. When looking at 21 comparison studies, 14 of the studies favored using Reading Mastery, while only three studies favored another reading program. While statistical significances were found when the investigative studies involved general education students and general education remedial students, findings were less consistent for special education populations. Four of the nine studies favored Reading Mastery Signature, three favored other programs, and in two of the studies, no statistical significance was found. However, in one study conducted with 26 students with learning disabilities ages 7-10, student performance improved by an average of four months with improvements ranging from 0 months to 9 months (Schieffer et al., 2002). So while the data showed inconsistencies, there is data to support Reading Mastery Signature as it relates to positive student outcomes in reading for special education populations.

Another meta-analysis was conducted by the What Works Clearinghouse (WWC) on several of the Reading Mastery programs including Reading Mastery Signature. A total of 175 studies were reviewed by the WWC that investigated the effects of Reading Mastery on adolescent learners (What Works Clearinghouse [WWC], 2010). Of the 175 studies reviewed, only two of the studies met the WWC evidence standards. A study conducted by Stockard (2010), examined the effects of Reading Mastery Signature Edition on 4th grade regular education students. The students were randomly assigned to either a treatment or control group. Two pairs of teachers were also randomly assigned to each group creating four groups; two treatment groups and two control groups. Twenty-nine students received instruction in Reading

Mastery Signature and 28 students received instruction using the Scott Foresman Basal Reading Program. Student outcomes were reported after a five month implementation period (WWC, 2010). Stockard (2010) found statistically significant positive effects of Reading Mastery Signature on improving reading fluency as measured by the AIMS Web Curriculum Based Measurement Words Read Correct. No outcomes were reported in the area of reading comprehension (WWC, 2010).

Yu and Rachor (2000) conducted a quasi-experimental study that examined the effects of Reading Mastery Signature on students from three various grades in six different schools in the United States. Three of the schools implemented the Reading Mastery program and three of the schools did not. The demographics of each of the schools were similar in regards to poverty level and the number of minority students (WWC, 2010). The study reported student outcomes from the fourth and fifth grade groups after one and two years of program implementation. Yu and Rachor (2000) reported a statistically significant positive effect of Reading Mastery in the area of reading comprehension as measured by the Riverside Publishing Off Grade Reading Proficiency test for students in grade four and statistically significant negative effects on the State Reading Proficiency test for the students in grade five (WWC, 2010).

Based on the studies conducted by Stockard (2002) and Yu and Rachor (2000) the WWC found "potentially positive effects on reading fluency and no discernible effects on comprehension for adolescent learners" (WWC, 2010, p. 5).

Fagella-Luby and Deshler (2008) conducted a review of literature to highlight emerging findings in the field of reading comprehension instruction among adolescents. The types of research included in the review were literature reviews, research syntheses, and meta-analyses. From this research, four key findings were discovered.

- Targeted instruction of what good readers do improved reading comprehension among LD students and those at risk for failure.

- Focused reading instruction, specifically instruction on self-monitoring strategies (metacognitive), improved student achievement in reading comprehension.

- Explicit instruction improved the reading comprehension skills of all students involved (LD students, at risk students, and typical students).

- Explicit strategy instruction improved reading comprehension skills among LD students, at risk students, and typical students.

In another meta-analysis conducted by Sencibaugh (2007), research found that "interventions involving metacognitive strategies benefitted students with learning disabilities" (p. 14). Like Fagella-Luby and Deschler (2008), Sencibaugh (2007) also found that it is critical to teach students with specific learning disabilities how to effectively implement specific strategies to enhance reading comprehension.

In a study conducted by Antoniou and Souvignier (2007), 73 students with specific learning disabilities in grades five through eight were placed in a reading strategy program containing reading and self-regulation strategies. Results of this study indicate that not only was student progress on reading strategy knowledge significant immediately following the implementation, but students showed significant gains in reading comprehension, reading strategy knowledge, and reading self-efficacy after conducting follow up assessments (Antoniou & Souvignier, 2007).

Berkeley, Mastropieri, and Scruggs (2013) conducted a study on strategy instruction in reading comprehension for secondary students with learning and other mild disabilities. They found that when students were explicitly taught strategies to implement when comprehending

read material, the students were able to use the strategies taught when given a similar piece of literature in a testing situation; however, the study indicated that although direct instruction in reading comprehension strategies usually improve student comprehension, the students do not generally persist with the strategy or transfer what they have learned when reading other types of material in general education classrooms (Berkeley et al., 2013).

A meta-analysis of single-subject design interventions was conducted to determine the effectiveness of direct instruction programs implemented throughout the last thirty years. The meta-analysis resulted in four major findings that were deemed important to the field of special education. Swanson and Sachse-Lee (2000) found that when various instructional approaches are used in a single-subject-design, the significant beneficial effect for children and adolescents with learning disabilities resulted in a mean effect size of .90 using Cohen's threshold. When looking specifically at a drill-repetition-practice-review segmentation model used in small group instruction, the analysis yielded the highest effect size. Gregory et al. (2005) found that when the direct instruction program, Corrective Reading was implemented with a 16-year-old high school student with a learning disability, his reading grade level equivalency increased by five years after a one year implementation as measured by the Peabody Individual Achievement Test. In addition to the meta-analysis conducted by Swanson and Sachse-Lee, another study conducted by Becker and Gersten found that after a three year implementation of a direct instruction model, students who participated performed better on standardized achievement tests than comparable students in their communities who did not participate in the treatment (Becker & Gersten, 2001). Strategy instruction models as opposed to non-strategy instruction models were found to have much higher effect sizes. Finally, direct instruction models proved especially beneficial for students with an intelligence quotient in the 85-90 range which falls in the low average range

(Swanson & Sachse-Lee, 2000). Reis, McCoach, Coyne, Schreiber, Eckert, and Gubbins (2007) found that when a school enrichment model, which included a direct instruction strategic model, was implemented with students in grades three through six, students who received the SEM intervention "scored significantly higher than the control group on posttest measure of reading fluency and reading comprehension" (p. 12). Shippen et al. (2005) conducted a study that sought to investigate the effects of two direct instruction reading programs on the performance of struggling, middle school readers. The study specifically looked at the differential effects on skill improvement in word reading efficiency based on the type of direct instruction that the students received. The participants in the study were students who were reading significantly below grade level. After a six week intervention, the students showed gains in word recognition and reading fluency regardless of the direct instruction that was implemented. The researcher indicated that if the direct instruction program had been implemented for a longer period of time, the students could have reached even higher levels of improvement. This study further validates that highly structured, explicit, teacher direct instruction for struggling readers is an effective practice (Shippen et al., 2005).

Summary

Reading instruction has historically been, and will continue to be, a controversial issue that is debated by professionals in the field of literacy. This controversy is especially evident in the area of special education because the ability to read fluently and effectively has clear implications on a student's overall academic achievement. Educators, administrators, and parents are continuously seeking to determine the most effective ways to teach struggling students to read. The skill of reading can be affected when a student suffers from even one weakness in an area of reading. The inability to decode words affects the student's ability to read because it

creates a more labored reader. Labored reading results in frustration; thus, forming a student

who lacks the motivation and confidence needed to become an efficient reader who is able to

read, synthesize, and understand text. Because the volume that students read is directly related to

their vocabulary knowledge, a labored reader who reads only when it is required does not

develop the vocabulary and comprehension skills needed to achieve academic success in the area

of reading. When a child progresses through elementary school and does not gain the skills

needed to become an efficient reader, success in middle school, high school, and even the adult

years is compromised. The achievement gap in reading widens, and because of this, struggling

readers have difficulty in all areas of academics (Shippen et al., 2005).

CHAPTER THREE: METHODOLOGY

The purpose of this chapter is to describe the research design, methodology, data collection procedures, and the data analysis procedures that were used in this study. This chapter is divided into 8 sections including the purpose of the study, the research design, the research questions and null hypotheses, a description of the participants and the setting, the instrumentation, a description of the procedures, and a description of how the data was analyzed.

Purpose

The purpose of this study was to determine the effectiveness of two direct instruction programs, SRA Reading Mastery Signature and SRA Reading Success, on reading comprehension and vocabulary skills of middle school students with a learning disability. The IRB approval number granted for this study was 1473.012913. This study investigates implementation of SRA Reading Mastery Signature and SRA Reading Success in a resource classroom setting with 72 middle school students with learning disabilities.

The ability to comprehend read material is a problem that many special education students face into their high school and adult years. Even after years of involvement in direct instruction programs that address these needs through special education, there continues to be students with severe reading deficiencies in reading comprehension and controversy surrounding the effectiveness of direct instruction programs when teaching reading comprehension. By assessing students who are participating in direct instruction reading programs with assessments other than those that come as components of the direct instruction program, this research will offer a more viable indication of the effectiveness of direct instruction reading programs and the students' ability to generalize the information learned through the direct instruction program into the general education setting. Therefore, the purpose of this study is to determine if the ability to

comprehend read material is more effectively taught through SRA Reading Mastery Signature or SRA Reading Success as measured by the reading portion of the Measures of Academic Progress.

Design of the Study

This study was a quantitative, quasi experimental study that employed a non-equivalent control group design. Characteristics of this design include the lack of random assignment, a treatment and control group, and the presence of a pretest and a posttest. However, while common to have both a treatment and a control group, it is possible to have all groups receive a treatment with the absence of a control group (Gall, Gall, & Borg, 2007). For this particular study, students in grades six through eight who qualify as students with a learning disability in reading comprehension participated in one of two direct instruction reading programs during their regularly scheduled resource class period and were assessed using the reading portion of the Measures of Academic Progress for the pre and posttest.

