

**BLOCK READING MODEL AND FRAMEWORK BASED ON BIG BLOCK MODEL
AND STUDENT READING LEVELS**

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BLOCK READING MODEL AND FRAMEWORK BASED ON *BIG BLOCK MODEL*
AND STUDENT READING LEVELS

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The College of Graduate Studies

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Of

The Requirements for the Degree

Educational Specialist

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To the College of Graduate Studies

We are submitting a field study written by Toni Lynne-Gasper Hamlin entitled “Block Reading Model and Framework Based on *Big Block Model* and Student Reading Levels.” 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.



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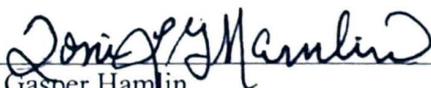


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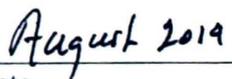
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DEDICATION

To the memory of Elwood M. Leviner: uncle, teacher, mentor, and friend.

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ABSTRACT

TONI L. G. HAMLIN. Block Reading Model and Framework Based on the *Big Block Model* and Student Reading Levels (Under the direction of DR. J. GARY STEWART.)

The purpose of this study was to research the effectiveness of the Block Reading Model based on the *Big Block Model* in a rural North Middle Tennessee County. The researcher sought to answer the Research Questions: 1. Was the second year of the Big Block Reading Model more effective than the first year? And 2. Was the Big Block Reading Model effective for all students or just for certain subgroups? The Block Reading Model was implemented in the middle school grades (6-8) and was used for two years prior to this study. The first year of use, 2011-12, was a bridge to practice year when teachers received training before school started and continually through the year. The second school year, 2012-13, the Block Reading Model was fully implemented in classrooms. Students were given the STAR Reading test three times a year to determine their Reading Scale Scores and their Reading Growth Scores. Archival data from the August and May tests from each school year were collected and used by the researcher in this study. The researcher conducted a *t*-test to determine if there was any statistically significant difference between first school year of Block Reading Model usage and the second school year using the Block Reading Model. The *t*-test indicated that there was no statistically significant difference between scale scores at the end of the first school year and the second school year of use with the Block Reading Model used throughout the district. Based on the Analysis of Variance Test (ANOVA), the research data indicated that there were statistically significant differences in student growth. Based on *t*-tests, the researcher was able to determine that there was no statistically significant difference

between the first school year and second school year for whole groups and subgroups except for the students that were originally tested in the lower 25th percentile. The researcher concluded that the Block Reading Model was effective for students using extended testing time and testing in the lower 25th percentile, but was not significantly effective for students testing in the upper 75th percentile.

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CHAPTER I

INTRODUCTION

The *Nation's Report Card; Reading 2011* (National Center for Educational Statistics, 2011) brought national attention to the growing Reading gap during the middle school years for students. This changed the focus of numerous districts and many of these are working diligently to restructure middle school Reading classes to improve learning and overall student achievement. The introduction of the Common Core State Standards at the Tennessee State level, has made it increasingly important for schools to lessen the Reading level gap experienced at the middle school grades and to insure that all students are able to read at higher Lexile levels than had been required by the previous standards. The push for Common Core State Standards and the growing concern over the middle school Reading achievement scores, has generated considerable interest in the *Big Block Reading Model*, which is one organizational schedule alternative and curriculum design being undertaken to bridge the middle school level Reading achievement gap.

Statement of Problem

The focus for this study was a predominantly rural Middle Tennessee school district, which has recently revamped the Reading Language Arts curriculum in the sixth, seventh, and eighth grades at the middle school level. The curriculum is based on the *Big Block Model* (Arens, Loman, Cunningham & Hall, 2005), which consists of block-scheduling for Reading Language Arts. The teaching model is divided into four teaching sets; Reading Comprehension, Writing, working with words, and self-selected Reading. In addition to the *Big Block Model*, teachers begin one-on-one conferencing and

interventions for Writing and Reading. All middle school students, registered in the county public school system, participated in the curriculum change, making the students the independent variables. The dependent variable for this study was the student Reading levels, as determined by the Standardized Test for the Assessment of Reading (STAR) program.

Purpose of Study

The purpose of this study was to examine the effectiveness of the district Block Reading Model framework based on the *Big Block Model* following the first two years of using the model to determine the extent to which it contributed to the increase in student Reading levels. The first year of implementation included training and bridge-to-practice professional development. In bridge-to-practice concept, teachers were given professional development covering the Block Reading Model before school began and received additional training in how to use the Block Reading Model in their classroom as the school year progressed. During the second school year, the Big Block Model was fully implemented in all classrooms without any additional professional development. Curriculum leaders will be able to use this study to determine if the Big Block Reading Model framework was effective in lessening the Reading gap at the middle school level.

Significance of the Study

The information gathered from this study will help in understanding which students tend to make the most significant gains with the new Big Block Reading Model. Based on the data and analyses, changes can be made for subsequent school years.

Currently, there are insufficient and inadequate studies on the *Big Block Model*.

Therefore, it is anticipated that the information gained from this study may help in providing sufficient quantitative data related to student Reading achievement, thereby, generating data and information needed to make curriculum changes. Educators considering using the *Big Block Model* for Reading instruction, could use the information from the study to help evaluate the curriculum model as a means of raising student achievement levels in Reading.

Research Questions

1. Is there a significant difference in student scale scores based on the amount of time the Big Block Reading framework has been in place?
2. Is there a significant difference in student Reading growth after using the *Big Block Model* in middle school Reading classes?
3. Is there a significant difference in student Reading growth based on using allowed extended time for special education students between the two school years?
4. Is there a significant difference in student Reading growth based on using regular allotted time between the two school years?
5. Is there a significant difference in student Reading growth based on using allowed extended time and those who use regular allotted time during the same school year?
6. Is there a significant difference in student Reading growth based on original testing percentiles for students in the lower 25th percentile between the two school years?

7. Is there a significant difference in student Reading growth based on original testing percentiles for students in the lower 25th percentile and the whole group during the same school year?
8. Is there a significant difference in student Reading growth based on original testing percentiles for students in the upper 75th percentile between the two school years?
9. Is there a significant difference in student Reading growth based on original testing percentiles for students in the upper 75th percentile and the whole group during the same school year?
10. Is there a significant difference between student Reading growth based on original testing percentiles for students in the lower 25th percentile and the upper 75th percentile during the same school year?

Null Hypotheses

1. There will be no statistically significant difference in student Reading scale score based on the number of years using the Big Block Reading framework.
2. There will be no statistically significant difference in student Reading level growth after using the *Big Block Model* in middle school Reading classes.
3. There will be no statistically significant difference in student Reading growth based on allowed use of extended time for special education students during testing between the 2011-2012 school year and the 2012-2013 school year.

4. There will be no statistically significant difference in student Reading growth based on using regular allotted time between the 2011-2012 school year and the 2012-2013 school year.
5. There will be no statistically significant difference in student Reading growth based on using allowed extended time and those who used regular allotted time during the same school year.
6. There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile between the 2011-2012 school year and the 2012-2013 school year.
7. There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile and the group as a whole during the same school year.
8. There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the upper 75th percentile between the 2011-2012 school year and the 2012-2013 school year.
9. There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the upper 75th percentile and the group as a whole during the same school year.
10. There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile and the upper 75th percentile during the same school year.

Limitations of Study

The population for the study was situated in a predominantly rural community in Middle Tennessee and the study would only apply to school systems of a similar make up and demographics. The data collected for this study only cover two years of eighth grade students with pre-test scores and post-test scores, using STAR reading data, which are not used in all school systems, versus the Tennessee Comprehensive Assessment Program (TCAP) scores or student Tennessee Value Added Assessment System (TVAAS) in English Language Arts. Demographic information was not assigned to all students when the student information was placed in the testing program. Thus, data by student demographics, such as ethnicity, gender and socio-economic status, were unavailable. STAR testing cannot account for such things as illness, or attendance.

Assumptions

The following assumptions were made concerning this study and have been identified as being relevant in this study:

1. It is assumed that each teacher used the same methods of implementing the Big Block Model in their classrooms.
2. It is assumed that the student Reading levels as determined by the test data are accurate and that students performed at their maximum on each test given.

Substantive Definition of Terms

Big Block Reading Model is a multi-level, multi-method teaching method used in Language Arts classes. Multi-level instruction focuses on the multiple learning

levels and needs of all students in the class in a single lesson (Arens, et al, 2005). Each block was divided into four periods of instruction on a daily basis. The four periods were guided Reading (comprehension), working with words (vocabulary), writing, and self-selected Reading. The *Big Block Reading Model* was differentiated with varied texts, conferencing, mini-lessons, and small group instruction. This model was an extension of the Four Block Model developed by Cunningham, Hall, and Defee (1989).

Operational Definition of Terms

- 1. Bridge-to-Practice** is a form of professional development in which teachers are given training on a new method before starting the practice at the beginning of the school year. Teachers continued training as the year progressed to help master the new method as teachers use it in their classrooms.
- 2. Common Core State Standards (CCSS)** are a set of standards developed for kindergarten to grade 12 which list what a student should know and accomplish before the end of each school year. The standards focus on math and reading with a goal for college and career readiness for all students. The standards are currently adopted in over 43 states in the United States. (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010).
- 3. Lexile** is a number used by teachers that represent a student's reading level or difficulty of a text (MetaMetrics, Inc. 2009).

4. **STAR Reading** is a computer generated norm reference testing program designed by Renaissance Learning to test student reading levels in grades K-12 (Renaissance Learning, n.d.).
5. **Scale Score** is the raw scaled number used to correlate and determine student reading levels. For STAR Reading, the scale score used is 0 to 1400 with 0 equaling no reading ability and 1400 equaling the highest reading level (Renaissance Learning, n.d.).
6. **Tennessee Comprehensive Assessment Program (TCAP)** is the state-wide assessment for grades 3-8 in Tennessee in the subjects of Reading, Mathematics, Science and Social Studies as well as writing in grades 5, 8, and 11. Data from these tests is used by the State of Tennessee to determine a school's effectiveness in teaching all students (Tennessee Department of Education, n.d.).
7. **Tennessee Value Added Assessment System (TVAAS)** is a system developed in Tennessee to track and project student's individual growth in TCAP tested subjects (Tennessee Department of Education, n.d.).

