

**THE EFFECTS OF CORRECTIVE READING PROGRAMS ON  
TCAP READING AND LANGUAGE SCORES**

-  
**Rebecca E. Moore**

THE EFFECTS OF CORRECTIVE READING PROGRAMS ON TCAP READING  
AND LANGUAGE SCORES

A Field Study

Presented to

The College of Graduate Studies

Austin Peay State University

In Partial Fulfillment

Of the Requirements for the Degree

Of Education Specialist

Rebecca E. Moore

December 2014

Copyrighted @ 2014

By

Rebecca E. Moore

All Rights Reserved

To the College of Graduate Studies:

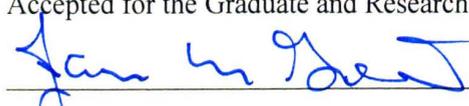
We are submitting a field study written by Rebecca E. Moore entitled “The Effects of Corrective Reading Programs on TCAP Reading and Language Scores” (Under the direction of DR. J. GARY STEWART). We have examined the final copy of this field study for form and content. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Educational Specialist Degree in School Administration and Leadership.

  
\_\_\_\_\_  
Dr. J. Gary Stewart, Committee Chair

  
\_\_\_\_\_  
Dr. Gina Grogan, Committee Member

  
\_\_\_\_\_  
Dr. Anthony Sanders, Committee Member

Accepted for the Graduate and Research Council:

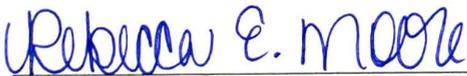
  
\_\_\_\_\_  
Dean, College of Graduate Studies

STATEMENT OF PERMISSION TO USE

To the College of Graduate Studies:

In partial fulfillment of the requirements for an Education Specialist Degree at Austin Peay State University, I agree that the Library shall make the Field Study, "The Effects of Corrective Reading Programs on TCAP Reading and Language Scores," available to borrowers under that rules of the Library.

Permission for extensive quotation or reproduction of the field study may be granted by my major professor, or, in his absence, by the Head of the Inner-Library Services. Any copying or the use of the material in this field study for final gain shall not be allowed without written permission.



Rebecca E. Moore



Date

Classroom Effects of Direct Instruction .....	14
Assessment Effects of Direct Instruction .....	15
Attitudinal Effects of Direct Instruction .....	17
Long-Term Effects of Direct Instruction .....	19
Critics of Direct Instruction .....	20
Effects of a Reading Remediation Block .....	22
Statistical Findings on Corrective Reading .....	22
Perceptions of Corrective Reading .....	36
CHAPTER III: METHODOLOGY .....	46
Overview .....	46
Research Design .....	42
Participants .....	43
Data Collection Procedure .....	43
Data Analysis Plan .....	44
CHAPTER IV: Analysis of Data .....	45
Introduction.....	45
Research Question One.....	45
Null Hypothesis One .....	45
TABLE 4.1 .....	46
TABLE 4.2 .....	48
TABLE 4.3 .....	50

## DEDICATION

This field study is dedicated to my husband, Daniel Moore. Without his love, support, and patience throughout the last few years, it would have been impossible for me to be a teacher, student, and wife. This journey could not have occurred without him taking on the role of dishwasher, laundry-doer, cheerleader, and more so willingly.

## ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my chair, Dr. J. Gary Stewart. As a constant source of knowledge and experience, Dr. Stewart provided more leadership and guidance, than one could imagine. Without his constant support and encouragement, this field study could not have been completed. Additionally, I would like to thank my parents and other family members who always pushed me to keep going despite the obstacles.

I would also like to thank Dr. Donald Luck. His help with statistics and quick wit on the hard days helped make the completion of this field study possible.

Additionally, I would like to thank the other members of my cohort at APSU, especially Matthew Coffey. Our collaboration and vent sessions made the completion of this project and the entire program possible. I am forever grateful to each of you.

I would also like to thank Dr. Linda Cash, Assistant Director of Schools for Robertson County for allowing me to conduct research within the school district.

Finally, I would like to thank my friends (TS, KR, and BS) for putting up with me. This project could not have been completed without you encouraging me every step of the way and putting up with me on the days when my attitude was less than stellar. Thank you for standing by me and understanding my crazy schedule.

## ABSTRACT

REBECCA E. MOORE. “The Effects of Corrective Reading Programs on TCAP Reading and Language Scores” (Under the direction of DR. J. GARY STEWART).

This study examined the effects of a required literacy intervention block using McGraw Hill’s curriculum, *Corrective Reading*, on TCAP Reading and Language Arts scores of middle school students. The 2011-2012 school year was the control year for the study since students did not participate in *Corrective Reading* during that year. Scores from the 2012-2013 and 2013-2014 school year of the program were used to measure student growth. The school district in this study spent funding from the Race to the Top Initiative to fund the literacy program so program accountability is important. The study consisted of the same 30 students over a three year period. The students in the study consisted of the same 18 male students and 12 female students for all three years. Three years of archived TCAP scores were analyzed using a repeated measure ANOVA test and basic statistical percentages. The results of the study yielded a failure to reject. There was no statistically significant difference in TCAP scores before or after the program. Additionally, student achievement levels yielded no statistically significant different before or after the program.

## TABLE OF CONTENTS

Copyright Statement .....	ii
Graduate Committee Signature Page .....	iii
Statement of Purpose to Use .....	iv
Acknowledgements .....	v
Dedication .....	vi
Abstract .....	vii
Table of Contents .....	viii
List of Tables .....	xi
CHAPTER 1: INTRODUCTION .....	1
Statement of the Problem .....	1
Purpose of the Study .....	1
Significance of the Study .....	2
Research Questions .....	3
Null Hypothesis .....	3
Limitations .....	4
Assumptions .....	5
Definition of Terms .....	6
CHAPTER II: REVIEW OF THE LITERATURE .....	8
Introduction .....	8
Elements of a Strong Literacy Program .....	12

Research Question Two .....	51
Null Hypothesis Two .....	51
TABLE 4.4 .....	52
TABLE 4.5 .....	53
TABLE 4.6 .....	54
TABLE 4.7 .....	55
TABLE 4.8 .....	57
TABLE 4.9 .....	59
Research Question Three .....	60
Null Hypothesis Three .....	60
TABLE 4.10 .....	61
TABLE 4.11 .....	62
TABLE 4.12 .....	63
CHAPTER V: SUMMARY, CONCLUSIONS, AND RECOMMENDATIOONS .....	66
Summary.....	66
Findings .....	66
Null Hypothesis One .....	66
Null Hypothesis Two .....	67
Null Hypothesis Three .....	68
Conclusions .....	69
Recommendations .....	70

REFERENCES VI: .....72

APPENDICES VII: .....78

    Appendix A .....79

        Letter of Approval to Conduct Research from  
        Austin Peay State University Institutional Review Board .....80

    Appendix B .....81

        Permission to Conduct Research from  
        Robertson County Board of Education .....82

# CHAPTER I

## INTRODUCTION

### **Statement of the Problem**

Currently, all middle school students in the Tennessee school district studied are grouped into response to intervention (RTI<sup>2</sup>) for thirty minutes per day based on their scores on a variety of standardized tests such as the STAR Reading tests, ThinkLink assessments, and TCAP scores. Within these intervention groups, students are taught using McGraw-Hill's *SRA Corrective Reading*. There is a large amount of research that supports the use of these courses to improve literacy overall. However, much of this research comes from the company that sells the materials used for the intervention program or similar programs. Additionally, there is very little research or evidence that supports the use of this program at the local level. The Middle Tennessee rural school that is the target school for this study received Race to the Top Funds from the state of Tennessee to fund this project. Research is necessary in this field to explore the impact that *Corrective Reading* can have on student academic achievement with regards to Reading and Language Arts.

### **Purpose of the Study**

The purpose of this field study was to explore the impact of McGraw Hill's *SRA* (n.d.) *Corrective Reading* on student academic achievement in Reading and Language Arts. The independent variable for this field study is the corrective reading program

known as *SRA Corrective Reading*. The dependent variable for this field study is end-of-the-year Reading and Language Arts TCAP scores. Identifying the impact of the *SRA Corrective Reading* program in this particular school was necessary in determining whether or not the program is having a positive impact on student academic achievement in Reading and Language Arts. The SRA Corrective Reading Program was first piloted in the 2012-2013 school year during Response to Intervention time. This study will follow thirty randomly selected students for three years. Their TCAP scores from 2011-2012 (before the use of *SRA Corrective Reading*), 2012-2013, and 2013-2014 will be used to measure the success of the program. Assessing the success of the program following two years of use is a vital part of future planning for both the school and district.

### **Significance of the Study**

Several groups will benefit from this study. First, the school district will benefit from the results of this study. They will be able to determine if funds should continue to be allocated to this program in the school district. Also, they will be able to plan for future enrichment and remediation opportunities based on the results in this school. Furthermore, the professional development department will benefit from this study as they plan training for teachers within the district. The teachers in the district will also benefit from the research findings in this field study by gaining knowledge of their students' growth since the implementation of the corrective reading program. The parents and students will also benefit if the data reflects that the corrective reading

program aided in the improvement of academic achievement in Reading and Language Arts. Finally, future researchers may benefit from the research findings resulting from this field study for support in their own research studies.

### **Research Questions**

1. Does McGraw-Hill's *SRA Corrective Reading* improve TCAP Reading and Language Arts composite scores?
2. Does McGraw-Hill's *SRA Corrective Reading* improve the number of students meeting proficient benchmarks on the TCAP?
3. Does McGraw-Hill's *SRA Corrective Reading* lower the number of students scoring below basic on the TCAP?

### **Null Hypotheses**

1. There will be no statistically significant differences between student TCAP Reading and Language Arts scores before a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts scores after the implementation of a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup>.
2. There will be no statistically significant differences in the number of students meeting proficient benchmarks on the TCAP Reading and Language Arts test before a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts

achievement levels after the implementation of a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup>.

3. There will be no statistically significant differences in the number of students meeting Below Basic benchmarks on the TCAP Reading and Language Arts test before a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts achievement levels after the implementation of a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup>.

### **Limitations**

1. The first limitation in this study was that only one tool was utilized to measure growth of student academic achievement in Reading and Language Arts to determine the impact of the corrective reading program. The TCAP was the only test administered to sixth, seventh, and eighth grade students in this study to measure growth in Reading and Language Arts.
2. The second limitation was that teacher content knowledge, training with the program, access to resources, and teacher commitment to the program differed among individuals at the school in the 2012-2013 and 2013-2014 school years and the impact of each of these factors was not measured and thus will remain unknown.
3. The third limitation was the educational level of corrective reading facilitators at each school during the 2012-2013 and 2013-2014 school years. Some facilitators were classroom Reading and Language Arts teachers, some other content areas,

others were instructional aides with only a high school diploma, and one was a guidance counselor. The impact of this factor was not measured and thus will remain unknown.

4. The fourth limitation was the weather during the 2013-2014 school year. Students missed twelve days because of snow. For a five week time period, students did not attend a full week of school. This program is reliant upon a set schedule and repetition. This lax in program structure was not measured and its impact will remain unknown.
5. The fifth limitation in this study is that students had different Reading/Language Arts teachers during their regular classroom instruction. The impact of this factor was not measured and thus will remain unknown.
6. The sixth limitation in this study was teacher turnover. Several teachers left and were replaced during the three years studied. The impact of this factor was not measured and thus will remain unknown.
7. The seventh and final limitation in this study was that demographic sub-groups were not identified in this study. All students, regardless of race, gender, or abilities, were compared from each pair of observations.

### **Assumptions**

1. One assumption in this study is that all students performed to the best of their ability on the TCAP during the 2012-2012, 2012-2013, and 2013-2014 school years.

2. Another assumption in this study is that all teachers received the same amount of training on how to use McGraw-Hill's *SRA Corrective Reading* program effectively in their morning reading blocks.
3. Another assumption in this study is that these all teachers had a strong commitment to McGraw-Hill's *SRA Corrective Reading* program.
4. A final assumption in this study is that all students participated actively in the corrective reading block and thus received all benefits of the program.

### **Definition of Terms**

1. SRA Corrective Reading: A comprehensive reading curriculum from McGraw Hill that utilizes Direct Instruction as its primary strategy. The program is taught in ability-based groups. There are two strands of Corrective Reading, Decoding and Comprehension (Marchand-Martella, Martella, & Przychodzin-Havis, 2002).
2. Tennessee Comprehensive Assessment Program (TCAP): "A multiple-choice test designed to measure student achievement in certain skills in four content areas: Reading/Language Arts, Mathematics, Science, and Social Studies" (Tennessee State Department of Education, 2012, p. 3).
3. RTI<sup>2</sup>: A framework for teaching and learning that focuses on tiered intervention and specialized student remediation based on individual data for students in mathematics, Language Arts, and science. (Tennessee Department of Education, 2013)
4. Direct Instruction: "An instructional approach that utilizes explicit and structured teaching routines" (Tennessee Department of Education, 2013, p.230).