This design was chosen because the study sought to compare two reading comprehension programs implemented with special education students. As indicated by Gall et al. (2007), the control group design employs at least two groups of research participants. Random assignment was not possible in this particular study because the participants were placed in each program based on both their qualification for special education and the results of the placement test given at the beginning of the 2012-2013 school year to determine the most appropriate program for each student. Each of the participants must qualify for special education services in the area of reading comprehension. While other areas of disability may also be identified, the only requirement for each of the treatment programs was qualification in the area of reading comprehension. Therefore, convenience sampling was used to determine participants for this

research study. This research study employed both a pre and posttest. A pretest preceded the treatment and the treatments were followed by a posttest using the three subtests of the reading portion of the Measures of Academic Progress.

Research Questions

- Will there be a significant difference in the ability to comprehend literary text between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success?

- Will there be a significant difference in the ability to comprehend informational text between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success?

- Will there be a significant difference in the acquisition of vocabulary development between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success?

Null Hypotheses

- H01: There will not be a significant difference in ability to comprehend literary text between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success.

- H02: There will not be a significant difference in the ability to comprehend informational text between students with specific learning disabilities who

participated in the direct instruction program, SRA Reading Mastery Signature

and those who participated in SRA Reading Success.

- H03: There will not be a significant difference in the acquisition of vocabulary

    development between students with specific learning disabilities who participated

    in the direct instruction program, SRA Reading Mastery Signature and those who

    participated in SRA Reading Success.

Sampling Procedures

Because in the non-equivalent control group design, random assignment is not utilized, participants for this study were chosen based on their areas of qualification for special education and based on the resource class that they were scheduled to attend. This type of sampling is referred to as "convenience sampling" (Gall et al., 2007, p.168). The students were chosen from sixth, seventh, and eighth grade special education classrooms from four middle schools located in the Upstate region of South Carolina. The students who were chosen ranged in age from 11 years old to 14 years old. The sample included both male and female students. While the majority of the sample consisted of Caucasian students, both African American students and Hispanic students were also included in the sample size. The sample size was 72 students: 32 students in the Reading Mastery Signature group and 40 students in the Reading Success group. The sampling frame included students who qualify for special education services as a student with a specific learning disability in the area of reading comprehension. While other areas of qualification may be present, the only required area of qualification is reading comprehension for this study. These participants receive at least one period of academic skills each day as indicated by each of the student's Individualized Education Program that was already in place and mandated by the state and federal laws that govern it. These participants were identified from

the school district's special education records housed in the district office building of the participating school district.

Population

The sample of students in this study represented the 147 middle school special education students in the participating school district that qualify, as defined by state and federal governing laws, as a student with a specific learning disability in the area of reading comprehension. All special education students who attend the four middle schools in the participating district and qualify in the area of reading comprehension were invited to participate in this study. The following sections analyze breakdowns of the demographic information of the 72 students from the 4 participating middle schools. Each section will contain two graphs to represent each treatment group.

Gender

This study employed convenience sampling due to the requirement that all students participating in the study must be identified as a student with a specific learning disability in the area of reading comprehension. Because of this, gender was not equally distributed among the two treatments groups or within each group. Both the Reading Success treatment group and the Reading Mastery Signature treatment group were dominated by the male gender. As displayed in Figure 1, 62.5% of the participants are male (n=25), and 37.5% of the participants are female (n=15) in the Reading Success group. Figure 2 represents the Reading Mastery Signature treatment group where 69% of the population is male (n=22) and 31% is female (n=10).
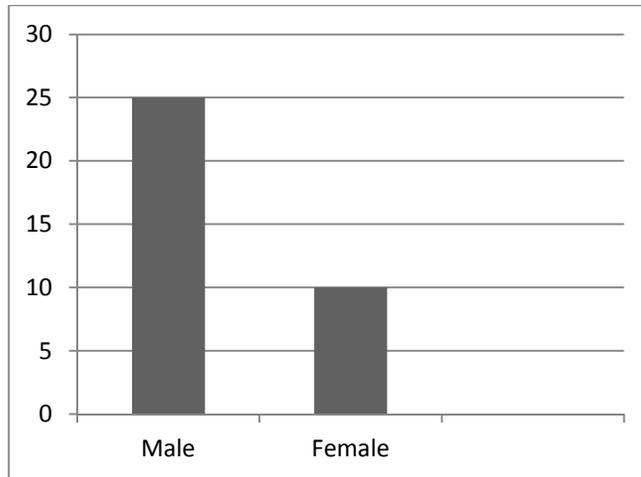
Figure 1. Bar graph representing gender breakdown for SRA Reading Success treatment group.
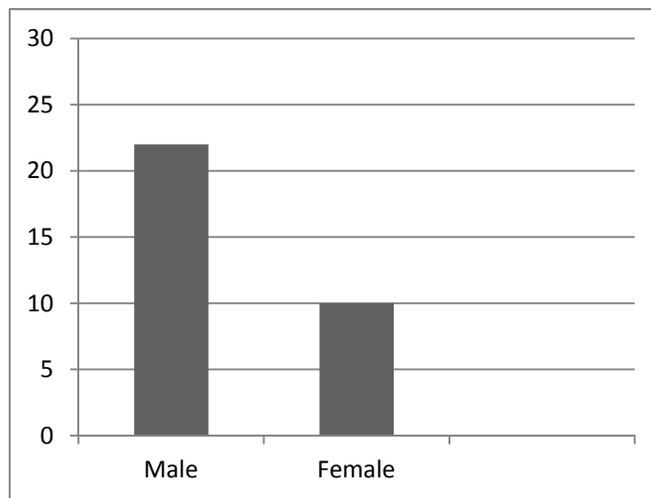

Figure 2. Bar graph representing gender breakdown for SRA Reading Mastery Signature treatment group.

Race

Because the participants in this study were chosen based on the presence of a specific learning disability in the area of reading comprehension, convenience sampling was used. Due to the use of convenience sampling, the sample size did not present itself as racially diverse as the researcher would have preferred. The sample size of the Reading Success treatment group

was 75% Caucasian (n=30), 15% African American (n=6), 7.5% Hispanic (n=3) and 3.5% other

(n=1). The sample size of the Reading Mastery Signature treatment group was 83% Caucasian

(n=27), 9% African American (n=3), 8% Hispanic (n=1) and 0% other (n=0). The analysis of

race for the Reading Success treatment group is represented in Figure 3 and for the Reading
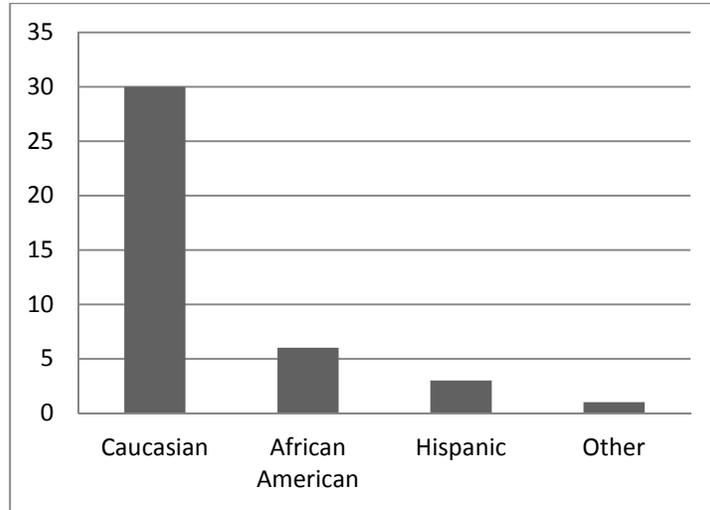
Mastery Signature treatment group in Figure 4.