Conclusion

With the transition to higher Lexile levels in Common Core State Standards and the increased focus on the widening middle school Reading gap, the focus in the school system targeted by this field study moved to a new Block Reading Model, which is based on the *Big Block Model* for Reading instruction. This study focuses on the effectiveness of the new Block Reading Model during the first two school years of implementation; 2011-12 and 2012-13 school years. The researcher examined the data collected during

pre-tests and post-tests to determine if there were any statistically significant differences in scale scores and Reading growth in various tested student groups. This information can be used by educators and policy-makers to determine effectiveness or changes needed in the Big Block Reading Model in the target school system, and, perhaps, in schools or school systems of similar demographics throughout the State of Tennessee.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

According to Edmondson and Shannon (2002), “Part of No Child Left Behind educational program, the Reading First Initiative was intended to make sure that all school children in the United States learned to read by the third grade” (p. 452). Biancarosa and Snow (2006) stated that “the recent interest in Reading, directed attention almost entirely on *early* literacy” (p. 1), which focused on word recognition. Unfortunately, Reading problems at the middle and upper grades have been almost entirely overlooked. Snow and Moje (2010) noted that the successful third-grade reader can struggle with content vocabulary, content area Reading and comprehension in later grades and even high school, and Reading instruction needs to continue beyond the third grade. These students with Reading problems are not achieving as well as international counterparts on Reading tests by tenth grade. According to Edmonson and Shannon (2002), students not making improvements on the National Assessment of Educational Progress (NAEP) in the eighth grade reopened the age-old discussion about adolescent Reading instruction. Edmonson and Shannon (2002) utilized statistics from the National Assessment of Educational Progress from 1997 and stated that “20 percent of elementary school children in the U.S. cannot read at a basic level and that nearly 60% read below the proficiency level” (p. 452) and similar studies were used by U.S. Senator Thad Cochran to establish the National Reading Panel. The problems regarding Reading instruction and low Reading achievement of students, have politicized Reading and Reading programs at failing schools (Edmondson & Shannon, 2002).

Over time, according to Biancarosa and Snow (2006), only 70% of high school graduates, complete high school on time and those with Reading gaps drop-out 20 times more frequently than their peers. Biancarosa and Snow (2006) pointed out that the opportunities of the 1950s for high school drop-outs were no longer available. Biancarosa and Snow (2006) stated that the “opportunities for drop-outs to achieve a comparable way of life were no longer available and put those students at a social and economic disadvantage” (p. 1). The authors also reported that 53% of all college students are taking remedial classes to be successful at the collegiate level. Every student should receive Reading instruction beyond basic literacy skills. According to Biancarosa and Snow (2006), middle and high school literacy instruction should focus on “Reading purposefully, figuring out meanings of unknown words, learning from Reading, and resolving conflicts between textual information” (p. 1). Snow and Moje (2010) stated that “turning around failing middle and high schools requires emphasizing literacy in instruction, interventions, and professional development” (p. 66). This should not be necessarily designed with the purpose of graduating more students, but for producing citizens who are able to meet the greater literacy challenges in their futures (Biancarosa & Snow (2006).

According to the National Center for Educational Statistics (2011), the Reading test used by NCES, focused on sections of questioning for literacy texts and informational texts. The questioning included skills such as being able to: locate, recall, integrate, interpret, critique, and evaluate. According to the National Center for Educational Statistics (2011), the National Report Card provided data that focused on the “achievement-level expectations of student performance in relation to a range of text

types and text difficulty, and in response to a variety of assessment questions intended to elicit different cognitive process and reading behaviors” (p. 56). In the 2011 Reading Report Card published by the National Center for Educational Statistics, data for Tennessee indicated that the gap in Reading abilities for eighth graders had not made any statistically significant changes over the previous report card in 2009. The National Report Card reflected data that suggested that 73 percent of Tennessee’s eighth grade students tested below grade level proficiency. Only 27 percent of Tennessee’s eighth graders were proficient or advanced in Reading. The gap between Caucasian and African-American students had not reflected any statistically significant change. This was also true with many other student categories studied. Across the nation, only ten states generated test data that reflected improved Reading scores; all other states remained statistically unchanged (National Center for Educational Statistics, 2011). According to Biancarosa and Snow (2006), students without these skills find themselves at a distinct disadvantage. Literacy should be seen as a lifetime skill and not one that provides for immediate or short-time success in school on Reading achievement tests.

Block-Scheduling

According to Nichols (2005), as early as the 1980s, educators began looking at ways to address scheduling the school day to maximize learning. By the 1990s, Nichols noted that schools were beginning to use block scheduling. Nichols (2005) warned there were limited numbers of empirical studies on block-scheduling and the academic achievement of students. Nichols also noted that when looking at the research available, there were other significant and contributing in relation to the use of block-scheduling that researchers cannot isolate, such as parental support, and that these also affect student

achievement. Jenkins, Queen, and Algozzine (2002) were also concerned with the lack of research on block-scheduling and the transition to a block-schedule from a traditional schedule. Their concern was not with limited empirical studies, but lack of studies focusing on teaching strategies actually being used in a classroom on a block-schedule.

Nichols (2005) conducted extensive research on five high schools that had converted to block-scheduling between 1994 and 1996, and reviewed data from the student grade point averages (GPAs) to determine academic achievement. Nichols collected data from 1992 up through the 1999 school year. Nichols (2005) concluded that there was variability between the five high schools with one school having significantly lower grade point averages (GPA's) for students after the transition to a block-schedule. Nichols discovered that two of the high schools had lower grade point averages (GPA's) before the transition to a block-schedule, and that trend continued well after the transition. The data from one high school highlighted that student grade point averages (GPA's) increased during the first school year after the transition to a block-schedule. However, the data from the same high school illustrated how those gains were negated as a result of the grade point averages (GPA's) during the second school year. According to Nichols (2005), "there were some small overall average increases in student achievement for language arts courses" (p. 307). Overall, higher income students received the greatest benefits of a block-schedule, when compared to the students with lower socio-economic status. Additionally, the majority of the students showed significantly greater achievement based on their grade point averages (GPA's) once the schools transitioned to a block-schedule.

Jenkins, Queen, and Algozzine (2002) conducted a study, *To block or not to block: That's not the question*, which was designed to compare the opinions concerning the preparation for varied teaching strategies when transitioning from a traditional schedule to block-scheduling arrangement. Their study relied on surveying teachers, of which English teachers made up 8.1 percent of the teachers who were the principal respondents to the research questions. After surveying teachers about the teaching strategies used in their classrooms, Jenkins, Queen, and Algozzine concluded that “the evidence from the study suggested that block-schedule teachers’ opinions about the use and appropriateness of a wide variety of instructional strategies are basically no different than those of high school teachers teaching in traditional schedules” (p. 201). The use of lecture or direct instruction, small group or structured pairs, and cooperative learning did not yield statistically significant differences between teachers on a block-schedule and those teachers teaching primarily on a traditional schedule. Jenkins, Queen, and Algozzine also concluded that it was important for teachers to be aware of research on learning styles and how to adapt lessons in a variety of ways to meet the needs of students.

Myers (2008) disagreed with the previously mentioned studies concerning block-schedules and traditional schedules. Myers stated that “a well-designed block-schedule can be beneficial to students in a literacy block” (p. 23). In Myers’ school, a moderately low-income, demographically diverse school, the schedule was changed to allow for an “uninterrupted block of time for core literacy instruction, as well as common blocks of time for intervention and enrichment” (p. 23). The first step in implementing the block-schedule was to get teacher commitment to the 90 minute instructional block for all

students. Students were not removed from the classroom during this block and remediation took place during the class period. The program, used at the school, which Myers studied, included guided Reading, shared and independent Reading, as well as vocabulary and word studies. This program also included writing instruction and teacher data assessment. According to Myers (2008), the school designed the master schedule to “systematically provide differentiated instruction” (p. 23). This was a component Jenkins et al. (2002) mentioned was lacking from their study. Myers (2008) noted that her school produced data on the mandated Illinois State tests, which reflected test scores that yielded “double-digit increases in student performance in each of the past two school years” (p. 23).

Evans, Tokarczyk, Rice, and McCray (2002) conducted a study to examine the concerns about the lack of empirical studies on student achievement from students who were part of a block-schedule. The researchers compiled data from three schools in New Jersey, which included interviews with teachers, parents, and students, in addition to several sophisticated student achievement measures. From interviews conducted with teachers and students, Evans et al. (2002) concluded that the transition to a block-schedule was largely positive. The only negative aspect mentioned by teachers and students was the work assigned for a substitute teacher. Evans et al. (2002) also noted that parent interviews were largely negative. Evans et al. (2002) also noted that they “were unsure whether it was working to its full potential” (p. 321). The authors examined student outcomes on grades, honor rolls, advanced placement courses, and state achievement tests. Across all three schools, there was an increase in the number of students on honor rolls and a decrease in the number of students receiving a D or an F in

a course. More students, approximately 25th percent, successfully completed Advanced Placement course-work and none of the students received the lowest score of one (1) on the Advanced Placement End-of-Course Exams. Evans et al. (2002) explained that the scores on the Scholastic Aptitude Test (SAT) also increased. The same held true for the state High School Proficiency Test (HSPT). The authors believed their findings supported block-scheduling and that block-scheduling helps improve student achievement.