5. Modified Academic Achievement Standards (MAAS): Alternative assessment to the TCAP; assessment no longer provided as of the 2014-2015 school year.  
(Tennessee Department of Education, 2014, p. 3).

## CHAPTER II

### REVIEW OF THE LITERATURE

#### **Introduction**

The SRA *Corrective Reading* program from McGraw Hill is a program that utilizes a common educational strategy called Direct Instruction. Direct Instruction (DI) was established as a method of teaching in the 1960s by Siegfried Engelmann (SRA/McGraw-Hill, n.d.). Schug, Tarver, and Western (2001) defined Direct Instruction as “a highly organized, teacher-direct approach informed by a careful analysis of the skills that must be acquired by anybody learning to read” (p. 1). Shippen, Houchins, Steventon, and Sartor (2005) added that “Direct Instruction uses explicit teaching (i.e. brisk, scripted lessons) to promote reading mastery” (p. 176). Falk and Wehby (2005) added to the definition of Direct Instruction by noting its script following, continuous teacher questioning, high-level of interaction format. Furthermore, they noted that Direct Instruction provides immediate feedback to teachers and students. However, Kohn (1999) used the adjective militaristic to negatively describe the pedagogy surrounding Direct Instruction. Finally, according to the American Federation of Teachers (1999), Direct Instruction was “designed to accelerate the learning of at-risk students” and “Curriculum materials and instructional sequences attempt to move students to mastery at the fastest possible pace” (p. 3).

This topic is of great importance since reading is a valuable skill needed not only for students in the secondary education setting, but in postsecondary education,

vocational education, and future life endeavors in general. Roberts (2013) stated that, “As students’ progress in the grades, there is a shift from ‘learning to read’ to ‘reading to learn’ which usually takes place around fourth grade” (p. 38). If students leave the fourth grade without the valuable skills of decoding and fluency, they will struggle to learn in secondary classroom settings. Biancarosa and Snow (2006) discussed the value of strong literacy skills to the success students will have in school and life. They argued that, “Students who do not acquire these skills find themselves at a serious disadvantage in social settings, as civil participants, and in the working world” (p. 3). The question remains, if Direct Instruction as a reading intervention strategy can work effectively, then why do so many educators refuse to try it?

However, despite the presented success of Direct Instruction, the research on Direct Instruction is quite divided. According to the research, Direct Instruction can be a valuable teaching strategy in regards to literacy remediation (Schug, Tarver, & Western, 2001; Shippen et al., 2005; & Flores & Ganz, 2009). However, others view Direct Instruction as ineffective (Carnine, 2000; Kohn, 1999).

For example, one study in the state of Wisconsin found that the Direct Instruction teaching strategy had “dramatic positive results in young children in the State of Wisconsin, and across the county” (Schug, Tarver, & Western, 2001, n.p.). On the other hand, child development authority, David Elkind argued that the use of Direct Instruction is harmful to all children, especially those who have preconceived learning disabilities and disadvantages (Carnine, 2000, p. 8). He expounded upon this idea by stating that the rote-learning style associated with Direct Instruction damages children in future learning

experiences by limiting his or her learning style. Flores and Ganz (2009) also found a link between Direct Instruction and reading instruction when researching literacy and students with autism.

J.E. Stone, Ed.D., President of Education Consumers Foundation, argued heavily in favor of Direct Instruction in the forward of *Clear Teaching: With Direct Instruction, Siegfried Engelmann Discovered a Better Way of Teaching*, by urging educators to look at the research data rather than focusing on feelings toward the repetitiveness of Direct Instruction (Barbash, 2012). Stone pointed to the fact that research shows that Direct Instruction works for all students—gifted, disabled, and general population. Furthermore, he compares the role of a teacher using Direct Instruction to a coach teaching the fundamentals to players on his team. Stone said, “It identifies key skills, teaches them first, and then adds to that foundation. It builds mastery through practice and intervenes early to prevent bad habits” (Barbash, 2012, p. 2).

In recent years, there has been a push to move away from Direct Instruction because of the primary focus being on the teacher teaching rather than on the students. In fact, most of the recently trained teachers in Wisconsin received little to no training on Direct Instruction during their education program curriculum, but rather learned about it from their cooperating teachers (Schug, Tarver, & Western, 2001). Lack of training for educators is precisely the reason Stone claimed Direct Instruction-based programs often failed. Stone called the training for educators on Direct Instruction “flawed” and “detrimental to the aims of standards-based educational reform” (Barbash, 2012, p. 3). This lack of training has made teachers unlikely to use Direct Instruction correctly,

meaning results would be inaccurate at best. From professional development to undergraduate education programs, Direct Instruction training is often promoted in only a negative connotation. According to Stone, “Rather than preparing teachers to be confident directors and managers of classroom learning, most teacher preparation programs instill a reluctance to use DI and similar results-oriented methodologies” (Barbash, p. 3).

Stockard (2011) also warned educators against impatiently drawing conclusions about Direct Instruction reading programs. She conducted a study of three rural schools using the Direct Instruction reading program, *Reading Mastery*. In this study, she found that students made gains in literacy, although they were not always significant at every grade level. However, Stockard (2011) concluded that educators should be patient when implementing such reading programs. She said, “Direct Instruction Reading programs can produce significantly higher reading achievement, but these changes will most likely appear after teachers have fully learned the new curriculum and with students who are exposed to the model as designed, beginning in kindergarten” (p. 15).

There are a variety of reading programs available for struggling students on the market. One specific program, *Corrective Reading*, from McGraw Hill uses the Direct Instruction instructional model as a part of its core curriculum. This study will focus on the effects of *Corrective Reading* on middle school Reading and Language Arts TCAP scores. Marchand-Martella, Martella, and Przychodzin-Havis (2002) discuss three key elements to *Corrective Reading*. The three key elements are:

Thoroughly developed and tested program design structure so students learn how to learn as they master increasingly complex skills and strategies; scripted presentation approach that uses a brisk pace, carefully chosen exercises and examples, and other special presentation techniques to engage even reluctant learners; complete learning materials, including student books, workbooks, teacher presentation books and guides, and supplemental materials that provide everything from placement tests to a management system that reinforces hard work, helping to change student attitudes about reading. (p. 3)

Additionally, *Corrective Reading* is composed of two strands of learning. These strands are *Decoding* and *Comprehension* (Marchand-Martella, Martella, & Przychodzin-Havis, 2002). Students in this study participated in RTI<sup>2</sup> composed of both the *Decoding* and *Comprehension* strands of *Corrective Reading*.

### **Elements of a Strong Literacy Program**

According to Biancarosa and Snow (2006), there are Fifteen Elements of an Effective Adolescent Literacy Program. Several of these elements align directly with the elements needed to make Direct Instruction successful. Those elements appearing in both Biancarosa and Snow's list and the Direct Instruction model include [list ranked in numerical order provided by researchers]:

1. Direct, explicit comprehension instruction;
9. Ongoing, formative assessment of students,
10. Extended time for literacy,

11. Professional development, and

12. Ongoing, summative assessment of students and programs. (p. 4)

The first element discussed, “Direct, explicit comprehension instruction” is the authors’ way of saying, Direct Instruction (Biancarosa & Snow, 2006, p. 4).

Each of the other components also plays an important role in Direct Instruction (and thus, often the success of *Corrective Reading* as well since *Corrective Reading* uses the Direct Instruction model of teaching). Assessment is a major part of Direct Instruction, especially in the *Corrective Reading* program. Both formative and summative assessments must be frequent and ongoing to ensure that students are getting the instruction provided at the appropriate level. Extended time and support is another important part of reading intervention. With the *Corrective Reading* program approach, students need additional time outside of their regular reading block for accurate success. Finally, as noted throughout this review of literature, professional development is vitally important to the success of teachers using both Direct Instruction as teaching model and the *Corrective Reading* program as an intervention tool.

The American Federation of Teachers (1999) listed Direct Instruction as one of *Five Promising Remedial Reading Programs*. They listed the main elements of the Direct Instruction Model as: “Scripted lesson plans, Research-tested curriculum, Coaches/facilitators, Rigid pace, Achievement grouping, and Frequent assessments” (p. 4). These elements are strongly synonymous with Biancarosa and Snow’s (2006) elements of effective literacy programs.

## Classroom Effects of Direct Instruction

According to Schug, Tarver, and Western (2001), classrooms utilizing the Direct Instruction approach to teaching reading had an obvious classroom appearance. The researchers commented that students and teacher had greater focus and intensity during the lesson. The lessons moved quickly and were extremely orderly. Moreover, there were minimal classroom disruptions or behavior issues. In fact, the researchers gave credit to students being “too engaged in reading to take time for fooling around” (p. 17). Gun, Smolkowski, Biglan, Black, and Blair (2005) found a direct relationship between struggling readers and coexisting behavior problems. They suggest that reading instruction that is effective could be a variable in preventing behavioral problems. Donna Angelli, Lead Reading Teacher at Breed Middle School in Lynn, Massachusetts commented on the decline in discipline problems in her school as well saying that discipline issues almost disappeared completely within two weeks of implementation of the program (SRA/McGraw Hill, n.d.). She attributed this decline to the intensity and engagement portions of Direct Instruction as utilized *Corrective Reading* and the fact that students are acquiring the skills they previously lacked to be a successful reader. Furthermore, she said, “These kids are completely aware of what they are lacking, which really hurts and often manifests itself in appropriate behavior. The rapid rate at which students acquire skills and confidence with this program quickly diminishes the need to act out” (p, 23).

Lingo, Slaton, and Jolivette (2006), however, argued that there was not an observable relationship between students receiving Direct Instruction through *Correct*

*Reading* and the behavior exhibited in their peers. They stated that an excessive number of school calendar absences and a great number of student absences for several of the students could have contributed to this matter. They suggested that future studies follow students who have strong attendance records during an uninterrupted school schedule time period. Since students for this study will be drawn at random, however, the researcher in this case cannot follow such suggestions.

Teachers also agreed that their lessons ran at a much smoother, more efficient pace when using Direct Instruction as a teaching model. SKF Educational Services, LLC. (2010) interviewed one teacher about the use of the Direct Instruction *Corrective Reading* program from McGraw Hill. The teacher had no experience in Direct Instruction methods prior to beginning the program. However, later in the program she said, “although it was challenging in the beginning, I feel that once I had the routine down I was using time more efficiently” (SKF Educational Services, LLC., 2010, p. 10).

### **Assessment Effects of Direct Instruction**

Schug, Tarver, and Western (2001) found that Direct Instruction had a positive effect on reaching achievement and other areas in six Wisconsin schools. The demographics of the cities where the schools were located included one small town, two suburban areas, and three urban cities. Several of the schools saw improvements on state standardized assessments. In fact, “one of the city schools had an increase from 23 percent to 72 percent on the state fourth-grade Knowledge and Concepts test, the largest school wide increase in the district” (p. 14).

Kubina, Commons, and Heckard (2009) conducted a study of the effects of a Direct Instruction reading program on literacy using a program called *Reading Mastery*. In this study, 203 students were part of a summer school program which ran four days a week for six weeks total. If students attended 25% of summer school, or less, they were not included in the final results of the study. Kubina, Commons, and Heckard (2009) found that “Students showed statistically significant improvement from the pretest to posttest assessments for the informal and formal reading measures at the end of the six-week summer school program” (p. 7). This research counters research by Stockard (2011) that questions how quickly a Direct Instruction reading program can have effect on student achievement. However, Kubina, Commons, and Heckard (2009) attributed the possible success to limitations from a one-time, small study and encouraged future research on the topic.

Berg (2004) found great success using Direct Instruction as the principal of a reopened urban elementary school in Cleveland, Ohio. The reading scores from the first year (prior to the use of Direct Instruction) were atrocious; scores in the single digits and teens showed that the students of Louisa May Alcott Elementary had great deficits to overcome. Berg pushed her district to allow her school to receive training from a model elementary school and implement the program with her students.

The first year of the program, the school used Direct Instruction in grades K-3. The second year, the school added Direct Instruction use to grades 4-5. Results from the implementation of Direct Instruction were impressive. “The percentage of students scoring at or above the proficient level on the Ohio Fourth-Grade Proficiency Test

increased from 29.6 in 1999-2000 to 86.2 in 2002-2003” (Berg, 2004, p. 34). The mean percentile ranks also increased for students in the fifth grade from 13 in 1999 to 79 in 2003 (Berg, 2004, p. 34).

Kozloff and Bessellieu (2000) suggested that not only was Direct Instruction a strong model of teaching and learning, but also that it was developmentally appropriate for students at any age. Moreover, Direct Instruction lessons met the growing needs of learners by applying to all four styles of learning. Students see the words (visual learning), hear the words (auditory learning), chorally and individually say the words (oral learning), and write the words (kinesthetic learning). According to Kozloff and Bessellieu (2000), “This [meeting of individual and cultural learning styles] ensures that all children have the best chance of being understood and of becoming proficient. It also means that each child’s knowledge is broader” (p. 4).