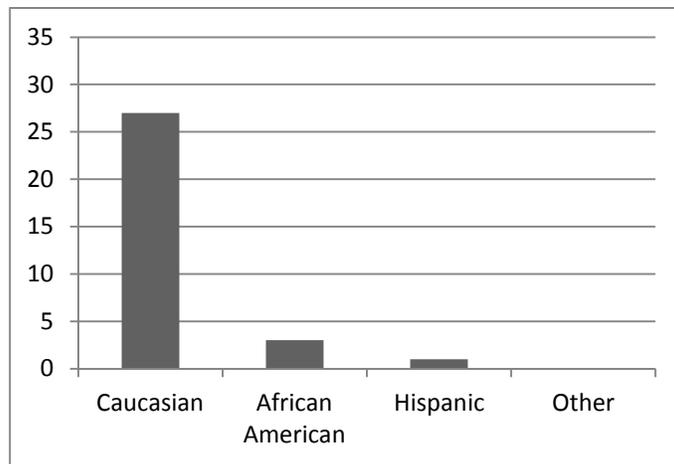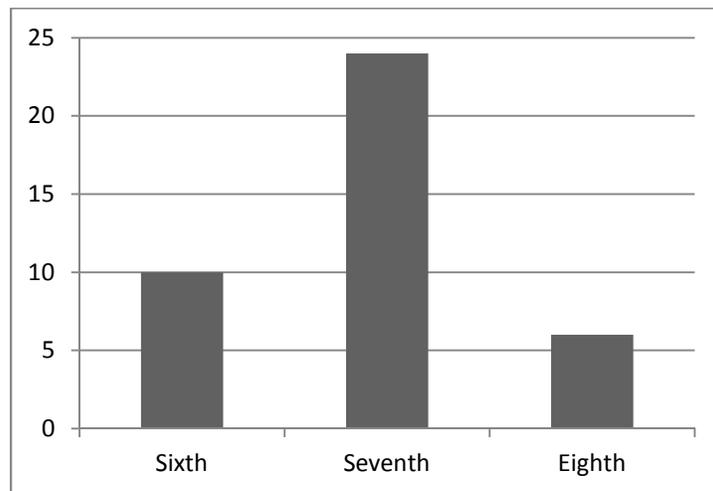*Figure 3.* Bar graph representing race breakdown for SRA Reading Success treatment group.
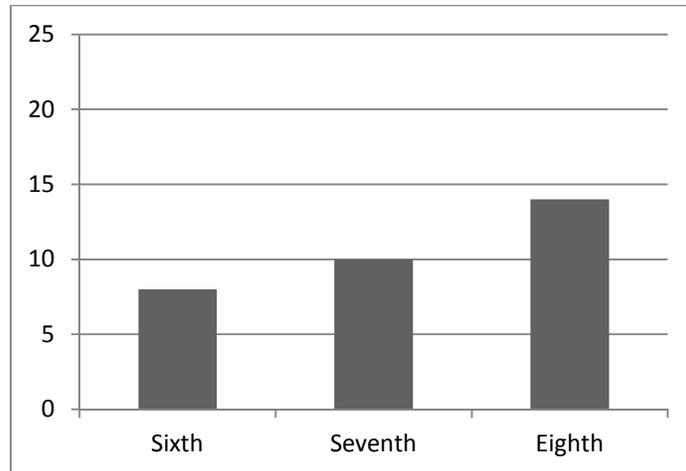

Figure 4. Bar graph representing race breakdown for SRA Reading Mastery Signature treatment group.

Grade Level

Each resource classroom consists of students in grades six through eight. The largest number of participants in the Reading Success treatment group are 7th grade students which represent 60% of the sample (n=24). Sixth grade students make up 25% of the sample size (n=10), and eighth graders represent 15% of the population (n=6). The largest number of participants in the Reading Mastery Signature treatment group is the 8th grade that represents 44% of the sample size (n=14). Seventh graders make up 31% of the population (n=10) and sixth graders represent 25% of the sample size (n=8). The grade level analysis for the Reading Success treatment group is represented in Figure 5 and the analysis for the Reading Mastery Signature treatment group is represented in Figure 6.

Figure 5. Bar graph representing grade level breakdown for SRA Reading Success treatment group.

Figure 6. Bar graph representing grade breakdown for SRA Reading Mastery Signature treatment group.

Setting

The site for this study was a moderate sized school district in the Upstate region of South Carolina. This district includes two traditional high schools, one alternative high school learning environment, one technology center, four middle schools, and twelve elementary schools. This school district serves approximately 9,000 students, grades PK-12. Of those students, approximately 68% are Caucasian, 27% are African American, 4% Hispanic, and 1% fall into the other category (SC Department of Education, 2011). The research site has been implementing direct instruction programs with special education students for the past eleven years. The district employs a direct instruction coach that serves all schools. In addition, a national consultant also works closely with the school district to ensure that the direct instruction is being implemented correctly.

This research study selected students from the four middle schools in this school district. Each of the four middle schools employs two to three special education teachers who teach in a resource setting. Each teacher manages a caseload of 18 to 25 special education students who

are identified as a student with a specific learning disability or as a student with another health impairment.

Instrumentation

The NWEA Measures of Academic Progress was used as both the pretest and the posttest. The NWEA Measures of Academic Progress is a complete set of assessments aligned to national and state curricula and standards (Northwest Evaluation Association [NWEA], 2013). It is intended for use with students in grades 5K through high school. MAP assessments provide detailed, actionable data about where each child is on the child's individual learning path in math, language and reading. MAP dynamically adapts to a student's responses by presenting more challenging items if the previous question is answered correctly, and a simpler question is presented if the previous answer is incorrect.

For this particular study, the reading subtest of the Measures of Academic Progress was used. The test is comprised of 42 questions that assess a student's comprehension of literary text, informational text and vocabulary development.

The literature and the informational sections of the MAP Assessment are broken down into two sections: Key Ideas and Details and Craft and Structure. The questions found in the key ideas and details sections require the student to understand explicitly stated ideas, cite textual evidence, make and support inferences and conclusions, determine central ideas, and analyze development and interaction of individuals, events, and ideas given either a piece of literature or informational text. The questions found in the literature section also require the student to describe characters, settings, and major events in a story. Questions found in the craft and structure section require the student to analyze how word choice determines meaning and tone, analyze text structure, order events when flashback and foreshadowing are used, analyze point of

view and purpose, and compare and contrast two texts. Questions included in the craft and structure section given in informational text also require the student to determine the effectiveness of a text structure for either an exposition or an argument. Questions found under the vocabulary development section require the student to understand the organization and basic features of print, define unknown and multiple-meaning words using context clues, analyze word parts, demonstrate understanding of work relationships and word meanings, and identify synonyms, antonyms, homographs, and analogies.

The MAP Assessment is not a timed test and is usually administered in the English/Language Arts classes during the fall, winter, and spring seasons by a highly qualified, certified teacher. Data becomes available to teachers immediately following the completion of the assessment. There are multiple reports that can be generated from the data compiled by the software accompanying the assessment. Every test item found on a MAP assessment corresponds to a value on the RIT scale. RIT assigns a value of difficulty to the test item and measures understanding regardless of the grade level. The MAP assessment produces scores that reflect each student's level of understanding of specific concepts and indicates if the student has mastered skills or if there is area for growth on specific concepts (NWEA, 2013).

Reliability

Reliability of the Measures of Academic Progress Assessment was measured in two different ways. The first reliability scores were obtained using a test retest model. The time span between the initial test and the retest was seven months to 12 months. The results are stated in terms of a Pearson product moment correlations coefficient ®. For sixth grade students, the reported test-retest reliability score is .89. For seventh graders is it .87 and for eighth grade students the score is .85. Internal consistency was determined by calculating the marginal

reliability coefficient. The reported score for sixth grade students is .95. For seventh graders the reported score is .95 and for eighth grade students the marginal reliability is .94 (NWEA, 2005).

Validity

The Measure of Academic Progress Assessment relies on validity evidence that comes in the form of concurrent validity. The validity scores were calculated using the South Carolina state standardized test that is required for sixth, seventh and eighth grade students as the data set. The reported concurrent validity scores for sixth grade students is .77. For seventh graders it is .78 and for eighth grade students the concurrent validity score is .75 (NWEA, 2005).

Procedures

In order to obtain permission from the Institutional Review Board for the conduction of the research study, many safeguards were put in place to protect the participants. Each student was assigned a number that was used to identify that student throughout the study to ensure that a student's name, area of disability, and any other identifying information remained confidential throughout the course of the research study. In order to ensure confidentiality of the participants, a neutral third party provided the information to the researcher stripped of all identifying information; therefore, the researcher did not have the ability to deduct the identities of the participants. Because this study was educational in nature and the treatment received by both treatment groups was not different from the curriculum that would be followed if the study were not taking place, permission from parents and students was not needed for participation in the treatment groups; however, permission was obtained for the collection of data on each individual student from both the parent and student. This permission was received in the form of a parental consent letter and a child assent letter signed by both the parent and student. Personal communication was made with the superintendent, special education director, direct instruction

coordinator, middle school special education coordinator, and the principals of the involved schools to make them aware of the proposed study and to gain their permission. A signed letter of permission on the school district's letterhead was obtained for documentation. The data and information collected was stored on both a jump drive and an external hard drive. Both of those devices remained in the care of the researcher and were placed in a locked environment. In addition to the electronic devices, a hard copy of information also remained in the care of the researcher in a locked environment.

Once the researcher gained approval from the Institutional Review Board, the participants and their guardians, and all school officials that would be included in the study, the researcher was allowed to begin conduction of the study. In March 2013, the reading subtest of the Measure of Academic Progress was administered to all participants during their regularly schedule academic skills class period by their special education teacher. Each participating teacher is a highly qualified special education teacher in teaching students with learning disabilities in grades K-12. Extensive training in teaching direct instruction programs was provided to each teacher by both the district's direct instruction specialist and a national direct instruction consultant. In addition, the national direct instruction consultant completed observations to ensure that the programs were being taught on a daily basis with fidelity. After administration of the pretest, the ten week instructional period began. The participating teachers began teaching each of the direct instruction programs during the students' scheduled 50 minute academic skills period. Instruction of the programs took place on a daily basis. In May 2013, after a ten week instructional period, the reading subtest of the Measures of Academic Progress was administered to the student and served as the post test.

Student Placement

Placement of students in each of the two treatment groups was based on each individual student's ability to decode words. SRA Reading Mastery Signature is a comprehensive program that is intended for students who are at a fourth grade reading level. Students who qualify for SRA Reading Mastery Signature must have a sound foundation of decoding skills and must not require intense, explicit instruction in decoding. SRA Reading Mastery Signature touches on decoding throughout each lesson along with teaching comprehension skills needed for reading to understand. Students in this study who were placed in the SRA Reading Mastery Signature group were those students who either did not need explicit instruction in decoding or those students who had already received explicit instruction in decoding. Students who were placed in SRA Reading Success were those students who were reading below a fourth grade level. The students who received instruction through SRA Reading Success also received intense, explicit instruction in SRA Corrective Reading as part of their daily schedule. In order to ensure that the lack of decoding skills did not influence the outcomes of the reading portion of the Measures of Academic Progress assessment, students were provided the testing accommodations that were listed on the IEP. Therefore, if a student was a non-reader or a lower level reader, the MAP assessment was administered with oral administration as an accommodation.