Gill (2011) specifically researched the use of block-scheduling at the middle school level. She compared Mathematics and Reading scores on the Virginia State Standards of Learning (SOL) tests between schools on a block-schedule and those on a traditional schedule. Gill found no statistically significant differences between Mathematics and Reading scores based on the data from her study. The tests that Gill administered in regards to race and ethnicity, produced entirely different results. Gill concluded that African-American and Hispanic students had better test scores when they were part of schools with a block-schedule organizational arrangement. However, they still lagged behind the Caucasian students in regards to achievement test scores in Mathematics and Reading.

Lawrence and McPherson (2000) also compared the effects of traditional and block-scheduling arrangements on student academic achievement. The researchers used student test data from state end-of-course exams administered in Biology, Algebra 1, English 1, and U. S. History. The researchers stated that “The Mean scores for students who participated in schools with a traditional schedule were consistently higher than the Mean scores for the students who were participated in schools that used the block-

schedule arrangement” (p. 5). This came as a real surprise to the researchers. Lawrence and McPherson (2000) cited several studies that had produced data that indicated that there was a time period of transition for teachers where all the tested materials were not covered. Therefore, Lawrence and McPherson (2000) speculated that this might account for the drop in the Mean scores for the end-of-course exams in Biology, Algebra I, English I, and U.S. History. Lawrence and McPherson (2002) suggest that additional research is needed on transitioning from a traditional organizational schedule to a block-scheduling arrangement and that additional research on the effects of scheduling arrangements on student academic achievement would be extremely beneficial.

To better understand the literature surrounding block-schedules, Zepeda and Mayers (2006) analyzed 58 empirical studies. After their reviews, Zepeda and Mayers arranged the studies into eight categories. The categories included teachers’ instructional practices and perceptions of block-scheduling, change and block-scheduling, effects of block-schedules on student learning, and students’ perceptions about the use of block-scheduling. Zepeda and Mayers (2006) noted that in the 58 articles and research studies on block-scheduling, there was no mention of the reasons why a school would choose to implement a block-scheduling arrangement or the process used to make the decision regarding the implementation of a block-schedule. As a reform strategy, Zepeda and Mayers (2006) noted that modifying a schedule requires in-depth questioning surrounding the reasons for making the change to block-scheduling and careful consideration must be given to the effects of block-scheduling on the students and adults in the building as well as the instructional program. The researchers suggested that researching teaching methods used during a block-schedule was not as important as

knowing why schools adopted the block-schedule format over the more conventional traditional schedule or the specific achievement goals that were established which dictated that a block-schedule was more beneficial or preferable to the traditional schedule. Zepeda and Mayers (2006) referenced minimal articles discussing the transition period or any suggestions for other schools who might be contemplating a move toward the implementation of block-scheduling. The researchers compiled the findings of each group of studies and determined that the results were, at best, mixed. In the category of teacher practices and perceptions of block-scheduling, it was determined that teachers often perceive block-scheduling as helpful in the reduction of absenteeism and also in providing more time with reaching classroom objectives and experimentation with teaching strategies. However, some teachers perceived that there was very little to negligible differences in timing or teaching styles which resulted from the implementation of block-scheduling. In the realm or category of student achievement, Zepeda and Mayers (2006) noted a number of inconsistencies in the development and implementation of a block-schedule and those inconsistencies led to varied results in student achievement.

Reading

In their report for the Alliance for Excellent Education (AEE), Biancarosa and Snow (2006) made special note that most struggling readers at the upper levels can read the words but are continually struggling with comprehension about the material they are assigned to read. They suggested that students should be exposed to a variety of texts in various content areas with accompanying explicit instruction on comprehension strategies. The text variety and content should allow most students experience with

comprehension skills in the different subject areas. According to Biancarosa and Snow (2006), “Language Arts teachers need to expand their instruction to include [teaching] approaches and texts that will facilitate not only comprehension, but also [student] learning from texts” (p. 15). This suggestion was also notated in the Nation’s Report Card on Reading (2011). They also noted that utilizing a variety of texts, aligns with the National Assessment of Educational Progress (NAEP) Reading tests.

Snow and Moje (2010) concur, that the use of adolescent literacy instruction, “continues development of general language and literacy skills” (p. 66). The authors continue by stating that “adolescent literacy instruction should also incorporate literacy into content-area instruction” (p. 66). Literacy instruction must be utilized to provide students with the tools for comprehension in the study of and learning of subject area concepts. Snow and Moje (2010) suggested that activities must be incorporated which model comprehension and give students adequate opportunities to analyze and discuss texts. These opportunities should expose students to the academic language and accompanying critiquing arguments. The skills taught to students in English class must be transferred to the other content areas through direct and explicit instructions. Lyons and Thompson (2011) suggest that guided Reading is a necessary component of a balanced literacy program. Guided Reading involves the teacher as the Reading coach or guide to students during Reading instruction. The authors concluded that guided Reading in small leveled groups helped students acquire the necessary skills and thereby gains in their Reading levels. According to Edmondson and Shannon (2002), teachers have been instructed by the National Reading Panel to move away from silent Reading to a more

direct and explicit instructional model during their Reading classes because of a lack of empirical studies supporting the practice of silent Reading.

Several authors suggested that silent Reading is needed in the classroom to promote leisure and personal interest Reading (Brozo & Hargis, 2008; Erickson, 2008; Melton, Smothers, Anderson, Fulton, Replougle, and Thomas, 2004). Lyons and Thompson (2011) concur that silent Reading should be used with guided Reading in a literacy program at the middle grades. Lyons and Thompson (2011) also discovered that students were distracted from comprehension of Reading materials during oral Reading exercises after the seventh grade. Brozo and Hargis (2003) worked with Foothills High School to develop a literacy program for all students. The Sustained Silent Reading (SSR) component was implemented for 20 minutes in all homerooms, one day a week during the first year and three times a week during the second year. As part of the Foothills High School's Get Ready to Read (GRR) program, teachers were supplied with general-interest magazines and young adult novels. Students were encouraged to use various book-drops for paperback book donations. Teachers began modeling the independent Reading aspect by also reading for personal enjoyment during the 20 minute Reading time. Brozo and Hargis (2003) suggested that the research data indicated that there was a substantial growth of literacy levels in Reading when students were provided with scheduled Reading time to be used for silent Reading.

Krashen (2006) stated that, "silent, voluntary, Reading may be the only way to help children become better readers" (p. 41). In his article, *Free Reading*, Krashen (2006) insisted that students who read for pleasure, perform as well or better than their peers, who were not subjected to planned time using the Sustained Silent Reading (SSR)

program. Krashen (2006) stated that “pleasure Reading helps students develop richer vocabularies and understand complex oral and written language” (p. 41). According to Krashen (2006), Sustained Silent Reading (SSR) was often overlooked because the skills taught in the program, could not be easily measured or quantified on any of the standardized tests used by the schools in the studies. Additionally, Krashen (2006) suggested that using Sustained Silent Reading (SSR), can help impoverished students by giving them greater access to books.

Reutzel, Fawson, and Smith (2008) focused their research study on a form of silent Reading which involved teacher monitoring called Scaffolded Silent Reading (ScSR). Using the Scaffolded Silent Reading (ScSR) program, data was recorded through a comprehension retelling which added to a fluency Reading exercise. This method required researchers to record how many words per minute a student read and how many recalled idea units were provided. The researchers indicated that silent Reading was as effective as guided Reading for developing student fluency, but student idea recall (comprehension) also increased.

Samuels and Wu (n.d.) conducted their research study in response to the National Reading Panels decision that determined that silent sustained Reading does not affect student Reading achievement. The researchers utilized a quasi-experimental design that was specifically selected to estimate how the amount of time spent reading affected student Reading ability. Students were tested using the *Standardized Test of Assessment of Reading (STAR Reading)*. Teacher monitoring occurred through the use of the Renaissance Learning’s *Accelerated Reader Program (ARR)*. Samuels and Wu (n.d.) discovered that silent Reading for 15 minutes at a time, helped the students who were at

the below level reading category with Reading and vocabulary tests, while longer periods of time helped the students who were at the above level reading category.

McCallum, Sharp, Bell, and George (2004) stated that, “because of inconsistent research findings, teachers and test developers cannot unequivocally recommend either an oral or silent reading format” (p. 242). The researchers sought to statistically determine which Reading technique leads to improved Reading comprehension and which technique was determined to be more efficient. The results from the analysis of the available data suggested that there was no definitive statistically significant difference in student comprehension between silent or oral Reading. However, the data analysis did suggest that in certain testing situations, silent Reading was faster. All of the researchers of the aforementioned silent Reading studies recommended more research is needed to more clearly ascertain the effects of silent Reading on student achievement, more specifically, the effects on student Reading comprehension.

Vocabulary

Beyond having time to read or providing explicit instruction centered on Reading comprehension strategies, vocabulary and building vocabulary, is an area in serious need of attention for improvement, according to Nelson (2008). Nelson (2008) developed a vocabulary strategy that required students to comprehend, apply, analyze and evaluate vocabulary. Nelson realized students were not remembering words that they had learned through the use of the dictionary and also through the use of the flashcard method of vocabulary instruction. Nelson discovered the existence of significant disconnect between knowing the definition of a word and the actual usage of the word in multiple contexts. Nelson’s teaching method required students to gather unknown words from

their read materials. At times, Nelson found it necessary to model and emphasize certain words that students believed that they understood but the researcher determined that they had acquired merely a superficial understanding of the word. Afterwards, students were required, as well as encouraged, to use the words daily in discussion and through their written assignments. Nelson made a conscientious effort to also use the words as a way of reinforcing student understanding of the word.