### **Attitudinal Effects of Direct Instruction**

The use of Direct Instruction as a reading teaching strategy also effects the attitude of student learners. In the Wisconsin schools study, teachers and principals discussed how the program utilizing Direct Instruction “put children at ease and freed them up, emotionally and intellectually, to work independently and to enjoy their work” (Schug, Tarver, and Western, 2001, p. 14). One teacher in the study even said that the student’s literacy improvement from the direct-instruction program changed the student’s entire attitude toward school. Jennifer Pierce, an assistant principal at Chief Leschi School in Puyallup, Washington also noted a strong change in student attitude when

Direct Instruction through *Corrective Reading* was implemented (SRA/McGraw Hill, n.d.). She said, “There’s also been a huge change in student attitude. Before we started Direct Instruction, we had disengaged passive learners. Now they are completely engaged and held accountable for their academic achievements” (p. 16-17).

Lower frustration levels and an increase in confidence are two other positive factors that can arise from Direct Instruction reading programs such as *Corrective Reading*. According to Marchand-Martella, Martella, and Przychodzin-Havis (2002), one middle school teacher who was interviewed stated:

After just a few days, they [students] know they can excel, which is a huge boost to middle school kids who have struggled throughout their school careers. They can do the work because they are at the appropriate level, which means they don’t get frustrated. All of these components raise their comfort level and their confidence”. (p. 12)

Dr. Kathleen Airhart, Director of Schools for Putnam County Schools in Cookeville, Tennessee also commented on the positive affects Direct Instruction through *Corrective Reading* on student attitudes. Dr. Airhart stated:

We discovered that students in *Corrective Reading* had greatly improved attitudes toward reading. Before the program began 34% had an overall positive response to reading. After *Corrective Reading*, 70% reported positive attitudes, while the comparison group remained at thirty-four percent” (SRA/McGraw Hill, n.d. p. 19).

## Long-Term Effects of Direct Instruction

Critics of Direct Instruction, such as David Elkind, argued that the rote-memorization style of Direct Instruction negatively affects student learning in the future. However, according to Schug, Tarver, and Western (2001), many of the teacher's in the Wisconsin schools study clearly stated that their students demonstrated long-term skills such as sequencing, expository writing, critical thinking tasks, and more following the use of utilizing the Direct Instruction teaching strategy for teaching reading. Moreover, in four of the six schools, there was a positive effect on retention and special education referral rates attributed to the Direct Instruction reading program. Specifically, fewer students were being referred to special education services and less students were being retained a grade level at the end of the year.

Another positive long-term effect of Direct Instruction, specifically through the *Corrective Reading* program from McGraw Hill, is the ability to perform better in other content areas rather than just reading. Willetta Fritz, Chairperson of the English Department and Curriculum Support Provider at Sanger High School in Sanger, California found this positive trait to be true. She said, "Social Studies teachers have also noticed an improvement in their students' reading. They can finally read the text!" (SRA/McGraw Hill, n.d., p. 9). A seventh grade student from the school also attributed the program with providing success in other classes, "*Corrective Reading* has helped me in other classes like Language Arts and Social Studies. It helps me to understand when we read as a class" (SRA/McGraw Hill, n.d., p. 9). Additionally, Lynn Neeley, a Title I Resource teacher at Los Tules Middle School in Tulare, California echoed the positive

effect *Corrective Reading* was having on scores in all content areas in their school. She said, “Corrective Reading has made a big difference across subjects because students have become better readers. I don’t think we could have made that growth across the board if our students hadn’t had the ability to read and comprehend” (SRA/McGraw Hill, n.d., p. 11).

### **Critics of Direct Instruction**

Not all research supports the use of Direct Instruction. In some cases, even when positive results occur in regards to literacy success, critics argue against the strategy. For example, in the Wisconsin study, some teachers reported in their interview that Direct Instruction was “slow, repetitive, and boring” (SRA/McGraw Hill, n.d., p.15). Moreover, the teachers emphasized that while the students did not find the strategy of Direct Instruction boring, the teachers themselves found it boring. While the pace of the lesson is brisk, since teachers cannot move on to the next skill or objective until sufficient mastery is met, the program can be seen as very repetitive (SRA/McGraw Hill, n.d., p. 16). One principal even described the strategy as Mickey Mouse at first because it uses scripted lessons and signals for students response (often choral).

Others criticize Direct Instruction’s lack of cooperative learning. Slavin, Cheung, Groff, and Lake (2008) found that there were very few corrective reading programs available for secondary students. Of the programs they located and studied, however, they found one common pattern; cooperative learning was the base of the program. “These programs rely on a form of cooperative learning in which students work in small

groups to help one another master reading skills and in which the success of the team depends on the individual learning of each team member” (Slavin, et al., 2008, p. 309).

Another negative aspect of Direct Instruction can be the cost. The literacy market has several viable Direct Instruction corrective reading programs available for use. Most of the programs require the following materials to be purchased in order for the program to be utilized and taught as intended: student textbooks, workbooks, and teacher guides. However, schools also need professional development and training on utilizing the program and some even hire literacy coaches to assist teachers in the using the program in their classrooms (Schug, Tarver, and Western, 2001, p. 16).

Kohn (1999) heavily criticized Direct Instruction, stating that the set of research on the topic was not extensive or long enough to support a positive influence attributed to Direct Instruction. He claimed that even the supposed positive results from studies on the use of Direct Instruction should be considered invalid because the whole study was a mess. Furthermore, Kohn stated that even when positive results were exhibited in studies, the results did not last long and were not carried over to other school years and subject areas. However, Kohn’s greatest criticism of Direct Instruction came in his discussion of several studies that found that students who had been in preschools and Kindergartens using Direct Instruction rather than traditional teaching strategies were more often delinquents in middle and high school and had more arrests during adulthood.

## **Effects of a Reading Remediation Block**

Because of the recent educational shift to a type of remediation called Response to Intervention (RTI), reading remediation courses have become common in most United States schools. Wanzek, Vaughn, Roberts, and Fletcher (2011) conducted an experiment on the effect of a fifty minute reading intervention program conducted daily for an entire year. In this experiment, they had a control group of students identified as learning disabled who did not partake in the fifty minute intervention program each day (although they did continue to receive educational services per their Individualized Education Plan). The experimental group was made up of a similar set of students who did attend a daily reading intervention program for fifty minutes. The scores on overall assessments were varied. On the TOWRE Sight Word subtest and the Passage Comprehension subtest, there was a statistically significant difference found. However, on the TOWRE Phonetic decoding subtest, a small-sized effect was found. Also, there was no significant difference found on the WJ-III subtest. Therefore, the researchers determined that this study provided “initial evidence that many of the well-intentioned programs designed to enhance reading outcomes for students with significant reading problems are unlikely to adequately meet the needs of students with LD when provided in standard ways” (Wanzek, Vaughn, Roberts, & Fletcher, 2011, n.p.).

## **Statistical Findings on Corrective Reading**

While the debate over Direct Instruction creates a vast amount of research, there is also research on the success of reading remediation block programs using Direct

Instruction such as one program from McGraw Hill called *Corrective Reading*. Marchand-Martella, et al. (2003) found that there were twenty-eight studies that observed the effects of this Direct Instruction reading program. According to their research, “Twenty-six of the 28 studies found positive, often statistically significant, results for students who were taught using *Corrective Reading*” (p.1). It should be noted, nonetheless, that their research has been used by SRA and McGraw Hill to market the program, so validity in all studies should be assessed for further comparison.

However, not all researchers agreed with the idea that there significant results when schools used *Corrective Reading*. One study used a *t*-test comparison of Means of Tennessee Comprehensive Assessment Program (TCAP) *Terra Nova* tests and showed that in third, fourth, and sixth grade there was “no significance difference in reading scaled score gains prior to (2001-2002) and after implementation (2003-2004) of *Corrective Reading*” (Werner, 2005 p. 94-95). The fifth grade, conversely, showed that there was a significant difference after implementation of *Corrective Reading* in the mean reading scaled scores. In fact, the fifth grade students had an increase of almost 15 points following the use of the program. However, this increase could be attributed to other factors since Werner also found that when the corrective reading program was completed, there was no difference in reading scaled scores at any level between those students who participated in the corrective reading program and those who did not.

Strong, Wehby, Falk, and Lane (2004) also concluded differing results on the effectiveness of the *Corrective Reading* program. According to their research, four out of six students using *Corrective Reading* achieved moderate growth in oral reading fluency.

The same four students also had an increase in comprehension answers as well. Researchers did, however, note a “ceiling effect” for two of the students in the experiment. These two students were already at a higher reading level than their four peers. Therefore, researchers concluded that the program might not have been as beneficial for them at that level. Also, researchers noted that even though four of the six students did achieve an increase in fluency and comprehension, their achievement levels were still much lower than the expectation level of non-disabled student peers. Therefore, Strong et al. concluded that “although the intervention detailed in this study might be deemed effective, it is apparent that the improvement in reading performance was probably not significant enough to overcome the struggles in reading displayed by the participants” (Strong, Wehby, Falk, & Lane, 2004, p. 576).

Benner, Kinder, Beaudoin, and Stein (2005) found educationally and behaviorally/emotionally statistically significant results in their study of fifty-one public school students. The study consisted of thirty-one male and twenty female students from five elementary schools and one middle school. Data consisted of matched pairs of students who had high incidence disabilities. All but five students were matched almost identically. Students were located in two groups for the study. One group of students were in a general education classroom where they were taught using a variety of literacy strategies, but no Direct Instruction through *Corrective Reading* was used. The other group of students was in a pull-out classroom setting where they were taught using Direct Instruction through *Corrective Reading* three-times a week in forty-five minute sessions. Benner, Kinder, Beaudoin, and Stein (2005) found moderate results on the behavioral and

emotional responses of students between the two groups. The students in the *Corrective Reading* group showed statistically and educationally significant improvements on basic reading skills and on social adjustment assessments. For example, students in the *Corrective Reading* group had a statistically significant increase on mean scores on the post assessments given to students. Researchers also found that the effect size for this study was large which suggested that basic reading skills and oral fluency were statistically altered by the use of the *Corrective Reading* program.

Again, a study from SKF Educational Services, LLC. (2010) boasted that the *Corrective Reading* program researched in their study successfully increased reading fluency for the special needs students in this group. According to the study, “Approximately 57% of special needs students included in the sample significantly improved their reading fluency, in some cases by as much as one grade level” (SKF Educational Services, LLC., 2010, p. 11). Furthermore, ‘moderate’ success was demonstrated by about 14% of the sample. Finally, the *Corrective Reading* program was ‘highly’ to ‘moderately effective’ at increasing fluency for 71% of students with special needs. However, since the sample size was only 11 students, statistical data could be less than robust.

A study conducted by Vitale and Kaniuka (2009) also found positive correlations between students enrolled in *Corrective Reading* and reading achievement growths. They studied twenty- percent of the lowest-performing students in third grade and twenty-percent of the lowest-performing students in the fourth grade from one Eastern North Carolina elementary school and compared them to twenty-percent of the lowest-

performing students in those same grades the year before. The experimental group consisted of twenty-seven third grade students and thirty-three fourth grade students. Students in the experimental group received daily Direct Instruction from McGraw Hill's *Corrective Reading* program for ninety minutes (forty-five minutes for each strand; decoding and comprehension). The comparison group had received no *Corrective Reading* instruction during the previous year. Rather their teachers used a variety of literacy teaching strategies. Vitale and Kaniuka (2009) found significant differences at the end of the school year on reading achievement assessments for both students in third and fourth grade who were receiving services in *Corrective Reading*. Moreover, their study showed that students enrolled in the *Corrective Reading* group also had a statistically significant acceleration rate of growth illustrated by a twenty-four percent growth rate increase for third grade students and a twenty-nine percent growth rate increase for fourth grade students compared to students not receiving *Corrective Reading* during the previous school year.

Roberts (2013) also found positive success utilizing the *Corrective Reading* program from McGraw Hill. She studied three seventh grade ELL students who were pre-tested as at-risk. The students received intensive *Corrective Reading* curriculum for seven weeks. All three students exceeded the growth rate set for them of two words per week using this program. Furthermore, each student improved on correct word recognition and fluency. One weakness of this study, however, is the one-on-one instruction format. While Direct Instruction was utilized, typically *Corrective Reading* occurs in small group and whole class formats. Another weakness of this study is that

only three students compiled the sample. Increasing sample size would help strengthen the validity of the research.