Fidelity

To ensure that each program was being used with fidelity several safeguards were in place. The participating school district employed a full time direct instruction specialist that worked closely with data and with teachers to ensure that all of the direct instruction programs used with special needs students were being done so with fidelity. One way that fidelity was ensured was through teacher observations. The direct instruction coach observed each

participating teacher at least two times during the course of the ten week instructional period. These observations were written up in a formal manner using the observation template that the direct instruction specialist uses on a regular basis. In addition to observations, each participating teacher was responsible for maintaining a direct instruction data notebook on a daily basis. The data notebook contained a calendar that each teacher was responsible for filling out each day indicating what lesson number was taught and if a lesson was not taught, the teachers had to indicate a valid reason that the lesson was not taught. In addition, the data notebooks included forms that the teachers were required to use to record test scores that accompanied each lesson. In some cases, the direct instruction programs required the teacher to re-teach a specific skill or lesson if a certain mastery score was not met by the student. The data notebook included a section for the teacher to document the date of re-teaching and the mastery score after the re-teach had taken place.

In addition to observations completed by the direct instruction specialist, each building level administrator was responsible for completing teacher observations. These observations were completed in addition to the observations that were completed by the direct instruction specialist. These were not specially scheduled observations, but were observations that were completed at the convenience of the individual administrator. Also, the national independent direct instruction consultant that the participating school districts subcontracts worked closely with the district's direct instruction specialist to ensure that the programs being taught were being done so with fidelity.

Data Analysis

The first step in analyzing data was to compute descriptive statistics (Gall et al., 2007). The mean scores were computed for the pretest and posttest for both treatment groups. In order to ensure that the data was normally distributed and that there were no extreme outliers in each data set, histograms for each set of data were created and analyzed. Levene's Test of Equality of Error Variance was run for each data set to determine if the error variance of the independent variable was equal across the two groups. The next step in analyzing the data was to test the statistical significance of observed differences between the two groups using the differences in mean scores. The data in this study was analyzed using an ANCOVA. "The ANCOVA *F* test evaluates whether the population means on the dependent variable, adjusted for differences on the covariate, differ across levels of a factor" (Green & Salkind, 2011, p. 211). The ANCOVA *F* test is used when a study has categorical variables with 2 or more groups. This study has continuous dependent variables and continuous covariate variables; the posttest and the pretest respectively. The ANCOVA is used to analyze pre and post-test study designs. It was chosen for this study because this study seeks to compare the changes in student achievement among the two treatment groups. Because of the placement process of students into each treatment group, there was a likelihood that the posttest scores may depend, to some degree, on the pretest scores. Therefore the ANCOVA was used to compare differences in post test scores using the pretest as the covariate because of the chance that the pretest may influence the posttest

CHAPTER FOUR: FINDINGS

As stated in Chapter One, this research was conducted to discern if SRA Reading Mastery Signature or SRA Reading Success was more effective in teaching reading comprehension to middle school students with learning disabilities. The findings from this study are reported in this chapter and address three specific research questions as presented in Chapter One. The numerical data collected from this quasi-experimental, quantitative study were analyzed to determine if significant gains were present when comparing the effectiveness of each treatment group. The results of the pre-test and post-test scores of the participants were examined to determine if one of the treatment groups, SRA Reading Mastery Signature or SRA Reading Success, is more effective in delivering reading comprehension instruction to students with a learning disability as measured by the reading portion of the Measures of Academic Progress assessment.

Data

Tests of Normality

Basic parametric assumptions were assessed to ensure that assumptions were met for proper utilization of the ANCOVA test.

Standardized residuals for the treatments and the overall model were normally distributed as assessed by the Shapiro-Wilk's test (p>.05) and a visual evaluation of data for hypotheses 1, 2 and 3 were reviewed. Their histograms, normal QQ plots and box plots, indicated that he MAP scores were reasonably normally distributed for Reading Mastery Signature and Reading Success. A visual evaluation of a scatter plot indicated a linear relationship between pre and post test scores for both treatment groups.

The histograms created for the data set for hypothesis one are represented in figures 7 and

8 below. Figure 7 represents the literary text data set for SRA Reading Mastery Signature and

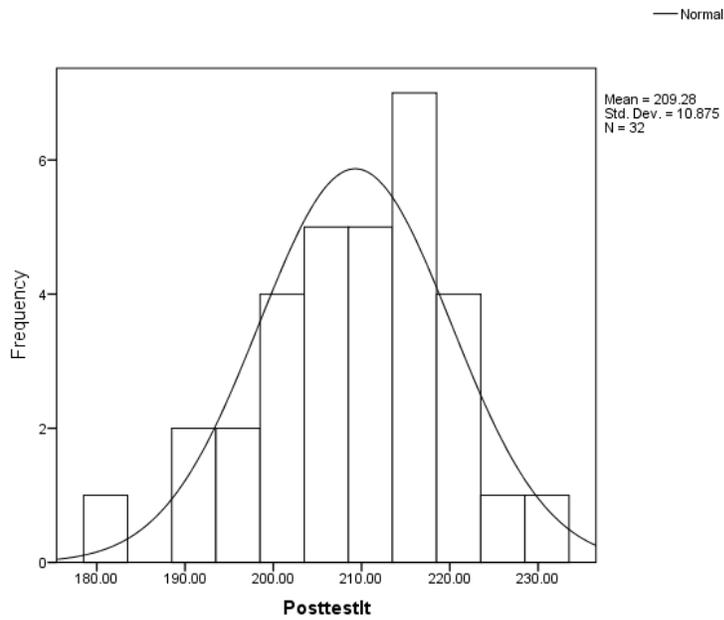Figure 8 represents the data set for SRA Reading Success.

Figure 7. Histogram of the data set for literary text for the SRA Reading Mastery Signature
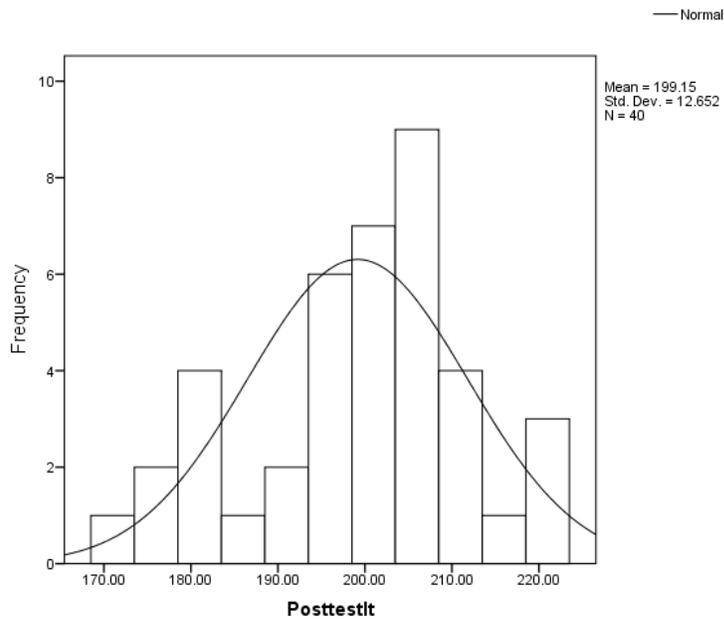Treatment group.

Figure 8. Histogram of the data set for literary text for the SRA Reading Success.

To verify the visual findings for hypothesis 1, the z-skew scores were tabulated to determine the skewness and kurtosis of the data sets. MAP scores were assumed to be normally distributed for SRA Reading Mastery Signature and SRA Reading Success for the literary text data set with a skewness of -.567 (SE=-1.37) and a kurtosis of .146 (SE=.183) for the SRA Reading Mastery Signature treatment group and a skewness of -.407 (SE=-1.09) and a kurtosis of -.363 (SE=-.495) for the SRA Reading Success treatment group. Standard Errors (SE) falling within the -1.96-1.96 numerical range are considered to be of reasonable and normal distribution. While the data for the literary text data set are somewhat skewed and kurtotic for both SRA Reading Mastery Signature and SRA Reading Success, it does not differ significantly from normality. Therefore, we can assume that the data is approximately normally distributed in terms of kurtosis and skewness.