Nelson (2008) was not alone in her discoveries and her experiences exemplifies and is quite typical of the findings of Jenkins, Stein, and Wysocki's (1984) study, *Learning Vocabulary through Reading*. Jenkins et al. (1984) researched and analyzed the comprehension of new vocabulary through context clues and Reading of fifth graders. They conducted their research over 18 low frequency words during a 10 week period. Through their research, Jenkins et al. (1984) exposed students to the words in various reading venues at 2, 4, 6, and 10 week intervals to determine if exposure to the words in Reading significantly impacted student comprehension. The researchers concluded that students acquired some meanings from context, but only as high as 27% of the students acquired any substantial meaning. The better readers were able to comprehend text at a significantly elevated rate. However, Jenkins et al. (1984) determined that students with higher reading levels could derive more from context clues than the students with significantly lower reading levels. Jenkins et al. (1984) concluded that multiple exposures to new vocabulary in a variety of contexts or venues were appreciably better for the development of vocabulary growth. Incidental learning of vocabulary required a sizeable use of word repetition. Additionally, it was determined that the addition of explicit vocabulary instruction would be extremely beneficial students.

Greenwood (2002) stated that:

Teachers cannot leave development of vocabulary to chance. Students need explicit vocabulary instruction but it should not be set in a drill and repeat format, disconnected from context use. Definitions do not necessarily contain enough information to allow for complete understanding and ease of use. (p. 258)

Greenwood advocated that teachers should use Reading time specifically set aside for the study of vocabulary. During this time, it would be essential for teachers to model, or think aloud, vocabulary strategies. Then the teacher would expect the students to respond with which of words were used. Greenwood (2002) also suggested that teaching word studies, such as word maps, commonalities, and context relationships should be utilized. Greenwood concluded that balancing explicit and focused instruction with Reading would greatly benefit students in the development of their vocabulary.

The *Big Block Model* developed by Arens, Loman, Cunningham and Hall (2005) combined explicit vocabulary instruction in the Reading classroom. Arens et al. (2005) specifically and deliberately set aside 20 minutes daily for specific vocabulary instruction. During this instructional time, the researchers advocated working on the nifty fifty which they identified as those words that had been determined as words that were misspelled with a high frequency occurrence. Additionally, Arens et al. (2005) suggested that teachers should begin working on prefix and suffix common word sets. Students would then be encouraged to find words in texts and use the words in their writings. The authors believed that teachers needed to provide structured and deliberate opportunities for explicit and intentional vocabulary instruction.

Intervention

Middle school can offer struggling readers a second chance at success in school. Palumbo and Sanacore (2009) pointed out that middle school students become naturally curious, and teachers can use the Reading block to help students gain content knowledge and bridge the literacy gap. The answer for literacy gap problems in the middle school and high school is through a multi-part approach with silent Reading, intervention, and content area comprehension strategies (Edmondson & Shannon, 2002; Erikson, 2008; Fisher, 2001). It is essential the teachers focus on developing content Reading skills to help students with the contextual learning process.

Palumbo and Sanacore (2009) looked at the strategies of guided Reading, vocabulary development, repetitive Reading, and authentic text use in their Reading intervention program. Palumbo and Sanacore (2009) suggested that guided Reading should be utilized because scaffolding texts are designed to help struggling readers build background knowledge and offers students some comfort with the content material. The scaffolding text could be in the form of articles, picture books, or online resources. Using scaffolding as a catalyst, teachers would then be able to guide students through the reading of textbooks based on the utilization of various comprehension strategies. Palumbo and Sanacore (2009) suggested that teachers use explicit instruction of academic vocabulary as well as explicit instruction on the use of prefixes, roots, and suffixes in the content area classes. They also suggested that this strategy would be beneficial in helping struggling readers become familiar with content specific vocabulary and would also aid students as a tool for improving their subject comprehension. An extension of vocabulary instruction, it should include commonly confused or misused

words in strengthening word recognition and analysis skills. Helping readers become fluent was the final part of what Palumbo and Sanacore (2009) termed as intervention strategies. By providing students with various opportunities for repeated Reading, oral Reading, and performance-Reading, struggling readers would most likely become more fluent in Reading and thereby enjoy Reading in the classroom. Self-selective Reading and having time to read silently were also suggested by Palumbo and Sanacore (2009) as a means to make significant advances in Reading fluency on the part of the struggling reader.

Fisher (2001) explained the school-wide literacy effort, which included block-scheduling, scheduled independent Reading, and cross-curricular comprehension strategies. Fisher's article indicated that a school-wide approach to Reading interventions was the best method for helping all readers, not just struggling readers. Teachers must be trained on the expectations for cross-content teaching and the use of Reading strategies. Fisher (2001) also maintained that there has to be accountability for the intervention to work. The school schedule was changed to a block-schedule to allow more time in all classes for Reading in the content areas. The scheduled independent Reading time was cross-campus with one period being extended by 20 minutes for student Reading instruction and conferencing.

In the Alliance of Excellent Education's (AEE) report to the Carnegie Corporation of New York, *Reading Next: A Vision for Action and Research in Middle and High School Literacy*, Biancarosa and Snow (2006) outlined 15 items needed in a successful Reading program. Biancarosa and Snow (2006) also stated that "15 items were needed for improving middle and high school literacy achievement right now" (p. 4).

They included direct, explicit comprehension instruction, text-based collaborative learning, strategic tutoring, diverse text, and extended time for literacy. None of the strategies were to be used in teaching Reading exclusively and should be integral to the instruction in all subject areas to ensure student literacy success. In Language Arts classes, teachers should expand the use of text to include variety of subjects and genres. According to Biancarosa and Snow (2006), “students should be provided with explicit instruction on the use of comprehension strategies in content area classes as well as be taught how to learn curriculum information” (p.18). Biancarosa and Snow (2006) suggested that students receive routine formal assessment to review a student’s strengths and weakness. Biancarosa and Snow also suggested that strategic tutoring should be designed on an individual basis along with the corresponding changes to classroom instruction in Reading.

Alvermann (2002) noted that intervention for struggling readers needs to include a variety of authentic texts, from weather maps to textbooks, and should be used in different and creative ways. Teachers need to consider using formal and informal Reading to help readers at individual levels, and intervention should be a multi-level approach over the course-of-time. Comprehension strategies utilized in the reading classroom must also be used in the content classroom to ensure subject-area learning. Struggling readers need the extra support to understand texts or comprehend cultural differences. Middle school Reading programs should address the modern need to Read critically within cultural and social contexts. According to Alvermann (2002), a comprehensive and effective Reading program should also focus on the social aspects of Reading, including participatory Reading, discussion, writing and the promotion of

Reading as a social activity for peers. Scaffolded Reading instruction helps struggling readers participate in the social Reading activities and enables them to move beyond passive Reading to a more active and engaged Reading venue. Any Reading program must be derived from the examination of all readers as individuals and then actively seeking means to develop a program that more thoroughly meets the needs of each and every student on a more personal level.

Sadoski and Wilson (2006) also used an individualized approach to intervention for readers. In their study, *Effects of a Large Scale Reading Invention*, Sadoski and Wilson had students who could decode words that they read but could not successfully comprehend what they were actually reading. Sadoski and Wilson (2006) stated that in their research studies, that they “differentiated student groupings according to individual need” (p. 140). By focusing on homogeneous groupings, staff members were able to remediate student readers on specific comprehension skills.

Erikson (2008) utilized a single method approach to intervention for struggling readers. In her study, Erickson created her own intervention program to assist sixth grade students at her urban school. Erikson (2008) developed specific interventions that were designed to teach students reading strategies for engaging the text. Students used authentic texts for the Erikson’s intervention program and were taught on an individualized level focusing on the comprehension skills in which they were demonstrating deficiencies, such as questioning, choosing appropriate reading material, prediction, as well as discussion. Through a concentrated Reading program that primarily focused on the needs of the individual reader, students made some appreciable gains on Reading Assessments.

Best Practices

Many of the best practices for literacy combine elements from the various intervention models. Best practices are designed for helping all students with literacy. Brock and Boyd (2011) examined numerous practices and beliefs of teachers and how the two tend to interact in the classroom. From their study, Brock and Boyd (2011) discovered that students derived significantly greater meaning from Reading, literacy, as well as ascertaining intended relevancy from the text, when the teacher was actively involved, to include modeling, in the Reading and writing process. Brock and Boyd (2011) highlighted an example that one teacher, Mrs. Baird, had used which utilized a variety of texts in the form of children's books and informational text. Mrs. Baird also had her students write a variety of text styles to help with the development of their comprehension skills. Brock and Boyd maintained that teachers should meet the students as individuals which was also suggested by Erikson (2009). Brock and Boyd (2011) also suggested that teachers should use a variety of methods to best reach their students and help them in the development of their skills and remediate their deficiencies.

Carbo (2007) suggested that the modeling of Reading and writing of texts by teachers should be considered to be a best practice. Carbo is very supportive of teachers who actively engage in modeling through repetition of the text as an excellent means to helping struggling readers. Struggling readers should first hear the text then they will be better equipped to read the text. This type of modeling helps students who are struggling with reading, by-pass any decoding issues. Modeling can also include think aloud comprehension strategies. Carbo's best practices centered on the idea or belief that individual student needs and interests could and should be used in Reading texts or in the

classroom environment. Carbo (2007) who was closely aligned to the thinking of other intervention strategists, expressed the need for individual reading time scheduled into the student's day.

Marchand-Martella, Martella, Madderma, Peterson, and Pan (2013) conducted research focused specifically on a number of key areas in a literacy program. They were concerned with the overall statistics concerning the number of high school students who were graduating and reading at or below grade level. They did not want to focus on struggling readers but rather on the best practices to support all readers at the middle and secondary level. For Marchand-Martella et al., there were five areas of instruction that were needed to be addressed; fluency, vocabulary, comprehension, word study, and motivation. The over-reaching umbrella for all five areas was explicit instruction with a variety of text. Teachers should use content area text as well as adolescent literature. Vocabulary and word-study belong together with teaching parts of words (e.g. prefixes and roots). Additionally, academic and content specific vocabulary are essential in understanding content area text in adolescent literature. Marchand-Martella et al. (2013) believed that both, academic and content specific vocabulary, help struggling readers with comprehension and fluency. Students reading a variety of texts and setting reading goals help them become motivated to read and participate actively in reading.