*Corrective Reading* was also found to be positively initiated, but not statistically significant in a study of more than 100 juvenile inmates in the Colorado Department of Correction (Coulter & Brookens, 2003). Data from twenty-six students was analyzed due to a large student turnover rate since inmates volunteered for *Corrective Reading* or were often relocated to another prison facility. Researchers found that there were three types of students who participated in program. There were high-performing students, low-performing students, and ESL students. According to Coulter and Brookens (2003), the students were placed into these categories based on the following criteria:

Students who attended class repeatedly and actively participated in instruction were considered high-performing students; students who took high doses of medicine, failed to repeatedly attend class, and did not participate in instruction were considered low-performing; and ESL students were English as second language learners. (p. 4)

The study found that “Students who received at least two lessons per week (n=17) improved on average by three correct words per minute per week” (Coulter & Brookens, 2003, p. 4). This gain scored higher than the expected gain on an average of one word per minute.

In a similar study comparing adjudicated youth, *Corrective Reading* was found to have a greater influence than a program developed by a Reading Specialist at the residential treatment facility (Scarilato & Asahara, 2004). There were two groups in this

study. One group was composed of five, sixteen to seventeen year old males living in residential treatment facility. The other group was composed of four, sixteen to seventeen year old males living in a residential treatment facility. Boys in both groups tested significantly below grade level on the pre-test issued, the Woodcock Reading Mastery Test-Revised. A reading specialist placed the students into the two groups. The group of five boys received reading intervention in the form of *Corrective Reading*, while the group of four boys received reading intervention in the form of a special program created by the reading specialist. The intervention lasted for 19-weeks with the *Corrective Reading* group receiving 180 minutes weekly and the reading specialists group receiving 345 minutes weekly. According to Scarilato and Asahara (2004):

Despite the variations in intervention time, standardized change scores for the Woodcock Reading Mastery Test-Revised (WRMT-R), revealed 60% of the *Corrective Reading* participant subtest showed moderate to large gains while none of the RS participants made gains, and the majority (57%) showed moderate to large losses. Composite scores revealed that 73% of the *Corrective Reading* group scores showed moderate to large gains, and 27% shows zero to no change. In contrast, no RS participants had scores that showed gains, and the majority (75%) showed composite scores with moderate to large losses. (p. 211)

Therefore, although this study is small in number, *Corrective Reading* proved to be a stronger tool of reading intervention than an individualized, specially created, time-intensive plan.

The effect of Corrective Reading on students with emotional and behavioral issues is also an area of interest. McDaniel, Houchins, and Terry (2012) reported significant statistical findings and social findings from their study of thirty-one students in the fourth through eighth grade diagnosed with emotional and behavioral disorders. Their study took place in two elementary schools and two middle schools in a metropolitan area. The students in this study reached significant achievement gains when pre and post test scores from the Woodcock-Johnson III Achievement were analyzed using a two-way ANOVA. Moreover, students and teachers in this study agreed that behavior was appropriate 70% of the time during the use of the program, a great achievement for students with emotional and behavioral disorders. Personally, both students and teachers believed the program was beneficial to student learning. Ninety-two percent of teachers and seventy-two percent of students in the study found *Corrective Reading* beneficial.

A study from schools in Melbourne, Australia also supported the use of *Corrective Reading* as a literacy intervention program (Hempenstall, 2014). While this study only focused on one part of the *Corrective Reading* Program, Decoding, the students in the experiment group produced statistically significant gains compared to the students in the control group. Furthermore, the students in the experiment group made educationally large gains through the use of *Corrective Reading: Decoding* compared to students in the control group.

*Corrective Reading* proved effective in a small study of three students with moderate intellectual disabilities (Bradford, Alberto, Houchins, Shippen, & Flores, 2006).

All three students in the study were males ages 12-15. Two of the three students were born with moderate intellectual disabilities. The other student was placed into the program following a traumatic brain injury. Students received 65, forty-five minute to fifty-five minute lessons, three days a week. At the conclusion of the study, all three students reached proficient status for the portion of *Corrective Reading* covered. Moreover, they had sight word reading gains of 21%, 68%, and 51% respectively when comparing pretest and posttest results (p. 340). While this study is very limited due to population size and the details surrounding the chosen population, *Corrective Reading* still proved to be effective in this case.

In this study, 206 students (150 males and 56 females) were identified by teachers as having a perceived slow reading progression compared to other students in their grades. The students ranged in age from 7.8 years to 13.4 years with a student mean age of 9.7. Each of these students was assessed using the placement test from SRA McGraw Hill's *Corrective Reading: Decoding* program. From the 206 initial students, 134 students were placed into experimental groups and 72 students were waitlisted, thus creating the control group. The students were selected at random based on the number of teachers at each school trained in the program, number of students in each grade, etc. Students in the experimental group received sixty-five, fifty minute lessons of reading intervention in a pull-out program provided by curriculum from *Corrective Reading: Decoding*. Correspondingly, students in the control group received only the regularly provided instruction in their normal English/reading programs. After, ten months, the students in the experiment group and control group were tested using the same posttest.

Students in the experiment group showed statistically and educationally significant increases that were represented in clear patterns after examining the data.

In a series of non-comparison studies, SRA and McGraw Hill (n.d.) discuss the success of *Corrective Reading* at several school districts. These studies are filled with terms such as “most” and “almost all”. However, they do illustrate some case studies of positive growth for the students in their school.

For example, one case study followed the implementation of *Corrective Reading* during the 2005-2006 school year in the Clover School District in Clover, South Carolina. Laura Holland, the Instructional Supervisor for Special Education in the Clover School District, found that “almost all students with disabilities achieved academic progress, but some achievements were more dramatic than others” (SRA/McGraw Hill, p. 5). Holland cited the example of one student who prior to *Corrective Reading* read on a Grade 2 reading level. However at the end of the year, the student was reading close to a Grade 4 reading level.

Another case study found that students enrolled in *Corrective Reading* in Sanger High School in Sanger, California for one year made gains of at least two years in comparison (SRA/McGraw Hill, n.d.). Willetta Fritz, the Chairperson of the Sanger High English Department and Curriculum Support Provider, shared positive data results from the implementation of *Corrective Reading*, “We’ve even seen some students score Far Below Basic on the state exam before Intervention and then score Advanced after just one year with the program. Once they begin to do well, they are motivated to pass the

state test and exit the class. The majority exit after one or two years” (SRA/McGraw Hill, n.d., p. 8).

Wausau School District in Wausau, Wisconsin also contributed success to teaching reading to English-Language Learners (ELL) to the *Corrective Reading* program (SRA/McGraw Hill). This school district serves a large population of ELL students from Hmong, in southeastern Asia. The percentage of students scoring Proficient or Advanced on the Wisconsin Knowledge and Concepts Examination (WKCE) increased from 64% in 2004 to 76% in 2005. This increase was after only three months use of the program. Nell Anderson, the Director of Bilingual Multicultural and Equity Programs for the Wausau School District shares the story of one ELL eighth-grade student who entered the school reading on a third grade level. After one year of being instructed using *Corrective Reading*, the student increased to a sixth grade level.

Additionally, a Native American school who introduced *Corrective Reading* in the 2003-2004 school year showed significant growth and gains after three years of the program (SRA/McGraw Hill, n.d.). Every student at Chief Leschi School in Puyallup, Washington needed *Corrective Reading* when it was first implemented in 2003-2004 because so many students were struggling readers. When researchers looked at the data in 2006-2007, only 30% of students needed *Corrective Reading*. Seventy-percent of students had risen to reading at or above grade level. Furthermore, students’ Reading scores also increased significantly. “For example, the percentage of Grade 10 students meeting or exceeding state standards rose from 10% in 2003 (before Direct Instruction began) to 62% in 2006” (SRA/McGraw Hill, n.d., p. 16).

Another case study from SRA/McGraw Hill (n.d.) discussed how Direct Instruction in the *Corrective Reading* program improved student reading proficiency scores on statewide assessments despite socioeconomic status in Putnam County Schools in Cookeville, Tennessee. “100% of Special Education students in one of the poorest schools in the district read proficiently in 2005” (p. 18). Moreover, this district saw significant success in reading proficiency when comparing scores at the national level as well. “By 2005, 80% of Putnam County students read proficiently, compared to 69% statewide that same year” (SRA/McGraw Hill, n.d., p. 18).

However, a study Direct Instruction reading remediation programs by Torgessen, Myers, Schirm, Stuart, Vartivarian, Mansfield, et al. (2006) found varying results than the ones from SRA/McGraw Hill. According to the Institute of Education Sciences Division of the United States Department of Education *What Works Clearinghouse* (2010), there was no statistically significant effect on the scores of Word Attack and Word Identification subtests of the Woodcock Reading Mastery Test-Revised (WRMT-R) or the Phonemic Decoding Efficiency and Sight Word Efficiency subtests of the Test of Word Reading Efficiency (TOWRE) for 5<sup>th</sup> graders in the Torgessen et al. study. These results are based on the fact that “the WWC-calculated effect across these measures was not large enough to be considered substantially important according to WWC criteria (i.e. an effect size of at least 0.25)” (Torgessen, Myers, Schirm, Stuart, Vartivarian, Mansfield, et al., 2006, p. 4). The effect on the Oral Reading Fluency test also provided no statistically significant effect according to WWC criteria. A non-substantive effect was also found on the comprehension portion of the Torgessen et al. (2006) study based

on two outcomes, the WRMT-R Passage Comprehension subtest and the Group Reading Assessment and Diagnostic Evaluation (GRADE) Passage Comprehension test (Institute of Education Sciences, p. 4). “In summary, the study showed indeterminate effects in the alphabets, reading fluency, and comprehension domains” (Torgessen, Myers, Schirm, Stuart, Vartivarian, Mansfield, et al., 2006, p. 4).

Another study by Lingo, Slaton, and Jolivette (2006) also produced mixed results. Researchers found that there was a significant difference between pre and post test scores on reading fluency when using a one-tailed t-test. However, the researchers end their results portion by saying the program “may have contributed to the improved reading abilities of the participants” (p. 276).

Stevenson and Fredrick (2003) also found varying results. Their study of three middle school students found that all three of the students had an increase in words read per minute. However, they also discovered that when the timed reading portion of the *Corrective Reading* program was not utilized, the students’ fluency score decreased. Also, two of the three students decreased the number of errors in their reading during the reading fluency test. One student, however, actually increased the number of errors during his reading fluency test. The researchers attributed this increase to an assumption that the student was trying to read fast at the insistence of the instructor or due to an individual pressure to read fast during the timed reading fluency test.

Furthermore, it is valuable to note that the gains that were made following the implementation of *Corrective Reading* were greatest in classrooms in Clover School District where dedication to the program and its components were the greatest

(SRA/McGraw Hill, n.d.). A case study in the Clay County School District in Green Cove Springs, Florida found similar results (SRA/McGraw Hill, n.d.). Dr. Suzanne Herndon, the District Supervisor of Reading and Language Arts in Clay County found that teachers, reading coaches, and principals were all very dedicated to the success of the program and make sure to dependably follow the plan. She said, “They all understand the value of *Corrective Reading*, so buy-in is from the top down, and teachers are fully trained” (SRA/McGraw Hill, n.d., p. 6). Therefore, it can be concluded that another variable to consider when examining statistical significance of the implementation of *Corrective Reading* on student achievement would be a teacher’s fidelity to the program.

#### *Corrective Reading and Other Literacy Remediation Tools*

Caldwell (2009) conducted a study to determine if *Corrective Reading* or Read180 was a better reading tool for reading remediation. He found that there was no significant difference between students’ gain scores on the Individual Reading Inventory (IRI) assessment for students placed in Read180 versus those students placed in *Corrective Reading*. However, his study showed that *Corrective Reading* had a significantly higher improvement level at the .05 research level than Read180. This means that while there was no significant different in assessment scores for students in both programs, students in *Corrective Reading* group did improve more than students in the Read180 group during the course of the experiment.

## Perceptions of Corrective Reading

There have been many studies following the use and success of *Corrective Reading*. However, many of these studies do not meet the criteria required for publication. Nevertheless, one important aspect to acknowledge in the use and success of *Corrective Reading* is the perceptions offered by students and teachers utilizing the program. Educators can note that while statistically-based, research-driven data is most definitely the most important measure of intervention success, other criteria, such as perceived success, attitudinal success, and small growth can illustrate success when it comes to dealing with student needs in the classroom.

McDaniel, Duchaine, and Jolivette (2010), applied such recognition in their study of the perceptions of students and teachers following the use of *Corrective Reading* with students having severe emotional and behavioral disorders. This study was composed of two different groups that had already completed a study on the statistical success of *Corrective Reading* (still going through the publication process at the time). The eighteen-member student group was composed of 9-14 year olds in the 4-8 grades who agreed to participate in this parallel study at the end of the initial study. Only seven members of the original study declined to participate. Each of these students proved to be at least one grade level behind in reading, fit into one of three of the first levels of *Corrective Reading: Decoding*, and had been diagnosed with severe emotional and behavioral disorders. The educator study group was composed of three teachers and one school psychologist from the original study. Three teachers declined to participate in the second study.