The histograms created for the data set for hypothesis two are represented in figures 9 and 10 below. Figure 9 represents the informational text data set for SRA Reading Mastery Signature and Figure 10 represents the data set for SRA Reading Success.
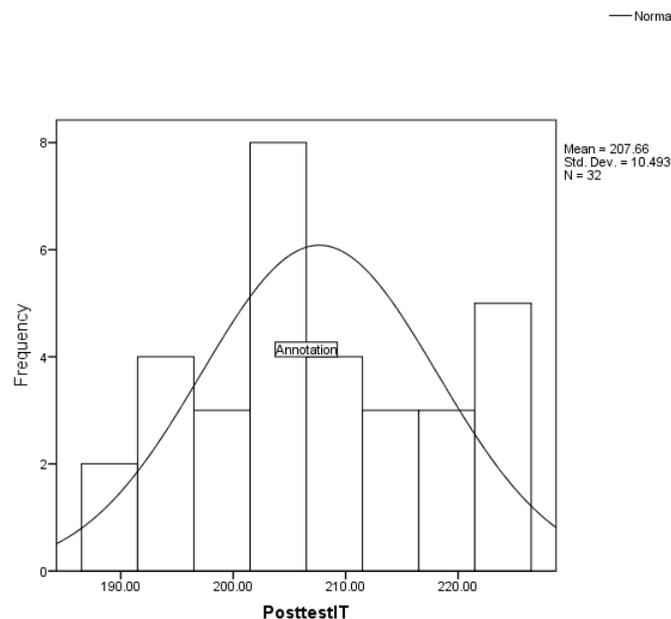

Figure 9. Histogram of the data set for informational text for the SRA Reading Mastery Signature.
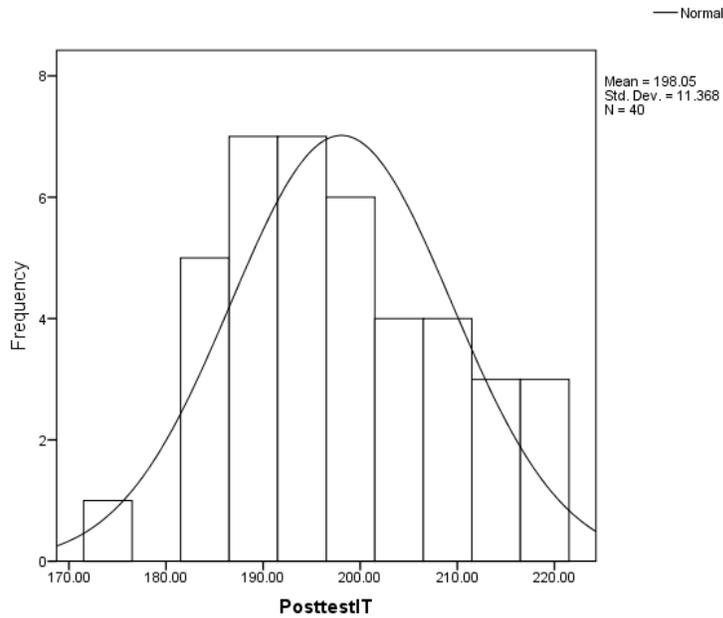
73

Figure 10. Histogram of the data set for informational text for the SRA Reading Success.

To verify the visual findings for hypothesis 2, the z-skew scores were tabulated to determine the skewness and kurtosis of the data sets. MAP scores were assumed to be normally distributed for SRA Reading Mastery Signature and SRA Reading Success for the informational text data set with a skewness of .115 (SE=-.285) and a kurtosis of -.943 (SE=-1.17) for the SRA Reading Mastery Signature treatment group and a skewness of .243 (SE=.650) and a kurtosis of .576 (SE=-.785) for the SRA Reading Success treatment group. Standard Errors (SE) falling within the -1.96-1.96 numerical range are considered to be of reasonable normal distribution. While the data for the informational text data set are somewhat skewed and kurtotic for both SRA Reading Mastery Signature and SRA Reading Success, it does not differ significantly from normality. Therefore, we can assume that the data is approximately normally distributed in terms of kurtosis and skewness.

The histograms created for the data set for hypothesis three are represented in figures 11 and 12 below. Figure 11 represents the vocabulary development data set for SRA Reading Mastery Signature and Figure 12 represents the data set for SRA Reading Success.
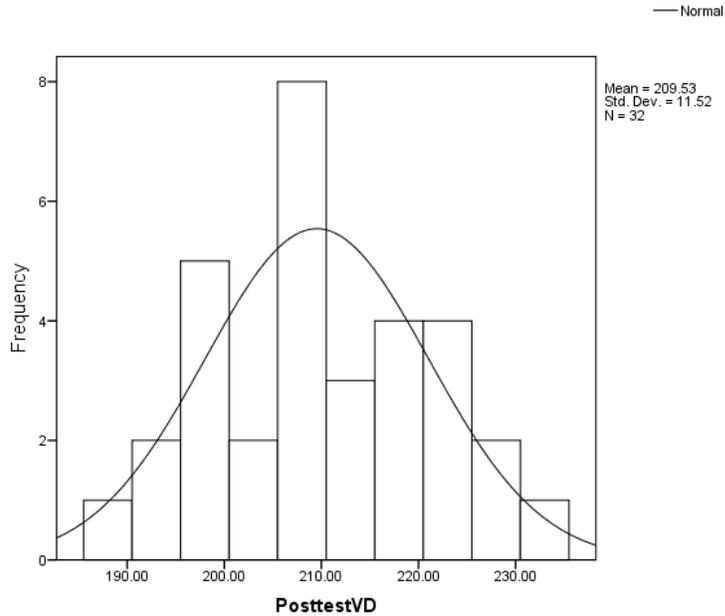

Figure 11. Histogram of the data set for vocabulary development for the treatment group SRA Reading Mastery Signature.
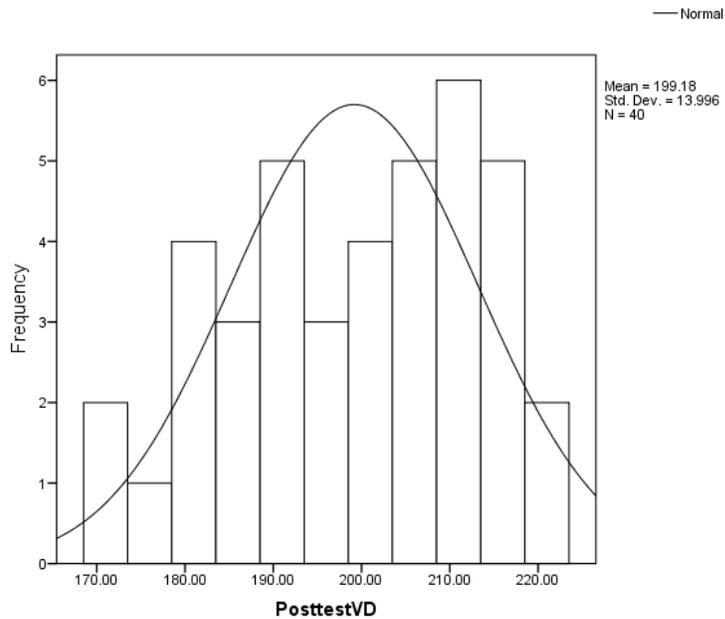

Figure 12. Histogram of the data set for vocabulary development for the treatment group SRA Reading Success.

To verify the visual findings for hypothesis 3, the z-skew scores were tabulated to determine the skewness and kurtosis of the data sets. MAP scores were assumed to be normally distributed for SRA Reading Mastery Signature and SRA Reading Success for the vocabulary development data set with a skewness of .050 (SE=.121) and a kurtosis of -.749 (SE=.925) for the SRA Reading Mastery Signature treatment group and a skewness of -.268 (SE=-.717) and a kurtosis of -.900 (SE=-1.23) for the SRA Reading Success treatment group. Standard Errors (SE) falling within the -1.96-1.96 numerical range are considered to be of reasonable and normal distribution. While the data for the vocabulary development data set are somewhat skewed and kurtotic for both SRA Reading Mastery Signature and SRA Reading Success, it does not differ significantly from normality. Therefore, we can assume that the data is approximately normally distributed in terms of kurtosis and skewness.

The assumption of equality of variance was evaluated using Levene's Test of Equality of Error Variance. Levene's test was run three separate times for each tested hypothesis. Levene's test was not significant (F (1 , 70)= .144, p=.706), when testing hypothesis one, indicating that the variances are equal. Levene's test was not significant for hypothesis two (*F* (1, 70) =.303, p=.584) and was also not significant for hypothesis three (F (1, 70) = .294, p=.589. As indicated by the above *p* values (p>.05), and a visual inspection of a scatterplot, there was homoscedasticity and homogeneity of variances. There were no outliers in this data set as indicated by standard deviations of no more than +/- 3.

Analyses of Data

Hypotheses one through three were analyzed using an analysis of covariance with the pretest being defined as the covariate and the posttest acting as the dependent variable. The independent variables were the two treatment groups, SRA Reading Success and SRA Reading

Mastery Signature. The covariate and dependent variables were measured using the reading

portion of the Measures of Academic Progress (MAP). The pretest (covariate) was given to

students in March of 2013 and the posttest was administered in May of 2013. Observed scores

obtained from the three sub tests of the reading portion of the MAP assessment are outlined in

the following table.

Table 3

Observed Scores

Group	Test	Score Range
SRA RMS	Literary Text Pre-Test	187-231
SRA RMS	Literary Text Post-Test	181-229
SRA RS	Literary Text Pre-Test	160-218
SRA RS	Literary Text Post-Test	171-222
SRA RMS	Informational Text Pre-Test	179-224
SRA RMS	Informational Text Post-Test	189-225
SRA RS	Informational Text Pre-Test	167-217
SRA RS	Informational Text Post-Test	174-221
SRA RMS	Vocabulary Development Pre-Test	179-225
SRA RMS	Vocabulary Development Pre-Test	188-233
SRA RS	Vocabulary Development Pre-Test	164-217
SRA RS	Vocabulary Development Pre-Test	171-220

Note. Lower scores indicate lower reading levels and higher scores indicate higher reading levels. RMS is an abbreviation for Reading Mastery Signature. RS is an abbreviation for Reading Success.