Strickland (1995) believed that teachers and students were searching for a balance in literacy programs. While the use of trade books and journal writing are being used extensively, explicit instruction should also be provided. Neither one should be used in isolation since "skills are worthless as isolated knowledge" (p. 5). Mini lessons are usually employed to demonstrate and model skills. A variety of text should also be used,

including textbooks and trade books, in addition to student self-selected Reading.

Strickland (1995) cautioned against the belief that there was not one balanced, answer all literacy program to serve as a panacea in teaching Reading, since students are considerably different between schools and districts. Instructional needs of students should come first in any literacy program.

Assessment

Several educational research organizations have cautioned educators regarding the excessive use of high stakes tests in education (Brozo & Hargis, 2003). Critics challenge the plethora of standardized tests used each year by the various states, school districts and individual schools. However, Brozo and Hargis (2003) maintain that teachers need data they can use to appropriately design lessons and interventions for students. Brozo and Hargis (2003) suggested the use of low-stakes reading assessments to determine student reading levels. The researchers used Standardized Test for Achievement of Reading (STAR) to determine student reading levels. STAR is a computer-based, norm referenced Reading test for ascertaining student reading levels. Standardized Test for Achievement of Reading (STAR) developed by the Renaissance Learning Program. According to Renaissance Learning (2014) the STAR Reading Program was “used for screening, benchmarking and progress monitoring of students in grades 1-12” (p. 15). However, based on this data, Brozo and Hargis (2003) used more specific Reading skill tests. The researchers were able to assist teachers in the development of programs for students including alternative textbooks in content-areas. Brozo and Hargis (2003) continue by stating that “Low-stakes reading achievement testing helped the Foothills

teachers become much more sensitive to the importance of finding ways to accommodate the diverse reading needs of each of their students” (p. 64).

Pfieffer (2011) utilized the Accelerated Reader (AR) program to promote Reading and Reading growth on the part of students. Accelerated Reader (AR) is also an important part of the Renaissance Learning Program as well as the STAR Enterprises. Students read independently or are taught using a guided instruction model and then take an appropriate comprehension (AR) test at the end. Pfieffer (2011) and her school made extensive use of the Accelerated Reader (AR) Program to help students set reading goals based on reading level, points earned, and percent correct. The combination of goal-setting and reading assessment encouraged students to read more frequently. The Accelerated Reader (AR) assessments provided teachers with the feedback concerning what students were reading, thereby allowing for productive student-teacher reading conferences. As part of the Accelerated Reader (AR) program, books in the library are labeled with a reading level to assist readers in making the appropriate choices when selecting their reading materials based upon the correct or appropriate reading level.

Churchwell (2009) in the doctoral dissertation, *The Impact of Reading Achievement on Overall Academic Achievement*, indicated the relationship between reading scores on STAR Reading Tests and the Tennessee Comprehensive Assessment Program (TCAP). Churchwell’s research demonstrated that students who read Accelerated Reader (AR) books and who scored at appreciably higher levels on their STAR assessments, were more successful on Tennessee Comprehensive Assessment Program (TCAP) for Reading/Language Arts and Social Studies. These students also made moderately significant gains in Mathematics and Science.

Conclusion

Unfortunately, reading problems at the middle and upper grades have been seriously over-looked by political initiatives designed to strengthen student reading, such as *Read First* (Biancarosa & Snow, 2006). Snow and Moje (2010) noted that the successful third-grade reader can struggle with content vocabulary, content area reading and comprehension in later grades, and even high school and reading instruction needs to continue beyond the third grade. In the 2011 Reading Report Card published by the National Center for Educational Statistics (2011), Reading data for Tennessee students indicated that a majority of Tennessee's eighth grade students tested significantly below their respective grade level proficiency. Also Tennessee's eighth grade students were not making statistically significant improvements over the 2009 Reading assessment scores.

Even with reports such as the National Report Card, it still remains generally unclear as to the best course of action that should be taken to help struggling readers in middle schools and high schools. Some studies, similar to Myers (2008) and Evans, Tokarczyk, Rice, and McCray (2002), suggested that changing school scheduling time to a block-schedule, which the researchers agree, was better than a traditional-schedule in providing the necessary assistance to struggling readers. Other studies, similar to Jenkins, Queen, and Algozzine (2002) and Nichols (2009), indicated that it was not the change in class-time that was responsible for helping students, but, rather, the teaching methods and practices used during the class time. The researchers agreed that there was considerable need for more research pertaining to the benefits of block-scheduling in contrast to the traditional-scheduling arrangement.

According to Biancarosa and Snow (2006), middle school and high school students needed additional explicit instruction on reading purposefully, determining the

meanings of unknown or unfamiliar words, learning from reading, and resolving conflicting information. Edmondson & Shannon (2002); Erikson (2008); and Fisher (2001) were unanimously in agreement that intervention for struggling readers should be a multi-part approach. Research by Marchand-Martella et al. (2013) focused on how the multi-faceted approach was needed to assist and benefit all readers at the middle school and high school levels with both reading comprehension and reading vocabulary. The *Big Block Model*, according to Arens et al., 2005, was designed as a block-schedule reading model, which incorporated a variety of teaching methods and practices for the middle school classroom.

Students who struggle with comprehension in the third grade continue to struggle as older readers, according to (Snow & Moje, 2010). Literacy education should continue throughout the middle school and high school years. The middle school reading gap demonstrated in the National Center for Educational Statistics (2011) *Nation's Report Card on Reading* and the high student dropout rate for struggling readers has reopened the discussion on literacy and literacy education.

CHAPTER III

METHODOLOGY

Purpose

The purpose of this study was the examination and determination of the effectiveness of the New Reading Model based on student reading level scale scores and reading level growth as a result of the *Big Block Model* after the first two years of the reading model implementation in the individual school years of 2011-2012 and 2012-2013. The first year of implementation, 2011-2012, teachers were trained using a bridge-to-practice method, which allowed for continuous training during the school year. The second school year, 2012-2013, was a full-year of implementation for the *Big Block Reading Model*.

Research Design

A pre-test was administered at the beginning of the 2011-2012 school year (August, 2011) utilizing the Standardized Test for Achievement of Reading (STAR) Reading test for all eighth grade students in five schools in a predominately rural school system in the Northern Middle Tennessee geographic region. A post-test was also administered to the students in May of 2012. The students who were classified as eighth graders during the 2012-2013 school year, were given a pre-test during August of 2012 and then they were given a post-test during May of 2013 using the Standardized Test for Achievement of Reading (STAR) Reading test. The archival scale score data from these tests were used in a quantitative comparison study. The independent variable for this study was the participation in the literacy curriculum. The student reading scale score were the dependent variable.

Population

The target population for the research study came from a school system that is predominantly a rural county in the Northern Middle Tennessee geographic region. According to the 2010 Census, the target county had approximately 66,283 residents, of which 25.7% were under the age of 25. Demographically, the county consisted of approximately 87.4% Caucasian, 7.4% African-American, 5.9% Hispanic, and 1.9% other (U.S. Census, 2010). The target school system consisted of nineteen schools under the authority of the County Board of Education. There were approximately 10,802 students enrolled in K-12 education in the county school system, according to the Tennessee Education Report Card (2011). The demographics of the schools were very similar to the percentages of ethnic groups based on the census demographic statistics.

Sample

The sample used for this study consisted of all students enrolled in the eighth grade in the target school system during the 2011-2012 school year and the 2012-2013 school year. During the 2011-2012 school year, the Standardized Test for Achievement of Reading (STAR) Reading tests were administered and the results from 855 students were used for the purpose of this field study. Standardized Test for Achievement of Reading (STAR) Reading tests were administered during the 2012-2013 school year and the results from 2012-2013 school year were from 821 students. There were three middle schools with a grades 6-8 organizational arrangement, as well as two high schools with a 7-12 organizational structure that were included in this study. Only students enrolled in the county during the two school years, 2011 through 2012 and 2012 through 2013, who took both the pre-test in August and post-test in May in their respective eighth grade year

were included in this study. If a student had taken the test more than once during the pre-testing or post-testing time-frame, only the research that was used came from the first test taken during that particular time-frame for analysis.

Instrument

The archival data came from scale scores calculated from the tests conducted by administering the Standardized Test for Achievement of Reading (STAR) Reading Tests during the eighth grade year for all students included in the study population. The STAR Reading Program by Renaissance Learning was the preferred Reading benchmark test in the target school district. The STAR Reading Test was used by teachers and academic coaches to determine student grade level equivalents and appropriate interventions. The scale scores provided through the administration of the STAR Reading Test tends to be a more concise and accurate measure of a student's reading level as opposed to the assigned grade level equivalencies. The grade level equivalency based on the Standardized Test for Achievement of Reading (STAR) Reading Tests in STAR represented a translation of a scale score with an accompanying range equivalency.

Procedures

Archival data were collected by a Central Office test administrator with the authority to access student test data and release authority for research projects involving student information. The test data administrator collected the test data for all eighth grade students for the 2011 through 2012 school year and for the 2012 through 2013 school year. Test score data were provided to the researcher as codified data without any identifying information such as student name or identification number or any other identifying markers which could be connected to any student or group of students or any

individual school within the school district. The data were provided to the researcher in a spreadsheet format. Complete anonymity for all students was strictly adhered to through the efforts of the test data administrator and the codified test data provided to the researcher.

Test data for all students were tracked through the Standardized Test for Achievement of Reading (STAR) Reading Tests which were randomly generated numbers for students. However, the test numbers and all other possible student identifiers were removed prior to the test data administrator at central office releasing the archival data to the researcher. The tests were identified from the August pre-test and May post-test administration dates. The archival data for the May tests were then compared using a post-hoc *t*-test to determine if there was a statistically significant difference in scale scores between the 2011 through 2012 school year and the 2012 through 2013 school year. Archival data of scale scores would be used to determine student reading growth for the school year. To determine the growth, the researcher subtracted the scale score of the pre-test from the scale score of the post-test. The growth could be either a positive (gain) or a negative (loss) depending on the post-test scale scores. The growth score could range between -1400 and 1400 since scale scores were from 0 to 1400.