The study by McDaniel, Duchaine, and Jolivet (2010) asked both participating groups a series of questions. The educator group answered the questions through written responses and oral recordings rather than through a focus group due to physical proximity and time constraints. The questions the educators answered were:

1. How do you feel about the small, ability level CR groupings,
2. What do you like and dislike about CR,
3. How did the students respond to CR instruction (academically and behaviorally),
4. Do you think CR is a feasible program with this population,
5. What are the positive and negative aspects of CR implementation,
6. Do you think CR is effective with this population,
7. What you think should change about CR,
8. Is there anything else we should know about the CR program?

(McDaniel, et al., 2010, p. 588-590)

Upon completion of the collection of responses, the data was recorded divided into five themes; technical issues, effectiveness, ease of implementation, behavioral concerns, and endorsement of corrective reading. Within these themes, technical issues played the least important role as comments in this area referred to scheduling and permissions issues rather than issues with the program itself. Additionally, behavioral concerns applied most strongly to students' response to changing their schedule and routine and how this affected students with severe behavior and emotional disorders. In regards to effectiveness, the educators agreed that the program "absolutely" impacted

their students (McDaniel, et al., 2010, p. 592). One teacher described the growth in her students by saying she was, “actually able to see the progress in my kids” (McDaniel, et al., 2010, p. 592).

The greatest positive perception of *Corrective Reading* came from the endorsement theme of the study. The educators noted that this program was beneficial to their students with emotional and behavioral disorders because it provided the structure they needed to be successful as well as the remedial aspects they needed without making students feel inferior or behind. In fact, one teacher commented that the program “should clearly be implemented across all levels and other teachers should do it every day” (McDaniel, et al., 2010, p. 593).

Students in this study were questioned in traditional focus groups. Two focus groups were conducted; one at the elementary level and one at the middle school level. A staff member not associated with the original study questioned the students. The following questions were asked of the students in the focus group:

1. How do you feel about reading in general,
2. How do you feel the CR reading groups went,
3. What do you like about the CR program,
4. What do you not like about CR,
5. Do you feel like you need help to be a better reader,
6. How do you feel about your weekly fluency tests,
7. What information do you want me to know about your reading classes or CR in general? (McDaniel, et al., 2010, p. 590)

Following the collection of data, student responses were segregated into four common themes; Reading attitudes, Opinions of fluency probes, Endorsement of corrective reading intervention, and Suggestions for future participation. In contrast to the educators' views of the *Corrective Reading* program, the students were mixed about the results and content within the program. For example, most of the students liked the fluency probes and felt that the probes helped the students read better. However, the students also commented that should be given appropriate-level probes to read, rather than the easy stories provided in the curriculum. Nevertheless, all of the students but one endorsed the program. They felt that the program was helpful. Many positive individual comments such as, "I learned", "it's cool", and "it was fun" were used by the students in regards to endorsing the program (McDaniel, et al., 2010, p. 594). Although the students said they learned using the program, the results were again divided in the discussion on future participation. The students who wanted to use the program again commented on their desire to do the program again but on a higher level. However, some students responded alternatively by saying that they did not want to use the program again because it was too easy or that they did not want to be in this [the *Corrective Reading*] group.

McDaniel, et al. (2010) noted that although the responses from the educator and student groups varied, they support empirical research on the topic. "CR is a socially valid reading program for struggling readers and offers the perspective of students and teachers involved with implementation" (McDaniel, et al., 2010, p. 595). Furthermore, the researchers noted that this data is equally important to successfully implementing

effective practices for students with emotional and behavioral disorders because it helps bridge the gap between research and practice.

In conclusion, there are many different viewpoints educators point to when debating the effective use of Direct Instruction and *Corrective Reading*. Research is often split over this important topic in education. Much of the research on Direct Instruction is five or more years older with several studies still in a pending-publication status. Additionally, most of the research on McGraw Hill's specific reading remediation program, *Corrective Reading*, is biased since it is published by SRA and McGraw Hill. Obviously, they wish to sell their product by producing positive experimental results. Studies that are not produced by McGraw Hill often lack large enough experimental size or break other rules of research to be included.

Therefore, this research project is an important step toward examining the effectiveness of *Corrective Reading* in one rural Middle Tennessee Middle School. It is not just a school district's money, time, and resources in question, but an entire population of students' future success both in school and life.

## CHAPTER III

### METHODOLOGY

#### Overview

The purpose of this chapter is to explain the methodology that was used in conducting a study using standardized testing archival data. The purpose of this study was to determine if there was a statistical difference between Reading and Language Arts Tennessee Comprehensive Assessment Program (TCAP) achievement scores for students enrolled in an RTI<sup>2</sup> literacy program for students in one Robertson County Middle School compared to previous group of students who were not required to take a required literacy course outside of their regular reading instruction. The program used for improving literacy was McGraw-Hill's *SRA Corrective Reading* program. This program utilizes a direct instruction, scripted program. The school began the program as part of an initiative from the district utilizing Race to the Top funds from the state of Tennessee. The school also began this program due to RTI<sup>2</sup> initiatives required by state and federal mandates.

At the beginning of the 2011-2012 school year, students were placed into the required reading course during RTI<sup>2</sup> intervention time if they were not reading at or above grade level based on scores from a placement test from Renaissance Learning called STAR by the middle school Reading and Language Arts teachers. In subsequent years, students were placed into RTI<sup>2</sup> *Corrective Reading* programs using the placement test STAR as well as TCAP Reading and Language Arts scores.

Students in the program were placed into groups of ten to fourteen. Each group had students with similar reading levels in it. For example, all students reading at 3 grade level were placed together, 3.5 placed together, 4 placed together, and so on. A classroom teacher, teacher's aide, or school staff member (i.e. guidance counselor) provided the instruction each day. The course took place every day, Monday through Friday, for 45 minutes at the beginning of the day. The program that was used for the required reading course came from McGraw-Hill called *SRA Corrective Reading*. The program uses Direct Instruction (DI). The program is completely scripted. Instructors cannot veer off of the scripted instruction. The teacher instructs, students respond in chorus, students do timed activities with a partner, and students complete individuals' tasks. Students must meet certain standards of criteria (provided by McGraw-Hill) before being allowed to move onto a different lesson.

### **Research Design**

The students in this study were selected at random using a random number table. The research utilized an ex post facto design. Archival data were obtained and analyzed to answer the research questions. The archival data used in this study were TCAP Reading and Language Arts Composite Scores. The statistical analyses that were applied in this study were a repeated measure Analysis of Variance (ANOVA) test since quantitative data involving one group of students is being used. The repeated measure Analysis of Variance (ANOVA) test was performed to compare the Mean score for students on the Tennessee Comprehensive Assessment Program (TCAP) achievement

Reading and Language Arts test before the implementation of McGraw-Hill's *SRA Corrective Reading* during RTI<sup>2</sup> block to the Mean score for students on the TCAP Reading and Language Arts test after the implementation of McGraw-Hill's *SRA Corrective Reading* during RTI<sup>2</sup> block. Composite scores from the 2011-2012 school year, 2012-2013 school year, and 2013-2014 school year were analyzed. Microsoft Excel was utilized for all statistical analysis.

## **Participants**

The participants consisted of 30 middle school students from the 2011-2012 school year and the same 30 middle school students from the 2012-2013 and 2013-2014 school years in one Robertson County School. Students were selected at random from the entire population of students in the required reading remediation course during 2012-2013. The school is made up of students with varying demographics. However, for this study, demographics were not taken into consideration. The only data analyzed was TCAP Reading and Language Arts composite scores before the implementation of the program, following year one of the implementation, and following year two of implementation.

## **Data Collection Procedure**

Approval was obtained from the Institutional Review Board of Austin Peay State University to conduct this study. Approval was obtained from the Robertson County School District to conduct research using Archival Data. Data were retrieved on

Tennessee Comprehensive Assessment Program (TCAP) achievement scores from the Robertson County Office of Student Services and the home school location. Students were coded to keep identifying student data anonymous. Students were coded using A B, C, and following. Data were collected for the 2011-2012 school year, 2012-2013 school year, and 2013-2014 school year.

### **Data Analysis Plan**

When analyzing the data to determine if the required reading course was statistically making a change in Tennessee Comprehensive Assessment Program (TCAP) Reading and Language Arts scores, a repeated measure Analysis of Variance (ANOVA) test was utilized. The repeated measure ANOVA test was performed to compare the Mean score for students on the Tennessee Comprehensive Assessment Program (TCAP) Reading and Language Arts test before the implementation of a required reading remediation block to the mean score for students on the TCAP Reading and Language Arts test after the implementation of a required reading remediation block. Student data from the 2011-2012 school year, the 2012-2013 school year, and 2013-2014 school year were compared with the repeated measure ANOVA test. Microsoft Excel was utilized for all statistical analyses. Null Hypotheses were tested for statistical significance at the Alpha level,  $p < .05$ , for determining statistical significance. The researcher will use the values generated by the repeated measure Analysis of Variance (ANOVA) tests to determine whether each Null Hypothesis should be accepted ( $p > .05$ ) or whether the Null Hypothesis will be accepted ( $p < .05$ ).

## CHAPTER IV

### ANALYSIS OF DATA

#### **Introduction**

The purpose of this study was to determine the effect of using McGraw Hill's program, *Corrective Reading*, during response to intervention time (RTI<sup>2</sup>) on middle school students' Reading/Language Arts TCAP scores. This chapter presents the analyses of the three research questions that provided a framework for the study.

#### **Research Question One**

Does McGraw-Hill's *SRA Corrective Reading* improve TCAP Reading and Language Arts composite scores?

#### **Null Hypothesis One**

There will be no statistically significant differences between student TCAP Reading and Language Arts scores before a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts scores after the implementation of a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup>.

To answer this question, Reading Language Arts scores from three consecutive years were analyzed from one group of thirty students who were selected at random using

a random number chart. The same group of thirty students was followed for the duration of three years. The group was composed of eighteen male students and twelve female students. Their scores for all three years are illustrated in Table 4.1. The first set of TCAP scores came from the 2011-2012 school year. During this year, students did not receive reading remediation from the McGraw Hill program, *Corrective Reading* but were pulled during RTI<sup>2</sup> for various classes based on classroom performance. The second set of TCAP scores came from the 2012-2013 school year, the pilot year of the middle school using McGraw Hill's *Corrective Reading*. Finally, the third set of TCAP scores came from the 2013-2014 school year, the second year of the school using McGraw Hill's *Corrective Reading*.

**TABLE 4.1**

*Mean Scores for Sixth, Seventh, and Eighth Graders in Population Based on Gender*

<b>Student Code</b>	<b>Sex</b>	<b>6th Grade Score</b>	<b>7th Grade Score</b>	<b>8th Grade Score</b>
A3	M	750	773	798
A11	F	722	744	755
A18	M	776	786	772
A19	M	308	326	340
A20	M	722	699	732
A25	M	724	735	715

A27	M	776	749	749
A28	M	767	768	793
A30	F	789	789	775
A31	F	750	742	744
A34	M	767	749	747
A36	F	773	773	783
A41	M	675	722	732
A42	F	773	763	768
A45	F	767	768	811
A47	F	789	765	789
A48	M	752	782	775
A51	M	747	727	732
A52	M	759	744	758
A53	F	782	776	779
A56	M	729	746	752
A60	M	729	705	727
A62	M	773	751	768
A63	F	770	789	793
A66	F	750	742	738
A74	M	738	738	738
A77	M	773	779	779

A84	F	736	751	741
A85	M	770	776	762
A89	F	642	710	698

The scores were analyzed using a repeated measure Analysis of Variance (ANOVA) test in Microsoft Excel. From the ANOVA test, a series of data were generated to be analyzed.

**TABLE 4.2**

*Arithmetic Mean Scores, Variances, Standard Deviations, Low and High Numbers from the Arithmetic Mean Calculations for the 2011-2012, 2012-2013, and 2013-2014 School Years with Count and Sum Scores*

<b>Groups</b>	<b>Count</b>	<b>Sum</b>	<b>Arithmetic Mean</b>	<b>Variance</b>	<b>Standard Deviation</b>	<b>Low</b>	<b>High</b>
2011- 2012 School Year	30	22078	735.93	7568.202	87.00	648.94	822.93
2012- 2013 School Year	30	22167	738.90	6684.921	81.76	657.14	820.66

2013- 2014 School Year	30	22343	744.77	6543.357	80.89	663.88	825.66
---------------------------------	----	-------	--------	----------	-------	--------	--------

First, the arithmetic Mean was compared. The arithmetic Mean for the 2011-2012 school year was 735.93, 2012-2013 school year was 738.90, and 2013-2014 school year was 744.77 as shown in Table 4.2. The Variance, Standard Deviation, and range were also computed and analyzed as illustrated in Table 4.2. During the 2011-2012 school year, the Variance was 7568.202, the Standard Deviation was 87.00, and the range was 648.94 to 822.93. During the 2012-2013 school year, the Variance was 6684.920, the Standard Deviation was 81.76, and the range was 657.14 to 820.66. During the 2013-2014 school year, the Variance was 6543.357, the Standard Deviation was 80.89, and the range was 663.88 to 825.66.