The descriptive statistics and the model summaries for the ANCOVAS

evaluation of hypothesis one, two, and three are displayed in the following tables. These tables

include type III sum of squares, degrees of freedom, mean square, F, and confidence level (Sig).

The main effect for hypothesis 1 will be evaluated using the results for Treatment Literary Text

(LT). The results for the main effect for Treatment Informational Text (IT) will be used to evaluate Hypothesis 2. The results for Treatment Vocabulary Development (VD) will be used to evaluate Hypothesis 3.

Interaction Effects

The interaction effect for pretest for hypothesis one was not significant, indicating that there was no significant pre-test effect ($F(1, 69) = 1.804$, $p > .001$). The interaction effect for pretest for hypothesis two was not significant, indicating that there was no significant pre-test effect ($F(1, 69) = 1.346$, $p > .001$). The interaction effect for pretest for hypothesis three was not significant, indicating that there was no significant pre-test effect ($F(1, 72) = .033$, $p > .001$); therefore, the data failed to reject the null hypotheses.

Hypothesis one. There were 32 students in treatment group one (SRA Reading Mastery Signature) and 40 Students in treatment group two (SRA Reading Success). The means scores and standard deviations for hypothesis one are outlined in the following table.

Table 4

Descriptive Statistics for Hypothesis One

Treatment	Mean	Std. Deviation	N
SRA Reading Mastery Signature	206.029	1.847	32
SRA Reading Success	201.752	1.635	40

a. Covariates appearing in the model are evaluated at the following value: Pretest=200.4167

Table 5

Statistics Related to Hypothesis 1

Source	Type III Sum of Squares	Df	Mean Square	F	Sig. (p)	Partial Eta Squared
Corrected Model	4941.694	2	2470.847	25.099	.000	.421
Intercept	2796.094	1	27096.094	28.403	.000	.292
Treatment Literary Text	272.135	1	272.135	2.764	.101	.039
Pretestlt	3116.943	1	3116.943	31.662	.000	.315
Error	6792.626	69				
Total	2997895.000	72				
Corrected Total	11734.319	71				

Note. 1. R Squared = .421 (Adjusted R Squared =.404).

Hypothesis 1 findings. Hypothesis 1 stated: There will be no significant difference in the ability to comprehend literary text as shown by the reading subtest of the Measures of Academic Progress between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success.

After adjustment for pre-test scores from the MAP assessment, the ANCOVA resulted in no significant difference in the literary text subtest post-test scores between the two groups, SRA Reading Mastery Signature and SRA Reading Success ($F(1, 69) = 2.764$ $p=.101$, partial eta squared = .039.

Hypothesis two. There were 32 students in treatment group one (SRA Reading Mastery Signature) and 40 Students in treatment group two (SRA Reading Success). The mean scores and standard deviations for hypothesis two are outlined in the following table.

Table 6

Descriptive Statistics for Hypothesis Two

Treatment	Mean	Std. Deviation	N
SRA Reading Success	205.884	1.712	40
SRA Reading Mastery Signature	199.468	1.524	32

a. Covariates appearing in the model are evaluated at the following value: PretestIT=198.9028

Table 7

Statistics Related to Hypothesis 2

Source	Type III Sum of Squares	Df	Mean Square	F	Sig. (*p*)	Partial Eta Squared
Corrected Model	3901.202	2	1950.601	21.735	.000	.387
Intercept	2475.371	1	2475.371	27.582	.000	.286
Treatment Informational Text	677.526	1	677.526	7.549	.008	.099
Pretest	2260.668	1	2260.668	25.190	.000	.267
Error	6192.451	69	89.746			
Total	2957281.000	72				
Corrected Total	10093.653	71				

Hypothesis 2 findings. Hypothesis 2 stated: There will be no significant difference in the ability to comprehend literary text as shown by the reading subtest of the Measures of Academic Progress between students with specific learning disabilities who participated in the

direct instruction program, SRA Reading Mastery Signature and those who participated in SRA

Reading Success.

After adjusting for the pretest scores from the MAP assessment, the ANCOVA resulted

in a statistically significant difference in the informational text subtest post-test scores between

the two groups, SRA Reading Mastery Signature and SRA Reading Success ($F(1, 72) = 7.549$

$p=.008$, partial eta squared = .099. Because the ANCOVA proved to be statistically significant,

post hoc analysis were performed which resulted in post-test scores that were statistically

significantly greater in the SRA Reading Success group.

Hypothesis three. There were 32 students in treatment group one (SRA Reading

Mastery Signature) and 40 Students in treatment group two (SRA Reading Success). The means

scores and standard deviations for hypothesis three are outlined in the following table.

Table 8

Descriptive Statistics for Hypothesis Three

	Mean	Std. Deviation	N
SRA Reading Mastery Signature	205.984	2.036	32
SRA Reading Success	202.013	1.802	40

a. Covariates appearing in the model are evaluated at the following value:
PretestVD=199.0972

Table 9

Statistics Related to Hypothesis 3

Source	Type III Sum of Squares	Df	Mean Square	F	Sig. (*p*)	Partial Eta Squared
Corrected Model	5442.948	2	2721.474	22.851	.000	.398
Intercept	2972.060	1	2972.060	24.956	.000	.266
Treatment Vocabulary Development	232.760	1	232.760	1.954	.167	.028
Pretest	3536.248	1	3536.248	29.693	.000	.301
Error	8217.496	69	119.094			
Total	3003488.000	72				
Corrected Total	13660.444	71				

Note. R Squared = .398 (Adjusted R Squared = .381).

Hypothesis 3 findings. Hypothesis 3 stated: There will be no significant difference in

the acquisition of vocabulary development as shown by the reading subtest of the Measures of

Academic Progress between students with specific learning disabilities who participated in the

direct instruction program, SRA Reading Mastery Signature and those who participated in SRA

Reading Success.

After adjusting for the pretest scores from the MAP Assessment, The ANCOVA resulted

in no significant difference in the vocabulary development subtest post-test scores between the

two treatment groups, SRA Reading Mastery Signature and SRA Reading Success ($F(1, 69) =$

1.954 $p=.167$, partial eta squared = .028.

CHAPTER FIVE: DISCUSSION

Identifying new strategies to utilize when teaching students with learning disabilities is a

priority for special education teachers, administrators, parents and regular education teachers.

All students are individuals with their own particular learning needs which drives teachers and

other educators to find new and innovative ways to reach their learning needs. Teaching students

with learning disabilities strategies to cope with their disabilities is the primary goal of all

involved in the educational process of these students. Various programs are taught in special

education classrooms for a number of reasons. In the case of this study, two different direct

instruction programs are taught in special education classrooms to teach students strategies for

comprehending read material. It is reasonable to believe that each of the two programs would

prove to deliver instruction in reading comprehension to students with learning disabilities

somewhat equally. Realistically, students in both SRA Reading Success and SRA Reading

Mastery Signature made similar gains after engaging in one of the programs for a 10 week

period; however, SRA Reading Success proved to be more effective in delivering instruction in

comprehending informational text.

Summary of Findings

SRA Reading Mastery Signature and SRA Reading Success are utilized in the

participating school district to teach middle schools students with learning disabilities strategies

in reading comprehension. SRA Reading Mastery Signature is used for those students who do

not have deficiencies in decoding and SRA Reading Success is implemented with those students

who show deficiencies in decoding and comprehension. Because both of these programs are

utilized with middle school students with learning disabilities, it is essential to determine if one

program proves to be more effective in teaching reading comprehension strategies to students

with learning disabilities. Analyses of gains or losses in achievement based on a pre and post-test using the Measures of Academic Progress were conducted using three separate one way ANCOVAS. An ANCOVA was chosen because there was a need to control for pre-existing differences between the two treatment groups. Results from the ANCOVAS for the literary text subtest and the vocabulary development subtest indicated that there was no significant difference in academic gains when comparing students who received comprehension instruction in SRA Reading Success and students who received comprehension instruction in SRA Reading Mastery Signature. Results from the ANCOVA for the informational text subtest indicated a statistically significant difference in favor of SRA Reading Success.

Research question 1 states: Will there be a difference in the ability to comprehend literary text between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success?

An ANCOVA was run to determine if there was a significant difference in the two treatment groups as measured by a pre and post-test assessment using the literary text subtest of the reading portion of the Measures of Academic Progress assessment after controlling for the pretest. Reviewing the data indicated that there was no significant difference between the post-test scores of the two treatment groups ($F(1, 69)=2.764$, $p=.101$, partial eta squared$=.039$). Based on these results, the researcher was unable to reject the null hypothesis.

Research question 2 states: Will there be a difference in the ability to comprehend informational text between students with specific learning disabilities who participated in the direct instruction program, SRA Reading Mastery Signature and those who participated in SRA Reading Success?

An ANCOVA was run to determine if there was a significant difference in the two

treatment groups as measured by a pre and post-test assessment using the informational text

subtest of the reading portion of the Measures of Academic Progress after controlling for the

pretest. Reviewing the data indicated a statistically significant difference between the post-test

scores of the two treatment groups ($F(1, 72)=7.549$, $p=.008$, partial eta squared=.099). Post hoc

analyses were performed which resulted in post-test scores that were statistically significantly

greated in the SRA Reading Success treatment group. Based on these results, the researcher

rejected the null hypothesis.

Research question 3 states: Will there be a difference in the acquisition of vocabulary

development between students with specific learning disabilities who participated in the direct

instruction program, SRA Reading Mastery Signature and those who participated in SRA

Reading Success?