An Analysis of Variance (ANOVA) test was administered to determine if there was a statistically significant difference in growth scores between the two school years as well as between extended time, and percentile rankings. If it was determined that a statistically significant difference existed between the growth scores, then the researcher would administer the appropriate *t*-tests that would be used to determine the exact

location of statistical difference. All statistical tests were conducted using the Microsoft Excel 2011 computer program with the XLStat add-on and t -values checked through the charts available in R. S. Witte and J.S. Witte (2010) *Statistics*.

Statistical Analyses

The researcher used a comparative t -test to determine significance in scale score at $p < .05$ level of significance. An Analysis of Variance (ANOVA) test was administered to analyze the growth scores where statistical significance was based on a $p < .05$ alpha level of statistical significance. If the Analysis of Variance (ANOVA) test determined that a statistically significant difference existed in growth scores, then the researcher would administer a comparative t -test to determine in which group of students the statistical significance occurred. The student groups were allowable extended time for special education, regular testing time limits, and original testing percentiles, lowest 25th percentile, or upper 75th percentile, between the two school years or during the same testing year.

Conclusion

The purpose of this study was to examine the data from pre-tests and post-tests administered to eighth grade students from two different school years; 2011 through 12 and from the 2012 through 2013 school year, in order to determine effectiveness of the county Block Reading Model based on the *Big Block Reading Model*. The county school system from which the student test data was collected was a rural county in the Northern Middle Tennessee geographic region. Test data for all eighth grade students being taught in five different schools were used for the analysis in this study. Student scale scores from their pre-tests and post-tests were compared using a t - Test to determine any

statistically significant difference between scores from the two school years. Also, student growth was examined using an Analysis of Variance (ANOVA) to determine if there were statistically significant differences in student growth between the 2011 through 2012 school year and the 2012 through the 2013 school year, as well as within the various tested student sub-groups. If a statistically significant difference was indicated by the results of the Analysis of Variance (ANOVA) test, then the appropriate *t*-tests were administered on the data to determine the specific origin of the statistical difference. All statistical analyses were conducted using the Microsoft Excel 2011 program with the XLStat add-on program. The results were compared to the charts in the textbook, *Statistics*, by R. S. Witte and J.S. Witte (2010).

CHAPTER IV

DATA ANALYSIS

Presentation and Analysis of Data

The data analysis focused on eighth grade student tested scale scores from the 2011 through the 2012 school year (N=855) and the 2012 through the 2013 school year (N= 821). The students in the population used for the study were taught during the first two years of the school system utilization of the Reading Model Framework. Scale scores ranged from 0 to 1400. Scale scores were used to determine student growth by subtracting their pre-test scale scores from their post-test scale scores. Student academic growth could be seen as gains (positive numbers) or losses (negative scores) and could range from -1400 to 1400.

Scale Scores

Null Hypothesis 1:

There will be no statistically significant difference in student Reading scale score based on the number of years using the Big Block Reading framework

The researcher conducted the first *t*-test on STAR Reading scale scores from May 2012 and May 2013 to determine any statistically significant difference at $p > .05$ confidence level. Student reading scale scores ranged from 0 to 1400. The results of the *t*-test that was administered ($t=0.7407$) indicated that there was no statistically significant difference in scale scores between the May 2012 test scores (N=855) and the May 2013 student test scores (N=821). Therefore, Null Hypothesis 1, there was no significant

difference in student scale scores based on the number of years using the Reading Framework, was accepted at the $p < .05$ level of confidence.

Table 1

Whole Group Scale Scores for 2011-2012 and 2012-2013 School Years

Year	N	M	SD
2011-2012	855	933.39	284.88
2012-2013	821	928.85	276.13

Growth scores

An Analysis of Variance (ANOVA) was administered on the student growth scores comparing the data from the 2011-2012 school year to the data from the 2012-2013 school year. To achieve the growth score, the researcher subtracted the pre-test scale score from the post-test scale score. The growth score could reflect a positive gain score up to 1400 or negative gain score as low as -1400 (loss) since scale scores were set from 0 to 1400. The student growth scale scores were divided into various sub-groups that were tested. The sub-groups were: whole group, allotted extended time, lower 25th percentile on pre-test and upper 75th percentile on pre-test. The Analysis of Variance (ANOVA) test results indicated a statistically significant difference ($F = 24.16189$, $F\text{-Crit} = 1.882213$) between the groups tested. Based on the results, as reflected in Table 2 and Table 3, a t -test was administered on the data to determine the specific location where the statistically significant difference between growth score groups occurred.

Table 2*Summary of Student Growth Scores for 2011-2012 School Year*

Groups	N	M	Sum
Whole Group	855	70.36374	60161
Allotted Extended Time	121	140.1157	16954
Regular Allotted Time	734	58.86512	43207
Lower 25 th Percentile	219	143.2557	31373
Upper 75 th Percentile	141	-81.5319	-11496

Table 3*Summary of Student Growth Scores for 2012-2013 School Year*

Groups	N	M	Sum
Whole Group	821	75.57734	60161
Allotted Extended Time	148	115.4595	16954
Regular Allotted Time	673	66.80684	43207
Lower 25 th Percentile	182	254.3626	31373
Upper 75 th Percentile	125	-101.8800	-11496

A *t*-test was administered on the growth data for the whole group from May of 2012 (N= 855) and May 2013 (N= 821) to determine whether any statistically significant

difference existed. The alpha level for the t -test was set at the $p > .05$ confidence level. The results from the t -test indicated that there was no statistically significant difference in the growth scores between the 2011-2012 school year, 2012 ($M=70.36$, $SD=280.47$) and the 2012-2013 school year, 2013 ($M= 75.58$, $SD=255.64$) scale scores $t= 0.3972$.

Null Hypothesis 2:

There will be no significant difference in student Reading level growth after using the *Big Block Model* in middle school Reading classes, was accepted.

Null Hypothesis 3:

There will be no statistically significant difference in student Reading growth based on allowed use of extended time for special education students during testing between the 2011-2012 school year and the 2012-2013 school year.

A t -test was administered using the data for those students who were allotted extended time as a part of their special education plan. The data from the 2011-2012 ($N=121$) school year was compared to the data from the 2012-2013 school year ($N=148$). The results ($t= 0.7180$) indicated that there was not a statistically significant difference in the growth scores between the 2011-2012 school year ($M= 140.12$, $SD= 255.77$) and the growth scores for the 2012-2013 school year ($M= 115.46$, $SD= 260.03$). The alpha level for the t -test was set at the $p > .05$ confidence level. Null Hypothesis 3, There will be no statistically significant difference in student Reading growth based on allowed use of extended time for special education students during testing between the 2011-2012 school year and the 2012-2013 school year, was accepted.

Null Hypothesis 4:

There will be no statistically significant difference in student Reading growth based on using regular allotted time between the 2011-2012 school year and the 2012-2013 school year.

A *t*-test was administered using the data for those students who used the regular allotted time during the testing sessions. The data from the 2011-2012 school year was compared to the data from the 2012-2013 school year. The results ($t = 0.05611$) indicated that there was no statistically significant difference in the growth scores between the 2011-2012 school year ($M = 58.87$, $SD = 275.09$) and the 2012-2013 school year ($M = 66.81$, $SD = 254.02$). The alpha level for the *t*-test was set at the $p > .05$ confidence level. The null hypothesis, there will be no statistically significant difference in student reading growth based on use of regular allotted time during testing between the two school years, was accepted.

Null Hypothesis 5:

There will be no statistically significant difference in student Reading growth based on using allowed extended time and those who used regular allotted time during the same school year.

Two *t*-tests were administered on the student data to determine if there was a statistically significant difference in student reading growth scores between the students using extended time and the students using regular allotted time during the same school year. Table 4 reflects the comparison of the test data between the students who were given extended time and the students who were allotted the regular time for taking the

test for the 2011-2012 school year and the 2012-2013 school year. For the 2011-12 school year, the results ($t = .00296$) indicated a statistically significant difference in Reading growth between students using extended time ($N = 121$) and students using the regular allotted time ($N = 734$). The results for the 2012-13 school year ($t = .00210$) indicated a statistically significant difference in Reading growth between students using extended time ($N = 121$) and those using the regular allotted time ($N = 673$). Therefore, Null Hypothesis 5, there will be no statistically significant difference in student Reading growth based on using allowed extended time and those who used regular allotted time during the same school year, was rejected.

Table 4

A Comparison of Student Test Data for the 2011-2012 School Year and Test Data for the 2012-2013 School Year Based on Time Allotted for Testing

Groups	2011-2012			2012-2013		
	N	M	SD	N	M	SD
Extended Time	121	140.12	303.05	148	115.46	260.03
	$t = .00296^*$			$t = .00210^*$		
Regular Time	734	58.87	275.09	673	66.81	254.02

** $p < .05$ Level of Significance*

Table 5

A Comparison of Student Test Data for the 2011-2012 School Year and Test Data for the 2012-2013 School Year for Students Testing in the Lower 25th Percentile

Groups	2011-2012			2012-2013		
	N	M	SD	N	M	SD
Lower 25 th Percentile	219	143.26	255.77	182	254.36	18.50
	<i>t</i> = .04378*			<i>t</i> = .03491*		
Whole Group	855	70.36	280.47	821	75.58	8.92
				<i>t</i> = .00857*		

**p < .05 Level of Significance*

Null Hypothesis 6:

There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile between the 2011-2012 school year and the 2012-2013 school year.