To discover the effect of McGraw Hill's *Corrective Reading* program, the previously mentioned data was used to run a repeated measure Analysis of Variance (ANOVA) test using Microsoft Excel, as shown in Table 4.3. The source of variation both within groups and between groups was analyzed. The sum of squares (SS) between the groups was 1212.466 and the sum of squares within groups was 603097.933. In regards to degrees of freedom (df), between the groups there was 2 degrees of freedom, but within the groups there was 87 degrees of freedom. The mean square (MS) between

the groups was 606.233 and within the groups was 6932.160. Finally, the F-value of the ANOVA was 0.087452 with a P-value of 0.91634 and F-critical value of 3.101

**TABLE 4.3**

*Results from the Repeated Measure Analysis of Variance (ANOVA) with Standard Deviation, Degrees of Freedom, Mean Score, F-Value, P-Value for Comparisons Between groups and Within Groups*

<b>ANOVA</b>						
<i>Source of Variation</i>	<i>Standard Deviation</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	1212.467	2	606.233	0.087452	0.91634	3.101
Within Groups	603097.9	87	6932.160			
Total	604310.4	89				

There is a very high *p*-value of 0.91634. When comparing this number to the experimentally acceptable *p*-value of 0.05, it is evident that there is not enough strong evidence to support a statistically significant difference in TCAP scores after the implementation of McGraw Hill's *Corrective Reading* program. Therefore, in regards to this research question the Null Hypothesis, There will be no statistically significant differences between student TCAP Reading and Language Arts scores before a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts scores after the implementation of a

required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup>, would fail to be rejected.

### **Research Question Two**

Does McGraw-Hill's SRA *Corrective Reading* improve the number of students meeting proficient benchmarks on the TCAP?

### **Null Hypothesis Two**

There will be no statistically significant differences in the number of students meeting proficient benchmarks on the TCAP Reading and Language Arts test before a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts achievement levels after the implementation of a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup>.

To answer this question, the same Reading Language Arts scores from the previous research question section were again analyzed. These scores came from three consecutive years. The study group was composed of thirty students who were selected at random using a random number chart. The same group of thirty students was followed for the duration of three years. The group was composed of eighteen male students and twelve female students. Their achievement levels for all three years are shown in Appendix 1 by student code. The first set of TCAP scores came from the 2011-2012

school year. During this year, students did not receive reading remediation from the McGraw Hill program, *Corrective Reading* but were pulled during RTI<sup>2</sup> for various classes based on classroom performance. The second set of TCAP scores came from the 2012-2013 school year, the pilot year of the middle school using McGraw Hill's *Corrective Reading*. Finally, the third set of TCAP scores came from the 2013-2014 school year, the second year of the school using McGraw Hill's *Corrective Reading*. A chart breaking down the scale scores for achievement levels can be found in Appendix 2.

This data were analyzed two different ways. First, the data were compared without looking at individual student growth, meaning did a student go from Below Basic or Basic to Proficient or Advanced. To reach this finding, the Achievement Levels were entered into a chart and turned into percentages as illustrated in Table 4.4. These percentages are represented by year in Tables 4.5, 4.6, and 4.7 below.

**TABLE 4.4**

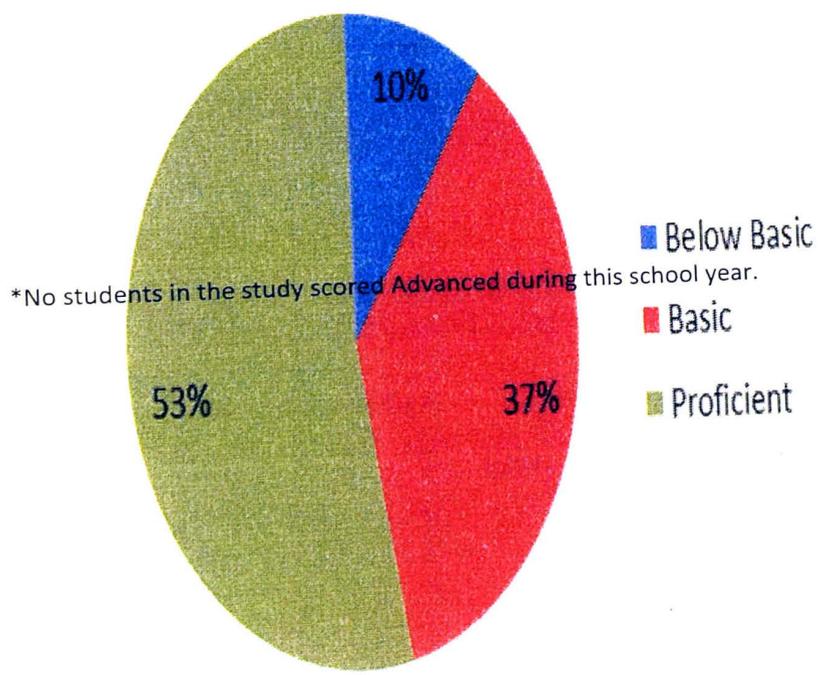
*Numbers of Students Scoring at each Achievement Level, Below Basic, Basic, Proficient, and Advanced, for the 2011-2012, 2012-2013, and 2013-2014 School Years*

Level	2011-2012	2012-2013	2013-2104
Below Basic	3	3	1
Basic	11	14	14
Proficient	16	13	14
Advanced	0	0	1

TABLE 4.5

*Pie Chart Illustrating the Percentages Students Scoring at each Achievement Level, Below Basic, Basic, Proficient, and Advanced, for the 2011-2012 School Year*

### 2011-2012 School Year



\*No students in the study scored Advanced during this school year.

TABLE 4.6

*Pie Chart Illustrating the Percentages Students Scoring at each Achievement Level, Below Basic, Basic, Proficient, and Advanced, for the 2012-2013 School Year*

## 2012-2013 School Year

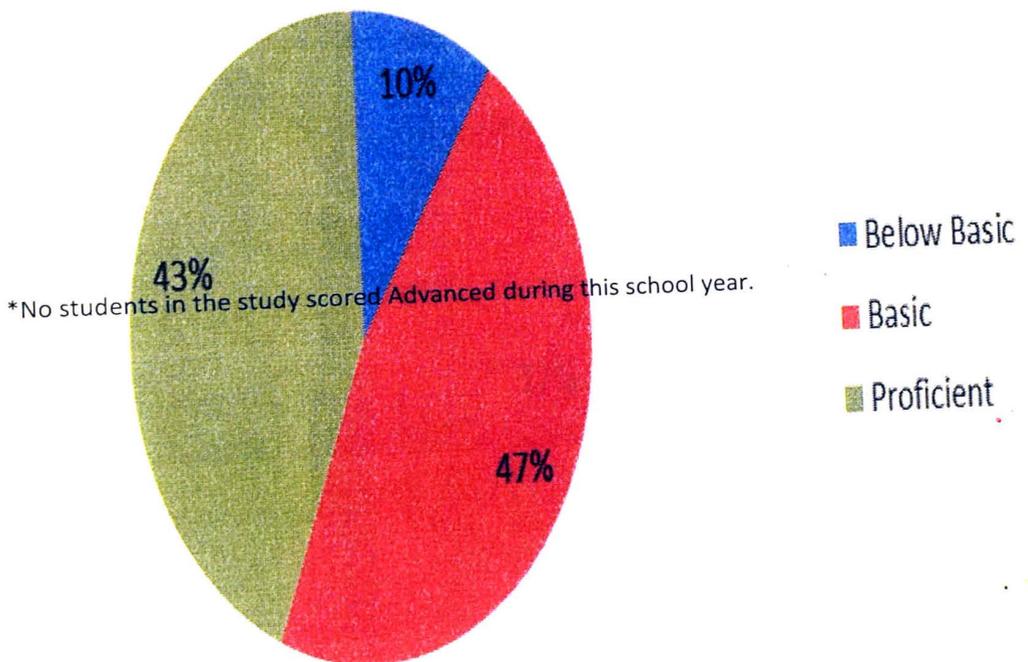
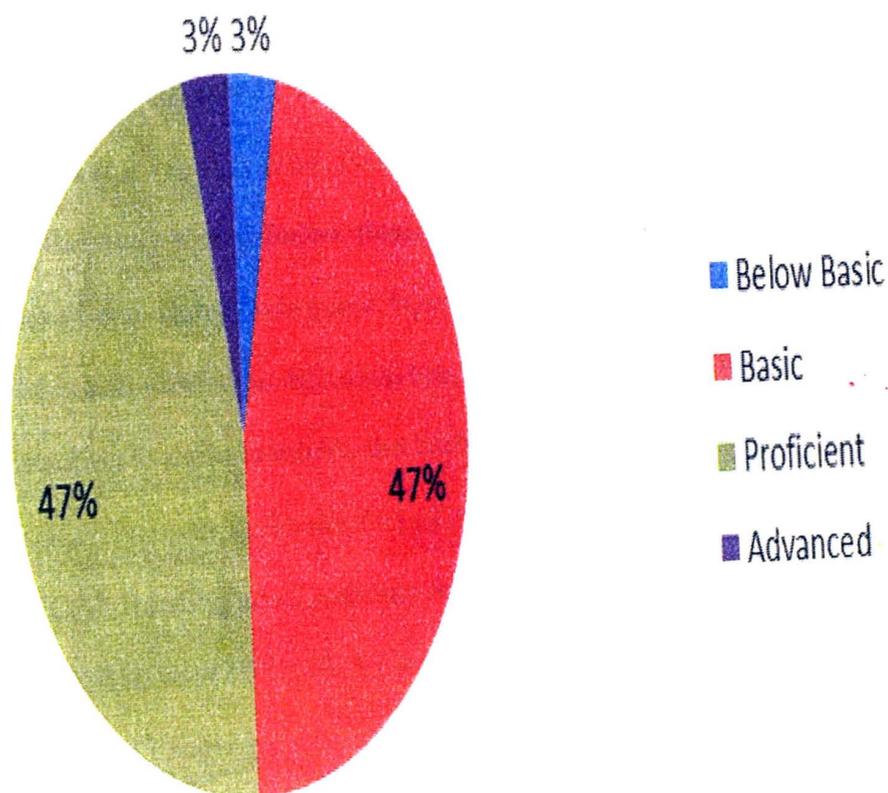


TABLE 4.7

*Pie Chart Illustrating the Percentages Students Scoring at each Achievement Level, Below Basic, Basic, Proficient, and Advanced, for the 2013-2014 School Year*

## 2013-2014 School Year



Visually, these charts (Tables 4.4, 4.5, 4.6, and 4.7) illustrate that there was not an increase in the number of students scoring Proficient on the TCAP Reading Language Arts Test. In fact, in the first year of the program, there was actually a decrease in the number of students scoring Proficient (or above) on the Reading Language Arts TCAP test. In the 2011-2012 school year, 10% of the students scored Below Basic on the test and 37% scored Basic on the test. Combined, the total number of students from the 2011-2012 school year that scored below Proficient on the Reading Language Arts TCAP test was 47%. In 2012-2013, 10% of the students in the study scored Below Basic and 47% scored Basic for a combined 57% scoring below Proficient. Therefore, there was actually a 10% increase from 2011-2012 when there was no *Corrective Reading* program to the 2012-2013 pilot year for the program. However, in the 2013-2014 school year only 3% of the students in the study scored Below Basic and 47% scored Basic for a combined total of 50%. This set of data shows a decrease from the previous year, however, the 50% from 2013-2014 is still more than the initial total of 47% from the 2011-2012 school year. Therefore, according to these numbers, the Null Hypothesis, there will be no statistically significant differences in the number of students meeting proficient benchmarks on the TCAP Reading and Language Arts test before a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts achievement levels after the implementation of a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> meets the criterion for failure to reject.

However, this data was also analyzed student-by-student to see if the impact was greater there. The chart showing this data can be found in Table 4.8 below.