An ANCOVA was run to determine if there was a significant difference in the two

treatment groups as measured by a pre and post-test assessment using the vocabulary

development subtest of the reading portion of the Measures of Academic Progress after

controlling for the pretest. Reviewing the data indicated that there was no significant difference

between the post-test scores of the two treatment groups ($F(1, 69)=1.954$, $p=.167$, partial eta

squared=.028). Based on these results, the researcher was unable to reject the null hypothesis.

Although no significant differences were noted between groups on the literary text and

vocabulary development subtests, both the SRA Reading Mastery Signature treatment group and

the SRA Reading Success treatment group showed improvements as indicated by academic gains

on all three subtests as found by a review of mean scores. The SRA Reading Mastery Signature

treatment group showed a gain of 1.2813 on the literary text subtest, a gain of 4.025 on the

informational text subtest and a gain of 6.9063 on the vocabulary development subtest of the

reading portion of the Measures of Academic Progress Assessment. The SRA Reading Success

treatment group showed a gain of .6 on the literary text subtest, a gain of 5.18945 on the

informational text subtest and a gain of 5.425 on the vocabulary development subtest of the

reading portion of the Measures of Academic Progress Assessment. These results support earlier

research findings that direct instruction programs result in positive outcomes for students with

specific learning disabilities.

Discussion

This study intended to determine if there would be a significant difference in student

gains on the Measures of Academic Progress after being taught reading comprehension skills

through two different direct instruction programs; SRA Reading Mastery Signature and SRA

Reading Success. The results of this study indicated that there were no significant differences

between the two treatment groups on the literary text subtest and the vocabulary text subtest, but

SRA Reading Success proved to positively statistically significant on the informational text

subtest. The findings of this study reject the findings of a previous research study that reviewed

multiple comparison studies and found that 14 of the studies favored SRA Reading Mastery

Signature while only three studies favored another reading program (Schieffer et al., 2002).

These results indicate that both SRA Reading Success and SRA Reading Mastery Signature are

acceptable programs to utilize when teaching reading comprehension to middle school students

with learning disabilities, but that SRA Reading Success is more beneficial in teaching students

to comprehend informational text. In addition to being acceptable programs to use with students

with a learning disability, both programs follow the direct instruction model which has been

proven effective through previous research. Schieffer et al. (2002) noted that when compared to

other reading programs, direct instruction programs were found to be more effective in improving the reading performance of students with learning disabilities. The findings of this study indicate that when addressing weaknesses in the comprehension of literary text and vocabulary development it is not the particular direct instruction program being implemented that yields higher student achievement scores, but rather the actual method that a direct instruction program follows that results in higher student achievement scores. This is supported by Rupley, Blair, and Nichols (2009) in that research on effective teaching has shown that teachers should directly and explicitly teach students what they need to know. From this study, evidence suggests that both treatments were proven effective in teaching reading comprehension to middle school students with learning disabilities but SRA Reading Success proved to be more effective in teaching students to comprehend informational text.

While neither program yielded statistically significant results to prove that one program was more effective than the other in teaching the comprehension of literary text and vocabulary development, an inspection of mean scores between pre and post test scores indicated the following findings. Both treatment groups in all three areas resulted in gains in student achievement as measured by post-test scores on the Measures of Academic Progress assessment. These results support Swanson and Hoskyn's (2001) conclusions that middle school is an opportune time to close the achievement gap by providing interventions to remediate the reading skills that students lack.

More specifically, SRA Reading Mastery Signature yielded a higher gain when testing the ability to comprehend literary text. SRA Reading Success resulted in a higher gain when testing the ability to comprehend informational text and both programs made similar gains with testing vocabulary development. This data would support Swanson and Deschler's (2003)

findings that adolescents with learning disabilities are a heterogeneous group; thus, it is essential that program placement must be specific to individual student needs in order to achieve the highest possible level of gain.

Limitations

Changes in achievement levels of participating students could be attributed to various factors. All of these factors will be considered as possible limitations to this study. The learning environment lends itself to various limitations to a research study. Factors related to the classroom environment may present as limitations. These factors may include, but are not limited to, teachers' attitudes about the material being taught, their attitude about the students in the class or the school in which they are teaching, differences in classroom management styles, teachers' years of experience, and the level of training teachers have received. All of these factors can influence a research study either positively or negatively. Parental support is another factor that must be considered in terms of student achievement. Although all of these factors are considered by the researcher as limitations, it is difficult to conclude if any one factor could be determined as the cause of the change.

The sample chosen for this research study could present as a limitation to the study. The study was limited to four middle schools located in the Upstate region of South Carolina. All of the schools chosen to participate were Title I schools which limits the socioeconomic status of the participants. Of the 72 participants, 79% of these students receive free/reduced lunch. Because of the high percentage of students receiving free/reduced lunch, this sample size may not accurately represent other regions of the United States. It would be necessary to choose a more socioeconomically diverse sample in order to generalize the findings to other areas. In addition, because the students were chosen based on their eligibility in special education, various

races and gender were not represented equally in the sample size. Because of the nature of this type of sample, all races and genders would need to be represented equally in order to generalize the information found in the study to other school districts. The sample for this study included 72 students. In order to conclude that the findings of this study are supported, a much larger sample size from all over the United States would be necessary.

This study used a relatively short time frame between the pre and post-test dates. In order to generalize these findings to other special education programs, a longitudinal study would need to be conducted. This would allow the researcher to examine the long term and maintenance effects of the implementation of the two treatment programs, SRA Reading Success and SRA Reading Mastery Signature.

Finally, one of the issues that could contribute to skewed results is the variation that could be present in the fidelity of implementation across the special education teachers involved in the study. In this study, the teachers have received extensive training in teaching direct instruction programs, all teachers were highly qualified, and the teachers were observed both formally and informally throughout the implementation period. While all these safeguards were present to protect from lack of fidelity, there is no way to control for inconsistency in teacher performance. Teacher performance could certainly affect outcomes for students.

Implications

The findings of this study indicate that neither direct instruction program SRA Reading Mastery Signature or SRA Reading Success prove to be statistically better at teaching reading comprehension of literary text and vocabulary development to middle school students with learning disabilities when compared to one another; however, a statistical significance was found that indicated that SRA Reading Success was more effective than SRA Reading Mastery

Signature at teaching students to comprehend informational text. Based on these results, the researcher made the following statements about the implications of the data.

Practical Implications

- SRA Reading Success should be used to teach students with a specific learning disability in reading comprehension to comprehend informational text.

- Both treatment groups, SRA Reading Mastery Signature and SRA Reading Success, can be used to effectively teach comprehension of literary text and vocabulary development as indicated by mean score gains on the reading portion of the Measure of Academic Progress Assessment in these areas.

- Both direct instruction programs, SRA Reading Mastery Signature and SRA Reading Success, are appropriate for teaching reading comprehension to middle school students with learning disabilities.

- SRA Reading Mastery Signature and SRA Reading Success can be successfully implemented in the resource classroom setting.

- Students in special education benefit from effective instruction using research based direct instruction programs.

- Linking instruction in a sequenced progression throughout grade levels is beneficial for students with learning disabilities.

Methodological Implications

- SRA Reading Mastery Signature and SRA Reading Success can be successfully implemented in the resource classroom setting.

- SRA Reading Mastery Signature and SRA Reading Success both provide instruction in relevant areas of reading comprehension for generalization to the general education classroom setting.

- The findings that both treatment groups showed academic gains implies that teachers and special education coordinators should use this information to guide instructional practices in the special education classroom.

- Special education coordinators should use these research findings to guide placement options for students with learning disabilities.

- A student that qualifies for special education as a student with a learning disability in the area of reading comprehension benefits from direct instruction.

- Program placement in each program should be dependent on specific areas of weakness in reading comprehension. While this may require a more lengthy placement process, middle schools students with learning disabilities would benefit from being placed in a program that is more effective in teaching their individual weaknesses.

- Professional development should be provided on appropriate placement procedures so that instruction is based on accurate diagnostic information.

- Because special education law requires the use of research based programs, teachers and special education coordinators can implement both SRA Reading Mastery Signature and SRA Reading Success to be in compliance with federal mandates.

Recommendations for Future Practice

Based on the results and conclusions of this study, the following recommendations for future practice are suggested:

- Students who demonstrate a weakness in comprehension of informational text need to be instructed using SRA Reading Success.

- While neither instruction in SRA Reading Success of SRA Reading Mastery Signature proved to be statistically significant in teaching students to comprehend literary text and vocabulary development when compared to one another, students in both programs demonstrated academic gains in reading comprehension. This would suggest that continued use of direct instruction programs with students with a specific learning disability in reading would be beneficial.

- Special education teachers need to use direct instruction programs to teach students with learning disabilities. Using direct instruction will allow students to obtain strategies that the students can generalize in the regular education classroom in order to be successful.

- Students need to be placed in one of the two treatment programs, SRA Reading Mastery Signature and SRA Reading Success, according to specific areas of weakness in sub topics of reading comprehension such as knowledge of literary text, informational text and vocabulary development.

Recommendations for Future Research

- Because the sample size was relatively small, this study could be replicated using a larger sample size to more reliably reflect the population.

- This study could be replicated with various age groups of students. As indicated in the literature review, there are few studies that examine the effects of direct instruction programs with secondary level students. Future research should be conducted with high school students with learning disabilities.