The researcher administered *t*-tests on the student Reading growth data based on the original testing percentiles for the 2011-2012 school year and the 2012-2013 school year within the same school year. The first *t*-test administered used the Reading growth scores for the lower 25th percentile as ranked by pre-test scores. The first *t*-test was administered as a comparison between the 2011-2012 school year (M= 143.26, SD= 255.77) and the 2012-2013 (M=254.36, SD= 249.60) school year. The *t*-test results,

$t = .04378$, indicated that there was a statistically significant difference in Reading growth scores. Based on the results of the t -test results from the comparison of the data as indicated in Table 5, Null Hypothesis 6, there will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile between the 2011-2012 school year and the 2012-2013 school year, was rejected.

Null Hypothesis 7:

There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile and the group as a whole during the same school year.

To determine whether statistical significance in the growth scores existed for the group as a whole, t -tests were administered on the lower 25th percentile of growth scores in comparison to the group as a whole during the same school year. Table 5 reflects the test data showing statistical significance. For the 2011-2012 school year, the statistical results ($t = .03491$) indicated that a statistically significant difference existed between the Reading growth scores for students in the lower 25th percentile and the group as a whole. The results for the 2012-2013 school year test data indicated that the t -test results ($t = .00857$) also reflected a statistically significant difference between the Reading growth scores for students in the lower 25th percentile and the group as a whole. The null hypothesis, there will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile and the

group as a whole during the same school year, was rejected based on the data from the resulting *t*-tests that are indicated in Table 5.

Null Hypothesis 8:

There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the upper 75th percentile between the 2011-2012 school year and the 2012-2013 school year.

The researcher conducted *t*-tests on growth data from the scores for students who originally tested in the upper 75th percentile. The first *t*-test administered was between the two school years, 2011-2012 ($M = -81.53$, $SD = 264.50$) and 2012-2013 ($M = -101.88$, $SD = 205.15$). The results ($t = .06946$) indicated that there was no statistically significant difference. Therefore, the null hypothesis, there will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the upper 75th percentile between the 2011-2012 school year and the 2012-2013 school year is accepted.

Null Hypothesis 9:

There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the upper 75th percentile and the group as a whole during the same school year.

To determine whether any statistically significant differences existed in the student Reading growth based on the percentile levels for students in the upper 75% as compared to the entire group, a *t*-test was administered was on the student test data for the 2011-2012 school year where a comparison was made between the upper 75th

percentile and the grade as a whole. The results ($t = .00600$) indicated that a statistically significant difference existed when making this comparison. The t -test conducted on the student test data for the 2012-2013 school year where a comparison was made between the upper 75th percentile and the grade as a whole, resulted ($t = .00740$) in a statistically significant difference for this tested area as well (see Table 6). Therefore, the null hypothesis, there will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the upper 75th percentile and the group as a whole during the same school year was rejected.

Table 6

A Comparison of Student Test Data for the 2011-2012 School Year and Test Data for the 2012-2013 School Year for Students Testing in the Upper 75th Percentile

Groups	2011-2012			2012-2013		
	N	M	SD	N	M	SD
Upper 75 th Percentile	141	-81.53	264.50	125	-101.88	205.15
	$t = .00600^*$			$t = .00740^*$		
Whole Group	855	70.36	280.47	821	75.58	8.92
				$t = .06946$		

** $p < .05$ Level of Statistical Significance*

Table 7

A Comparison of Student Test Data for the 2011-2012 School Year and Test Data for the 2012-2013 School Year between Students Testing in the Upper 75th Percentile and the Lower 25th Percentile

Groups	2011-2012			2012-2013		
	N	M	SD	N	M	SD
Lower 25 th Percentile	219	143.26	255.77	182	254.36	18.50
	<i>t</i> = .00803*			<i>t</i> = .01318*		
Upper 75 th Percentile	141	-81.53	264.50	125	-101.88	205.15

**p < .05 Level of Statistical Significance*

Null Hypothesis 10:

There will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile and the upper 75th percentile during the same school year.

The last *t*-test, as indicated in Table 7, was administered to compare Reading growth scores based on the original testing percentile levels for students in the upper 75th percentile with the original testing percentiles for the students in the lower 25th percentile during the same school year. The results from the 2011-2012 school year, *t* = .00803, indicated a statistically significant difference in Reading growth between the upper 75th percentile and the lower 25th percentile. From the 2012-2013 school year, the test results

($t = .01318$) also indicated a statistically significant difference in reading growth between the upper 75th percentile and the lower 25th percentile. Therefore, Null Hypothesis 10, there will be no statistically significant difference in student Reading growth based on original testing percentile level for students in the lower 25th percentile and the upper 75th percentile during the same school year, was rejected.

Conclusion

The purpose of this study was to determine the effectiveness of a Northern Middle Tennessee County school system's middle school Reading model based on the *Big Block Model*. The study reviewed archival data from pre-tests and post-tests given to 8th grade students during the first two years of use with the new model, 2011-2012 and 2012-2013. Two forms of data were used for this study which included Reading scale scores and Reading growth scores. The Reading growth score was determined by subtracting the pre-test scale score from the post-test scale score. The growth could be reflected as gains, positive numbers, or losses, negative numbers. Students could be grouped by school year, use of extended testing time, use of regular testing time limits, as well as being classified as part of the lower 25th percentile or part of the upper 75th percentile.

The first part of this study examined the scale scores and a *t*-test was used to determine any statistically significant difference between the scale scores of the two school years, 2011-2012 and 2012-2013. The results indicated no statistically significant difference between the scale scores of the two school years. Therefore, the Null Hypothesis was accepted.

The second part of the study examined data from student growth scores for the two school years, 2011-2012 and 2012-2013, as a whole grade and data grouped by use of extended testing time, regular testing limits, lower 25th percentile and upper 75th percentile. An Analysis of Variance (ANOVA) was administered and the results revealed a statistically significant difference in the growth scores. The follow up *t*-tests conducted concluded that there no statistically significant differences existed in between the student growth for the first year of the Reading model, 2011-2012, compared to the second year, 2012-2013, in all sub-groups, with the exception of those who originally tested in the lower 25th percentile. Subsequently, Null Hypotheses concerning no statistically significant differences between the 2011-2012 and 2012-2013 school years were accepted for the whole group, allowable extended time, regular testing time, and those who originally tested in the upper 75th percentile. The Null Hypothesis was rejected because no statistically significant difference in students originally testing in the lower 25th percentile between the 2011-2012 and 2012-2013 school years was reflected in the statistical analyses. Comparative *t*-tests were conducted to examine the growth data within each school year. Within each school year, results indicated a statistically significant difference, allowing for all Null Hypotheses to be rejected.

CHAPTER V

SUMMARY AND CONCLUSIONS

Introduction

With the transition to higher student Reading Lexile levels required in the Common Core State Standards, and the increased focus on the widening middle school Reading gap, the Northern Middle Tennessee School System, used for the purposes of this study, moved to a new Reading model based on the *Big Block Model*. This new Reading model included changing to a block-schedule for Language Arts and dividing the Language Arts block into dedicated sections of instruction. The sections included comprehension, writing, vocabulary and silent Reading with teacher/student conferencing.

This study focused on the effectiveness of the new Block Reading Model during the first two years of implementation, 2011-2012 and the 2012-2013 school years. The first school year (2011-2012) that the Block Reading Model was used, the school district implemented a bridge-to-practice format where teachers received continued training on the use of the Reading model throughout the school year. Full implementation occurred during the second school year (2012-2013). The researcher examined scale score data collected during pre-tests and post-tests administered to all eighth grade students in the school system using the STAR Reading Program by Renaissance Learning. The data were used to determine if there were any statistically significant differences in scale scores and Reading growth in various tested student groups.

The study reviewed archival data from pre-tests, administered in August, and post-tests, administered in late April, given to eighth grade students during the first two

years of use with the new model, 2011-2012 (N=855) and 2012-2013 (N= 821). Two forms of data were used for this study which included Reading scale scores and Reading growth scores. The scale score provided as a result of administering the STAR Reading test was a more accurate gage of student Reading level than the assigned grade level equivalent. The grade level equivalent in STAR was a translation of a scale score within a given range. Reading growth was determined by subtracting the pre-test scale score from the post-test scale score. The growth could be listed as gains, positive numbers, or losses, negative numbers. Students could be grouped by school year, use of extended testing time limits, and use of regular testing time limits, those students who originally tested in the lower 25th percentile and those students who originally tested in the upper 75th percentile. Scale scores were compared between the two school years for each group of eighth graders as a whole. Reading growth was also compared between the two school years for each group of eighth graders as a whole. Then the various testing groups were compared within each individual school year. Student demographic information was unavailable for this study.

Scale Score

At the end of the 2011-2012 school year, the scale score Mean was 933.39 (N=855) for the eighth graders that were a part of this study. The Mean for May test for the 2012-2013 school year was 928.85 (N=821). The Mean for the 2012-2013 school year reflected a decrease of 4.54 over the previous school year (2011-2012). The Mean between the two May tests did not indicate a significant or observable difference. When the *t*-test ($t=.07407$) was concluded, the researcher was able to determine that there was no statistically significant difference in the Reading scale score for the two school years

(2011-2012 and 2012-2013). This result was very much similar to the findings in the study of block-schedules conducted by Nichols (2005). Therefore, the researcher concluded, based on the results, that there was no difference in the Reading scale scores for students after the first year with bridge-to-practice with the school system's Block Reading Model as compared to the results from the second school year of implementation (2012-2013) and accepted the null hypothesis. The researcher also concluded that the Block Reading Model was not necessarily effective in raising student Reading scale scores during the second year of implementation as compared to the test score data for first year. The researcher wondered if the appropriate *t*-tests are administered on the student data based upon a school-by-school basis, would the data exhibit a similar pattern as Nichols' (2005) study, where schools with lower student achievement continued to have lower student achievement. Additional studies should be conducted on a school-by-school basis to determine if some students are achieving at a higher level.