**TABLE 4.8**

*Individual Students Level of Proficiency (Below Basic, Basic, Proficient, and Advanced) on TCAP Reading and Language Arts Tests by Gender and Grade Level*

<b>Sex</b>	<b>Code</b>	<b>6th Grade Level</b>	<b>7th Grade Level</b>	<b>8th Grade Level</b>
M	A3	Basic	Proficient	Proficient
F	A11	Basic	Basic	Basic
M	A18	Proficient	Proficient	Proficient
M	A19	Below Basic	Basic	Proficient
M	A20	Basic	Below Basic	Basic
M	A25	Basic	Basic	Basic
M	A27	Proficient	Basic	Basic
M	A28	Proficient	Proficient	Proficient
F	A30	Proficient	Proficient	Proficient
F	A31	Basic	Basic	Basic
M	A34	Proficient	Basic	Basic
F	A36	Proficient	Proficient	Proficient
M	A41	Below Basic	Basic	Basic
F	A42	Proficient	Proficient	Proficient

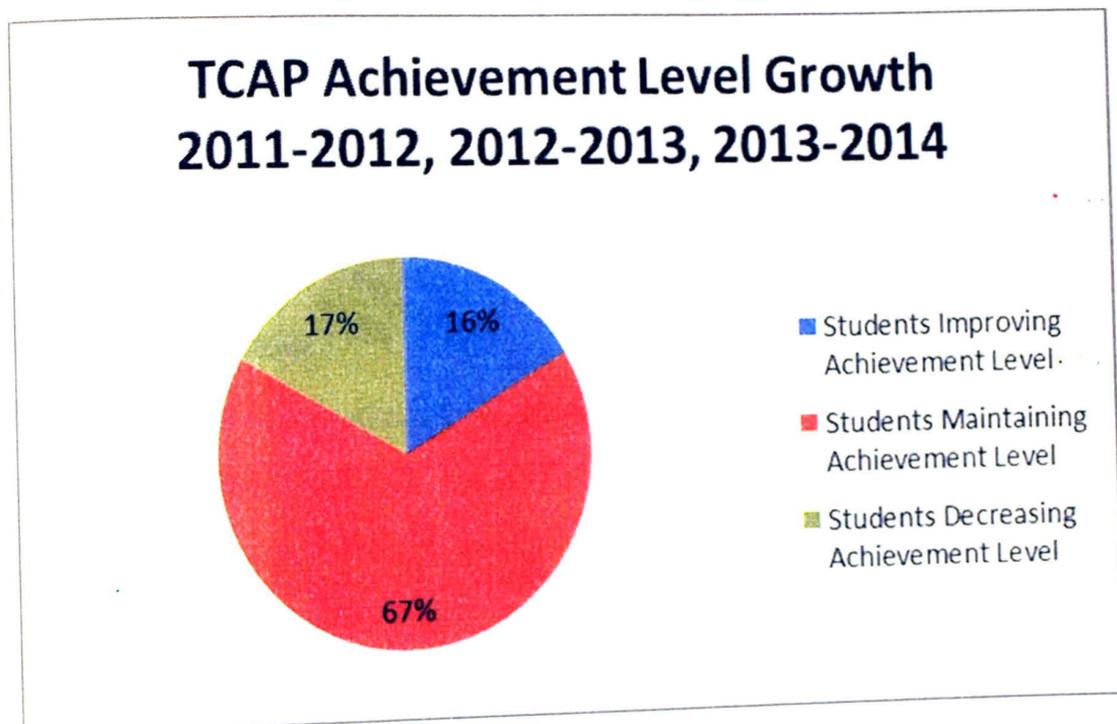
F	A45	Proficient	Proficient	Advanced
F	A47	Proficient	Proficient	Proficient
M	A48	Proficient	Proficient	Proficient
M	A51	Basic	Basic	Basic
M	A52	Proficient	Basic	Basic
F	A53	Proficient	Proficient	Proficient
M	A56	Basic	Basic	Basic
M	A60	Basic	Below Basic	Basic
M	A62	Proficient	Basic	Proficient
F	A63	Proficient	Proficient	Proficient
F	A66	Basic	Basic	Basic
M	A74	Basic	Basic	Basic
M	A77	Proficient	Proficient	Proficient
F	A84	Basic	Basic	Basic
M	A85	Proficient	Proficient	Proficient
F	A89	Below Basic	Below Basic	Below Basic

In this comparison, only five students showed a growth during either the 2012-2013 school year or the 2013-2014 school year. Twenty students out of thirty showed no change in their academic achievement level. Five students showed a decrease during the three year time period. As illustrated in Table 4.9, only 16% of the students in the study

improved their achievement level during the program while 17% decreased and 67% remained the same.

**TABLE 4.9**

*Pie Chart Illustrating Students Achievement Level Maintenance on TCAP Reading and Language Arts Tests for 2011-2012, 2012-2013, and 2013-2014 School Years*



Many of the students whom remained the same scored Proficient on their achievement level initially, but of those students who did not score Proficient, improvement was only made in 5%. Therefore, even fewer students showed a significant

difference when analyzing the data by individual schools. Once again, the Null Hypothesis Two, there will be no statistically significant differences in the number of students meeting proficient benchmarks on the TCAP Reading and Language Arts test before a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts achievement levels after the implementation of a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup> meets the criterion for failure to reject.

### **Research Question Three**

Does McGraw-Hill's *SRA Corrective Reading* lower the number of students scoring below basic on the TCAP?

### **Null Hypothesis Three**

There will be no statistically significant differences in the number of students meeting Below Basic benchmarks on the TCAP Reading and Language Arts test before a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts achievement levels after the implementation of a required reading remediation block using McGraw Hill's *SRA Corrective Reading* during RTI<sup>2</sup>.

To answer this question, the same Reading Language Arts scores from the previous research question section were analyzed once again. Again, three consecutive

years' worth of data was analyzed. The study group was composed of the same thirty students from the previous sections who were selected at random using a random number chart. The same group of thirty students was followed for the duration of three years:

The group was composed of eighteen male students and twelve female students. Their achievement levels for all three years are shown in Table 4.10 by student code.

**TABLE 4.10**

*Students Level of Proficiency (Below Basic, Basic, Proficient, and Advanced) on TCAP Reading and Language Arts Tests by Gender and Grade Level for 2011-2012, 2012-2013, and 2013-2014 School Years*

Gender	Student Code	2011-2012 Achievement Level	2012-2013 Achievement Level	2013-2014 Achievement Level	
M	A19	Below Basic	Basic	Proficient	**Student took the MAAS all 3 years
M	A35	Below Basic	Below Basic	Basic	
F	A40	Below Basic	Below Basic	Below Basic	
M	A41	Below Basic	Basic	Basic	
M	A76	Below Basic	Below Basic	Below Basic	**Student took the MAAS all 3 years
F	A89	Below Basic	Below Basic	Below Basic	

TABLE 4.11

*Student Reading and Language Arts TCAP Achievement Levels (Basic, Proficient, and Advanced) with Scale Scores for 2011-2012, 2012-2013, and 2013-2014 School Years*

<u>School Year</u>	<u>Achievement Level</u>	<u>Scale Score</u>
2011-2012	Advanced	803
	Proficient	752
	Basic	708
2012-2013	Advanced	798
	Proficient	760
	Basic	718
2013-2014	Advanced	799
	Proficient	760
	Basic	707

The first set of TCAP scores came from the 2011-2012 school year. During this year, students did not receive reading remediation from the McGraw Hill program, *Corrective Reading* but were pulled during RTI<sup>2</sup> for various classes based on classroom performance. The second set of TCAP scores came from the 2012-2013 school year, the pilot year of the middle school using McGraw Hill's *Corrective Reading*. Finally, the third set of TCAP scores came from the 2013-2014 school year, the second year of the

school using McGraw Hill's *Corrective Reading*. A chart breaking down the scale scores for achievement levels can be found in Table 4.10.

This data was analyzed by looking at percentages. The number of students scoring Below Basic each year was calculated and put into a graphic chart. This data can be found in Table 4.12.

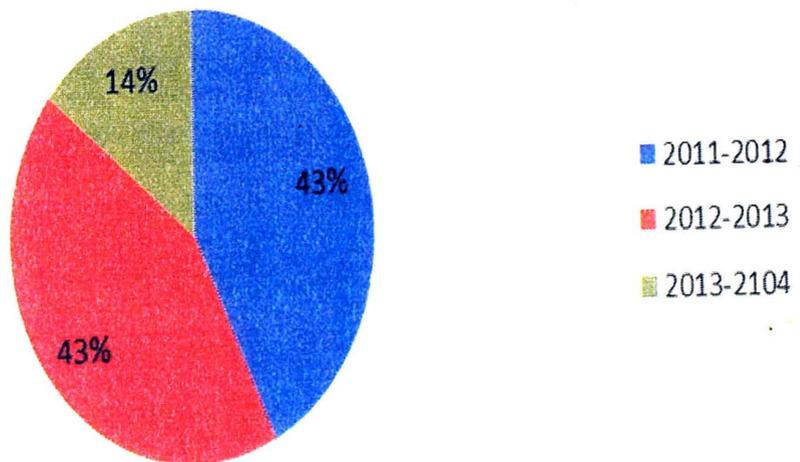
**TABLE 4.12**

---

*Pie Chart Illustrating Student Reading and Language Arts TCAP Achievement Levels Percentages for 2011-2012, 2012-2013, and 2013-2014 School Years*

---

## Students Scoring Below Basic On Reading Language Arts TCAP



A very small number of students in the randomly selected group scored Below Basic. Therefore, the numbers in this chart appear quite distorted. To counteract this problem, a population of students was selected for an alternate set of data. This group was comprised of only students who scored Below Basic during the 2011-2012 school year to see if growth occurred during the three years of *Corrective Reading*. Only 6 students out of 90 in the population group scored Below Basic. A chart showing the data from these students can be found in Tables 4.10. One unique aspect of this group, however, is the fact that students who took the MAAS, a modified version, of the TCAP could be included in the study since achievement levels between the TCAP and the MAAS are comparable unlike numerical scores. Of the six students, three improved at least one achievement level while the other three remained Below Basic. One interesting student to look at in particular is student A19. This student improved from Below Basic in 2011-2012, to Basic in 2012-2013, to Proficient in 2013-2014. This student did take the MAAS rather than the TCAP during those years. However, this growth is still quite impressive. However, this student's success cannot be associated with the use of the *Corrective Reading* Program as just one student is not statistically sound. This relatively small portion of the population size is not large enough to yield data of statistical significance. Therefore, the research in this study yields results of failure to reject.

Results did not yield statistically significant data that McGraw Hill's *Corrective Reading* curriculum is statistically impacting TCAP Reading and Language Arts scores. However, the researcher would like to note that the program does appear to be making

educationally important gains. Teachers reported throughout this project that they could see improvements in both reading and comprehension in their classroom assessments.

#### *Areas for Further Research*

Researchers need to spend more time and resources on conducting large-scale studies that meet the qualifications of acceptable research. Most of the studies researched for this project did not meet publishable criteria. The research in this project while applicable to the school did not produce statistically significant results. It is important that further study be done to determine the effectiveness of *Corrective Reading* during remediation time.

Many of the teachers in the school responded verbally upon learning about this project that they thought *Corrective Reading* was a positive program to improve reading and comprehension. Most stated that they could see the results in their own classroom even if the state standardized assessments did not prove statistical significance. It is important, therefore, that future research consider following students for longer than three middle school years to see if results are yielded on upper grade state standardized assessments.

Another area for future research would be the effects of *Corrective Reading* on TCAP scores based on gender. This study did not specifically focus on gender (or any other qualifying factor) due to the population size of the rural school. However, future studies might focus on these areas to see if one group is benefiting from *Corrective Reading* more than another.

## CHAPTER V

### SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

The purpose of this study was to investigate the impact of a required reading remediation block using McGraw Hill's *Corrective Reading* curriculum on middle school students' Reading and Language Arts TCAP scores. The program was initiated to help with a literacy deficit. Funding for the program came from Race to the Top funds given to the Robertson County School district. The study focused on thirty middle school students during a three year time period. The relationship between the intervention reading block using *Corrective Reading* and student scores on the TCAP Reading and Language Arts test was examined. A repeated measures ANOVA test with cross tabulations was utilized to test for statistical significance. The study was conducted to test three null hypotheses at the .05 level of significance. Microsoft Excel was used to analyze all data.

#### Findings

The main purpose of this study was to determine if a required reading remediation block using McGraw Hill's *Corrective Reading* curriculum had a statistically significant impact on those students' scores on the Reading and Language Arts TCAP.

#### Null Hypothesis One

There will be no statistically significant differences between student TCAP Reading and Language Arts scores before a required reading remediation block

using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts scores after the implementation of a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup>.

This hypothesis compared the score students made on the Reading and Language Arts TCAP test before the implementation of the required reading block using *Corrective Reading* curriculum to the scores students made on the Reading and Language Arts TCAP in the two years after the implementation of the required reading block.. This hypothesis was tested for 30 randomly selected students. A repeated measures ANOVA test with an Alpha of .05 was used to test for statistical significance. The analysis indicated there was no statistically significant ( $p= 0.9163$ ) difference in students before and after the implementation of the required reading remediation block.

The failure to reject the null hypothesis indicated that students did not score statistically significantly higher on the TCAP Reading and Language Arts tests during the 2012-2013 and 2013-2014 schools years (after they began using McGraw Hill's *Corrective Reading* curriculum in their required reading block) than they did during the 2011-2012 school year (before McGraw Hill's *Corrective Reading* curriculum was used and a remediation reading block required).

### **Null Hypothesis Two**

There will be no statistically significant differences in the number of students meeting proficient benchmarks on the TCAP Reading and Language Arts test

before a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts achievement levels after the implementation of a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup>.