- The options for direct instruction programs that teach reading comprehension are plentiful. It is recommended that more direct instruction programs be compared to one another to determine if one direct instruction program is most effective in teaching reading comprehension to students with learning disabilities.

- Examine the effects of SRA Reading Mastery Signature and SRA Reading Success on students with learning disability based on ethnicity, gender and grade level.

Summary

This quantitative, quasi-experimental study was designed to discern if SRA Reading Mastery Signature or SRA Reading Success is more effective in teaching reading comprehension to middle school students with learning disabilities. Specifically, student achievement was measured by student scores on the three subtests of the reading portion of the Measures of Academic Progress assessment. Scores from the literary text, informational text and vocabulary development subtests were collected from the four participating middle schools and were used for statistical analysis using an ANCOVA. The findings suggest that there was no significant statistical difference between the two treatment groups on the post test scores on the literary text and vocabulary development subtests from the reading portion of the Measure of Academic Progress. However, a positive statistically significant difference exists when comparing the two groups on their ability to comprehend informational text indicating that the post-test scores were

greater in the SRA Reading Success treatment group. While no statistical significance was found after conducting an ANCOVA for the literary text and vocabulary development subtests, gains were noted when reviewing the mean scores of students in both treatment groups, SRA Reading Mastery Signature and SRA Reading Success. Additional research is needed to determine the most effective ways to teach reading comprehension to students with specific learning disabilities.

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Parent Consent Letter

CONSENT FORM

EFFECT OF DIRECT INSTRUCTION PROGRAMS ON TEACHING READING

COMPREHENSION TO STUDENTS WITH LEARNING DISABILITIES

Jennifer S. Parker

Liberty University

Education Department

Your student is invited to be part of a research study that studies the effects that the direct instruction programs, Reading Mastery Signature and Reading Success, have on your student's ability to comprehend read text. You student was selected as a possible participant because he/she is enrolled in an academic skills class at his/her school where these programs are being taught. I ask that you read this form and ask any questions you may have before giving consent for your student to be a part of this study.

This study is being conducted by Jennifer Parker, Educational Doctorate Candidate.

Background Information:

The purpose of this study is the purpose of this study is to test the theories of B.F. Skinner's operant condition and Vygotsky's zone of proximal development as they relate to the acquisition of reading comprehension skills among middle school students with specific learning disabilities.

Procedures:

If you agree to be in this study, I would ask your student to do the following things:

- Participate in his/her academic skills class' curriculum on a daily basis

- Each student is currently engaged in the two curriculums that I will be researching; therefore, your student's involvement in this study will begin when they take the winter administration of the MAPS Assessment in February and conclude when they take the spring MAPS Assessment in April. For each assessment, your student will receive one full academic skills period which lasts for 50 minutes.

- The researcher will use the data from the winter administration of the MAPS test to determine where you student is currently functioning. The spring administration data will be used to determine if your child has made gains in the area of reading comprehension.

Risks and Benefits of being in the Study:

The risks of this study are minimal, which means that the risks are no more than your student would encounter as part of his/her everyday school schedule. As a student in an academic skills class, he/she will be participating in the reading comprehension programs on a daily basis due to the demands of the special education curriculum in place by Cherokee County School District 1. The benefits to participation are that Cherokee County School District will gain knowledge needed to guide the instruction of special education students so that students can reach their fullest potential.

Compensation

No form of compensation will be given to those involved in this study.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a participant. Research records will be stored securely and only researchers will have access to the records. Each student will be

assigned a number that will identify that student throughout the study to ensure that a student's name, area of disability, and any other identifying information remain confidential throughout the course of the research study. In order to ensure confidentiality of the participants, a neutral third party will provide the information to the researcher stripped of all identifying information; therefore, the researcher will not have the ability to deduct the identities of the participants. The data and information collected will be stored on both a jump drive and an external hard drive. Both of those devices will remain in the care of the researcher and will be placed in a locked environment. In addition to the electronic devices, a hard copy of information will also remain in the care of the researcher in a locked environment.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to allow your student to participate will not affect current or future relations with Liberty University or Cherokee County School District. If you decide to allow your student to participate, you are free to withdraw your student at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Jennifer S. Parker. You may contact me at 864-490-0825 or by email at jennifers.parker@cherokee1.org. You may ask any questions you have at your convenience. If you have questions later, **you are encouraged** to contact Dr. Deanna Keith, Liberty University at (434)-582-2417 or by email at dlkeith@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd, Suite 1837, Lynchburg, VA 24515 or email at fgarzon@liberty.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read and understood the above information. I have asked questions and have received

answers. I consent to allow my student to participate in the study.

Printed Student Name: _____

Printed Name of Parent or Guardian: _____

Signature of Parent or Guardian: _____Date: _____

Signature of Investigator:_____ Date:_____

IRB Code Numbers: 1473.012913

IRB Expiration Date: 01/29/2014

Child Assent Letter

Assent of Child to Participate in a Research Study

EFFECT OF DIRECT INSTRUCTION PROGRAMS ON TEACHING READING

COMPREHENSION TO STUDENTS WITH LEARNING DISABILITIES

Principal Investigator: Jennifer S. Parker

Liberty University

Why are we doing this study?

We are interested in studying the reading program that you participate in during your academic

skills class.

Why are we asking you to be in this study?

You are being asked to be in this research study because the researcher is interested in the

reading program that your academic skills teacher uses to teach you how to understand what you

read. Your reading program will be compared to another reading program that other middle

school students participate in during their academic skills classes to determine which one better

helps students comprehend the material that they read.

If you agree, what will happen?

If you are in this study you will continue to participate in your reading group during your

scheduled resource time. Your winter MAP and spring MAP scores will be used to determine

how well your reading program teaches you what it is supposed to teach you. Nothing else about

your reading program or daily schedule will change.

Do you have to be in this study?

No, you do not have to be in this study. If you want to be in this study, then tell the researcher. If you don't want to, it's OK to say no. The researcher will not be angry. You can say yes now and change your mind later. It's up to you.

Do you have any questions?

You can ask questions any time. You can ask now. You can ask later. You can talk to the researcher. If you do not understand something, please ask the researcher to explain it to you again.

Signing your name below means that you want to be in the study.

_____   _____

Signature of Child   Date

Jennifer S. Parker

Jennifer.parker@gw.cherokee1.k12.sc.us

864-490-0825

Faculty Advisor: Dr. Deanna Keith

Dlkeith@liberty.edu

434-582-2417

Liberty University Institutional Review Board,

Dr. Fernando Garzon, Chair,

1971 University Blvd, Suite 1837, Lynchburg, VA 24502

or email at fgarzon@liberty.edu

Contact with Principals and District Personnel

CONSENT TO CONDUCT RESEARCH STUDY

EFFECT OF DIRECT INSTRUCTION PROGRAMS ON TEACHING READING

COMPREHENSION TO STUDENTS WITH LEARNING DISABILITIES

Jennifer S. Parker

Liberty University

Education Department

Your school district; specifically, the four middle schools in your district are invited to be part of

a research study that studies the effects that the direct instruction programs, Reading Mastery

Signature and Reading Success, have on a specific learning disabled student's ability to

comprehend read text as measured by the reading subtest of the Measures of Academic Progress.

This study is being conducted by Jennifer Parker, Educational Doctorate Candidate.

Background Information:

The purpose of this study is the purpose of this study is to test the theories of B.F. Skinner's

operant condition and Vygotsky's zone of proximal development as they relate to the acquisition

of reading comprehension skills among middle school students with specific learning disabilities.

Procedures:

If you allow the researcher to conduct this study in your district, we would ask that the students

invited to participate do the following things:

- Participate in his/her academic skills class' curriculum on a daily basis

Risks and Benefits of being in the Study:

The study has minimal risks: The risks of this study are minimal, which means that the risks are no more than the students enrolled in an academic skills class would encounter as part of his/her everyday school schedule. As a student in an academic skills class, he/she will be participating in the reading comprehension programs on a daily basis as determined by the special education curriculum in place by Cherokee County School District 1.

The benefits to participation are that Cherokee County School District will gain knowledge needed to guide the instruction of special education students so that students can reach their fullest potential.

Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a participant. Research records will be stored securely and only researchers will have access to the records. Each student will be assigned a number that will identify that student throughout the study to ensure that a student's name, area of disability, and any other identifying information remain confidential throughout the course of the research study. In order to ensure confidentiality of the participants, a neutral third party will provide the information to the researcher stripped of all identifying information; therefore, the researcher will not have the ability to deduct the identities of the participants. The data and information collected will be stored on both a jump drive and an external hard drive. Both of those devices will remain in the care of the researcher and will be placed in a locked environment. In addition to the electronic devices, a hard copy of information will also remain in the care of the researcher in a locked environment.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to allow the researcher to conduct this study in your district will not affect current or future relations with the researcher.

Contacts and Questions:

The researcher conducting this study is Jennifer S. Parker. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact Dr. Deanna Keith, Liberty University at (434)-582-2417 or by email at dlkeith@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd, Suite 1837, Lynchburg, VA 24515 or email at fgarzon@liberty.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read and understood the above information. I have asked questions and have received answers. I consent to allow the researcher to conduct this study in Cherokee County School District 1 in the four middle schools within this district.

Printed Special Services Director Name: _____

Signature of Special Services Director: _____Date: _____

Signature of Investigator:_____ Date:_____

IRB Code Numbers: 1473.012913

IRB Expiration Date: 01/29/2014