This hypothesis was tested by placing the information into a chart and converting the data into percentages based on the number of times each achievement level appeared. The hypothesis was tested to determine if the required reading block using McGraw Hill's *Corrective Reading* program had an impact on student achievement levels on the TCAP Reading and Language Arts test. The analysis indicated that there was no statistically significant difference before and after the implementation of a reading remediation block using *Corrective Reading*. Therefore, the null hypothesis failed to be rejected. Students enrolled in *Corrective Reading* for two years did not reach Proficient as an achievement level more often than they did before *Corrective Reading*.

### **Null Hypothesis Three**

There will be no statistically significant differences in the number of students meeting Below Basic benchmarks on the TCAP Reading and Language Arts test before a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup> and student TCAP Reading and Language Arts achievement levels after the implementation of a required reading remediation block using McGraw Hill's SRA *Corrective Reading* during RTI<sup>2</sup>.

This hypothesis was also tested by placing the information into a chart and converting the data into percentages based on the number of times each achievement level appeared. The hypothesis was tested to determine if the required reading block using McGraw Hill's *Corrective Reading* program had an impact on student achievement levels on the TCAP Reading and Language Arts test. The analysis indicated that there was no statistically significant difference before and after the implementation of a reading remediation block using *Corrective Reading*. Therefore, the null hypothesis failed to be rejected. Students enrolled in *Corrective Reading* for two years did not reach Below Basic as an achievement level less often than they did before *Corrective Reading*.

## **Conclusions**

The purpose of this study was to determine if there was a statistically significant difference between student test scores after the implementation of a required reading remediation block using McGraw Hill's *Corrective Reading* curriculum than before the implementation of the required reading remediation block using McGraw Hill's *Corrective Reading* curriculum. The study examined thirty students over a three year time period attending the Middle Tennessee rural school during the 2011-2012, 2012-2013, and 2013-2014 school years. Based on the findings of this study, the following conclusions were presented:

There was no statistically significant difference in the scores of students on the TCAP Reading and Language Arts TCAP before the implementation of a required reading remediation block during RTI<sup>2</sup> that used McGraw Hill's *Corrective Reading*

than after the implementation of a required reading remediation block during RTI<sup>2</sup> that used McGraw Hill's *Corrective Reading*.

There was no statistically significant impact on the number of students reaching Proficient achievement levels before the implementation of a required reading remediation block during RTI<sup>2</sup> that used McGraw Hill's *Corrective Reading* than after the implementation of a required reading remediation block during RTI<sup>2</sup> that used McGraw Hill's *Corrective Reading*.

There was no statistically significant impact on the number of students reaching Below Basic achievement levels before the implementation of a required reading remediation block during RTI<sup>2</sup> that used McGraw Hill's *Corrective Reading* than after the implementation of a required reading remediation block during RTI<sup>2</sup> that used McGraw Hill's *Corrective Reading*.

## **Recommendations**

Based on the findings of this study, the following recommendations are made:

1. Further research should be conducted on a bigger population of students.
2. Further research should be conducted in a larger school on a more diverse population of students.
3. Further research should be conducted with a more diverse set of student.
4. Further research should be conducted to include statewide data.

5. A longitudinal study should be conducted on the effects of Corrective Reading on other forms of data including high school formative/summative assessments, classroom participation, etc.

## REFERENCES

- American Federation of Teachers (1999). Building on the best, learning from what works: Five promising remedial reading intervention programs, 1-6.
- Barbash, S. (2012). Clear teaching: With direct instruction, Siegfried Engelmann discovered a better way of teaching. *Education Consumers Foundation*, 1-5.
- Benner, G. J., Kinder, D., Beaudoin, K. M., & Stein, M. (2005). The effects of the Corrective Reading decoding program on the basic reading skills and social adjustment of students with high-incidence disabilities. *Journal of Direct Instruction*, 5(1), 67.
- Berg, M. K. (2004). How one urban elementary school achieved success with Direct Instruction. *Direct Instruction News*, 4(1), 31-34.
- Biancarosa, G., & Snow, C.E. (2006). Reading Next--A vision for action and research in middle and high school literacy: A report to Carnegie Corporation of New York. 1-15
- Bradford, S., Alberto, P., Houchins, D. E., Shippen, M. E., & Flores, M. (2006). Using systematic instruction to teach decoding skills to middle school students with moderate intellectual disabilities. *Education and Training in Developmental Disabilities*, 41(4), 333-343.
- Caldwell, R. L. (2009). The study of predictive factors of reading in low-performing readers in an urban setting. (Doctoral dissertation, University of Louisville).<http://digital.library.louisville.edu/cdm/singleitem/collection/etd/id/890/rec/>

- Carnine, D. (2000). Why education experts resist effective practices (and what it would take to make education more like medicine). Washington D.C.: Fordham Foundation.
- Coulter, G. & Brookens, E. (2003). Corrective reading: A system-wide program to improve reading performance for incarcerated adult basic education students. <http://www.thefreelibrary.com/Corrective+reading%3A+a+systemwide+program+to+improve+reading...-a0110574284>
- Flores, M. M., & Ganz, J. (2009). Effects of Direct Instruction on the reading comprehension of students with autism and developmental disabilities. *Education and Training in Developmental Disabilities, 44*, 39–53.
- Grossen, B. (1998). C.M. Goethe Middle School: An evidence-based middle school model, evaluation for first year of implementation. Oregon: University of Oregon. Available: [www.higherscores.org](http://www.higherscores.org).
- Gunn, B., Smolkowski, K., Biglan, A., Black, C., & Blair, J. (2005). Fostering the development of reading skill through supplemental instruction results for Hispanic and Non-Hispanic students. *The Journal of Special Education, 39*(2), 66-85.
- Hempenstall, K. (2014). Corrective Reading Decoding: An evaluation. *Australasian Journal of Special Education, 32*(1), 21-54.
- Kohn, A. (1999). Early childhood education: The case against Direct Instruction of academic skills. In *The Schools Our Children Deserve*, Boston, MA: Houghton Mifflin.

- Kozloff, M. A., & Bessellieu, F. B. (2000). Direct Instruction is developmentally appropriate, 1-11.
- Kubina, R. M., Commons, M. L., & Heckard, B. (2009). Using precision teaching with direct instruction in a summer school program. *Journal of Direct Instruction, 9*(1), 1-12.
- Lingo, A. S., Slaton, D. B., & Jolivette, K. (2006). Effects of Corrective Reading on the reading abilities and classroom behaviors of middle school students with reading deficits and challenging behavior. *Behavioral Disorders, 31*(3).
- Marchand-Martella, N., Martella, R., & Przychodzin-Havis, A. (2002). The research base and validation of SRA's Corrective Reading program. Desoto, TX: SRA/McGraw-Hill.
- McDaniel, S. C., Duchaine, E. L., & Jolivette, K. (2010). Struggling readers with emotional and behavioral disorders and their teachers: Perceptions of Corrective Reading. *Education and Treatment of Children, 33*(4), 585-599.
- McDaniel, S. C., Houchins, D. E., & Terry, N. P. (2012). Corrective reading as a supplementary curriculum for students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders, 21*(4), 240-249.
- Roberts, J. (2013). Effects of Corrective Reading as an intervention for seventh grade English Language Learners. Unpublished dissertation. Retrieved February 11, 2014, from [http://usm.maine.edu/sites/default/files/school-psychology/ROBERT,%20Corrective%20Reading,%202013\\_1.pdf](http://usm.maine.edu/sites/default/files/school-psychology/ROBERT,%20Corrective%20Reading,%202013_1.pdf)

- Scarilato, M. C., & Asahara, E. (2004). Effects of Corrective Reading in a residential treatment facility for adjudicated youth. *Journal of Direct Instruction*, 211-217.
- Schug, M. C., Tarver, S. G., & Western, R. D. (2001). Direct Instruction and the teaching of early reading: Wisconsin's teacher-led insurgency. *Wisconsin Policy Research Institute Report*, 14(2), 1. <http://www.wpri.org>
- Shippen, M., Houchins, D., Steventon, C., & Sartor, D. (2005). A comparison of two direct instruction reading programs for urban middle school students. *Remedial and Special Education*, 26(3), 175–182.
- SKF Educational Services, LLC (2010). The Effectiveness of SRA/McGraw-Hill Corrective Reading Program on Reading Fluency for Middle School Students Identified with Special Needs.
- Slavin, R. E., Cheung, A., Groff, C., & Lake, C. (2008). Effective reading programs for middle and high schools: A best-evidence synthesis. *Reading Research Quarterly*, 43(3), 290–322.
- SRA/McGraw-Hill (n.d.). Results with Corrective Reading Direct Instruction in middle school and high school. Desoto, TX.
- Steventon, C. E., & Fredrick, L. D. (2003). The effects of repeated readings on student performance in the Corrective Reading program. *Journal of Direct Instruction*, 3(1), 17.
- Stockard, J. (2011). Increasing reading skills in rural areas: An analysis of three school districts. *Journal of Research in Rural Education*, 26.

- Strong, A.C., Wehby, J.H., Falk, K.B., & Lane, K.L. (2004). The impact of a structured reading curriculum and repeated reading on the performance of junior high students with emotional and behavioral disorders. *School Psychology Review*, 33, 561-581.
- Tennessee State Department of Education (2012). *Tennessee comprehensive assessment program achievement test-grade 7 item sampler*. Retrieved from website: [http://www.tn.gov/education/assessment/achievement/ACH\\_Gr7\\_IS\\_set1.pdf](http://www.tn.gov/education/assessment/achievement/ACH_Gr7_IS_set1.pdf)
- Tennessee State Department of Education (2013). *RTI<sup>2</sup> framework 2013 implementation guide*. Retrieved from website: <http://www.tncore.org/sites/www/Uploads/RTI2 Implementation Guide-FINAL-08.22.13.pdf>
- Tennessee State Department of Education (2014). *Tennessee state assessment information for 2014-15*. Retrieved from website: [http://www.tennessee.gov/education/assessment/doc/2014-15\\_assessment\\_info.pdf](http://www.tennessee.gov/education/assessment/doc/2014-15_assessment_info.pdf)
- Torgesen, J., Myers, D., Schirm, A., Stuart, E., Vartivarian, S., Mansfield, W., et al. (2006). National assessment of Title I: Interim report. Volume II: Closing the reading gap: First year findings from a randomized trial of four reading interventions for striving readers. Washington, DC: National Center for Education Evaluation and Regional Assistance.
- Vitale, M. R., & Kaniuka, T. S. (2009). Exploring barriers to the role of Corrective Reading in systemic school reform: Implications of a three-part investigation. *Journal of Direct Instruction*, 9(1), 13-33.

- Wanzek J, Vaughn S, Roberts G, Fletcher JM. (2011). Efficacy of a reading intervention for middle school students identified with learning disabilities. *Exceptional Children* in press. [PMC free article] [PubMed].
- Werner, D. H. (2005). A study to determine the relationship of the Direct Instruction program Corrective Reading on Terra Nova tests scores in one school system in East Tennessee. *Dissertation Abstracts International*, 69(3-A), 881.
- What Works Clearinghouse (2010). WWC intervention report: Corrective Reading. Washington, DC: US Department of Education, Institute of Education Sciences.

## APPENDICES

Appendix A

Letter of Approval to Conduct Study

Austin Peay State University Institutional Review Board

August 25, 2014

The Robertson County School Board and the Director of Schools hereby authorize Ms. Rebecca Moore permission to conduct a research project using archival data from the Robertson County Elementary Schools for her EDS Field Study at Austin Peay State University in Clarksville, Tennessee.

Rebecca's topic pertains to "The Effect of Corrective Reading Programs on TCAP Reading and Language Arts Scores". The data for his study will be provided by our system-wide accountability officer charged with maintaining all achievement data for the students in the Robertson County Schools.



Dr. Linda Cash

Assistant Director of Schools

Robertson County Schools

Appendix B

Letter of Approval to Conduct Research

Robertson County Board of Education



**AUSTIN PEAY STATE UNIVERSITY**  
**INSTITUTIONAL REVIEW BOARD**

Date: 6/2/2014

RE: 14-027- The Effect of Corrective Reading Programs on TCAP Reading and Language Scores

Dear Rebecca Moore,

We appreciate your cooperation with the human research review process at Austin Peay State University.

This is to confirm that your research proposal has been reviewed and approved for exemption from further review. Exemption is granted under the Common Rule 45 CFR 46.101 (b) (4); the research involves only the study of existing data, the data is recorded in such a manner that the subjects cannot be identified directly or through identifiers.

You may conduct your study as described in your application, effective immediately. Please note that any changes to the study have the potential for changing the exempt status of your study, and must be promptly reported and approved by APIRB before continuing. Some changes may be approved by expedited review; others require full board review. If you have any questions or require further information, you can contact me by phone (931-221-6106) or email ([shepherdo@apsu.edu](mailto:shepherdo@apsu.edu)).

Again, thank you for your cooperation with the APSU IRB and the human research review process.

Sincerely,

A handwritten signature in cursive script that reads "Omie Shepherd".

Omie Shepherd, Chair  
Austin Peay Institutional Review Board

Cc: Dr. Gary Stewart