Growth data - Comparing between School Years

With the administration of the *t*-tests on the student scale scores for the two school years, 2011-2012 and 2012-2013, where there was no statistically significant differences ascertained based on the test data and *t*-tests, it could be assumed that the same conclusions are appropriate with student growth scores between the two school years (2011-2012 and 2012-2013) as well. The researcher administered *t*-tests for comparison on student growth scores from the whole group between the two school years (2011-2012 and 2012-2013).

Table 8*Summary of Student Growth Scores for 2011-2012 School Year*

Groups	N	M	Sum
Whole Group	855	70.36374	60161
Allotted Extended Time	121	140.1157	16954
Regular Allotted Time	734	58.86512	43207
Lower 25 th Percentile	219	143.2557	31373
Upper 75 th Percentile	141	-81.5319	-11496

Table 9*Summary of Student Growth Scores for 2012-2013 School Year*

Groups	N	M	Sum
Whole Group	821	75.57734	60161
Allotted Extended Time	148	115.4595	16954
Regular Allotted Time	673	66.80684	43207
Lower 25 th Percentile	182	254.3626	31373
Upper 75 th Percentile	125	-101.8800	-11496

As was true with the *t*-tests on the scale scores, the *t*-tests administered on the student growth scores indicated that there was no statistically significant difference between the two school years. This pattern continued through the administration of all subsequent *t*-tests for use of extended time limits, use of regular time limits, and originally testing in the upper 75th percentile (See Table 8 and Table 9).

The *t*-test for growth in the sub-group of originally testing in the lower 25th percentile was contrary to the trend. The *t*-test ($t = .004378$) for this data revealed a statistically significant difference between the 2011-2012 school year and the 2012-2013 school year. While reviewing the test data, the researcher concluded there was an extreme statistically significant difference with a P value less than 0.01 ($t = .00857$). The Mean for the Reading level growth during 2012-13 school year was 111.10 points higher than the previous year. The researcher also observed in this trend that fewer scale scores were reported in this subgroup, meaning that fewer students were originally tested in the lower 25th percentile during the second year of implementation (2012-2013). Further research should be conducted to determine if this trend continues in subsequent years. If fewer students continue to test in the lower 25th percentile group, it would be a good indication of program effectiveness. This is due to the fact that most of these students read well below their grade level or their expected level of performance.

The researcher determined that the data analysis with both the Analysis of Variance (ANOVA) and the *t*-tests, offered sufficient justification to accept the Null Hypothesis pertaining to the comparison between the two school years for: whole groups, allowed extended time, regular testing time and originally testing in the upper 75th percentile. The researcher concluded that the Block Reading Model was not effective in

raising student Reading level growth based on a comparison between the two school years for most students. In fact, after the adoption and use of the Block Reading Model, higher achieving students who original tested in the upper 75th percentile developed Reading level losses. Students who were taught under the Block Reading Model for 2011-2012 and the 2012-2013 school years, did not produce test scores that indicated that the use of the Block Reading Model made a statistically significant difference in student Reading level growth. With the transition to a block schedule, Lawrence and McPherson (2002) found that teachers were not teaching all aspects of the curriculum. The Reading growth loss for students who tested in the upper 75th percentile may indicate that there are significant transitioning problems that have to be addressed. This finding supports the findings of Lawrence and McPherson (2002) who strongly suggested that there was a need for more studies on the transition to a block-schedule.

Growth Data - Comparing Within a School Year

While reviewing the information presented in Table 5, the researcher observed some interesting trends in the data before beginning the *t*-tests between the sub-groups within the same school year. The first trend observed was the large variation in Mean scores between the subgroups as well as a comparison of the subgroups to the whole. The subgroups of use of extended time and originally testing in the lower 25th percentile had Mean scores that were double or more the size of the whole group Mean. The second observed trend was the data in the upper 75th percentile subgroup for both school years, 2011-2012 and 2012-2013, in which the Mean scores were negative scores. This was a clear indication that there was a loss in Reading growth for both school years.

The researcher received confirmation of observed trends with the data from the administration of the *t*-tests. The first group of statistically significant differences was for the comparison made between the groups, use of allotted extended time for special education and use of regular time limits. For both school years, 2011-2012 ($t = .00296$) and 2012-2013 ($t = .00210$), students using the allotted extended time had significantly higher Reading growth scores. From the *t*-tests results, the researcher concluded that during both school years, 2011-2012 and 2012-2013, the Block Reading Model was effective for these students using extended time.

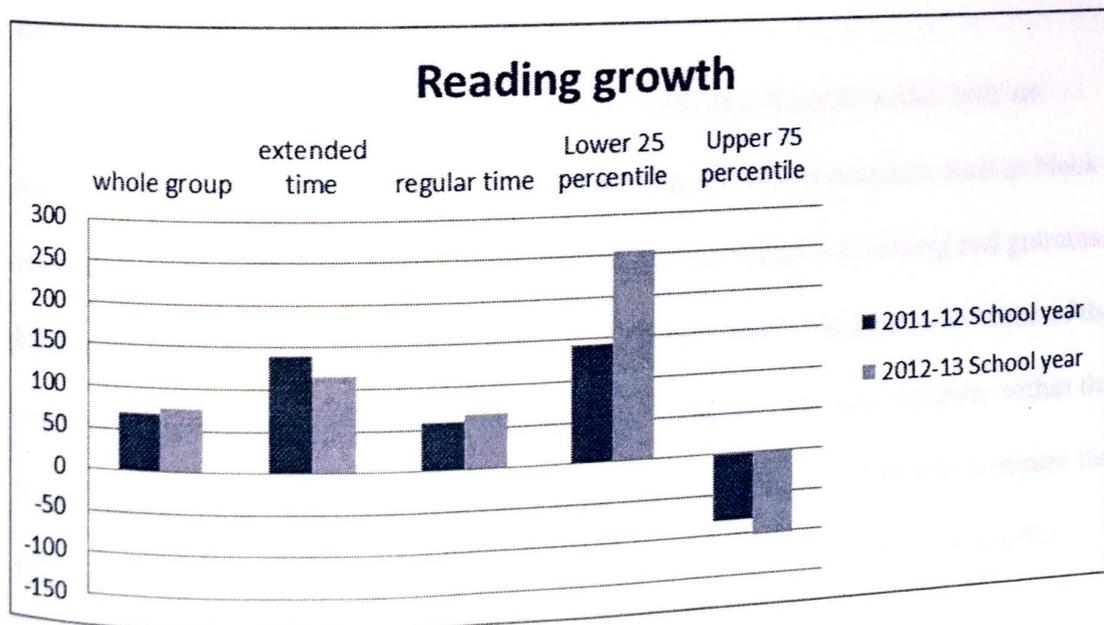
The researcher analyzed the student data for those who tested in the lower 25th percentile. Based on analyses from the *t*-tests that from data taken during the school year 2011-2012, the *t*-test results were reflected as ($t = .03491$) and for the 2012-2013 school year, the *t*-test results reflected a ($t = .00857$). Therefore, the researcher determined that the Block Reading Model was effective for the students who originally tested in the lower 25th percentile during the school year. Based on the *t*-test ($t = .04378$) conducted between the school years, the researcher concluded that the Block Reading Model was effective based on the statistically significant *t*-test results for student growth, after two years of using the Block Reading Model. The results of this *t*-test support the research conducted by Paumbo and Sanacore (2009) which examined the strategies of guided Reading, vocabulary development, and use of authentic texts in middle school Reading intervention.

For students testing in the upper 75th percentile, Reading growth was also determined to indicate that statistically significant differences existed in student data for the upper 75th percentile of students as compared to the whole group as well as those

originally testing in the lower 25th percentile. The Mean Reading growth from tests given in May of both school years, 2011-2012 and 2012-2013, reflected Mean scores of (M= -81.5319) for the 2011-2012 school year and a Mean score of (M= -101.88) for the 2012-2013 school year, where each school year's data reflected net losses as indicated by the negative numbers generated. As illustrated in Figure 1, the researcher concluded that the Block Reading Model appeared to be ineffective for students who originally tested in the upper 75th percentile, as these students demonstrated a significant loss in comparison to the other groups. The students in the 75th percentile had a greater loss than any other subgroup within both school years. Their subgroup test scores also reported higher losses in the second year over the first.

Table 10

Reading Growth Bar Graph for Whole Group, Extended-Time, Regular Time, Lower 25th Percentile, and Upper 75th Percentile for 2011-2012 and 2012-2013 School Years



Any school district wishing to effectively increase student Reading level growth in the subgroups of special education and lower achieving students, lower 25th percentile, might choose to use the *Big Block Model* as a tool for this goal based on the data tested in this study. The Block Reading Model used in the school system in the Northern Middle Tennessee County where the research for this study was conducted, effectively raised Reading levels for these two subgroups during the two school years, 2011-2012 and 2012-2013, as compared to the whole group. The research concluded that the Block Reading Model that was designed around the *Big Block Model* was most effective for the students who originally tested in the lower 25th percentile and that student Reading growth was statistically higher during the second year of implementation. This study adds to the field of research on block-scheduling and instructional practices used during a block-scheduled class. This study also adds to the field of research on the interventions for struggling middle school readers and the use of multi-level approaches to Reading intervention.

Recommendations

Currently there are few, if any, studies on the Big Block© model, only on practices within the model. The model includes aspects of best practices such as block-schedules, comprehension and vocabulary lessons, and integrated writing and grammar, but further studies need to be conducted on the model itself. Because, at the time of the study, student demographic information was not available or was incomplete within the STAR testing program, it was not possible for the researcher to effectively compare the findings from the research study to other studies completed, based on demographic

information such as ethnicity and socio-economic status. The researcher recommends that the school district used for the field study complete the input of student demographic information in the STAR program, so that all students' demographic information becomes readily available. Future studies are needed to examine and analyze the student Reading assessment data, as the student demographic information not available for analysis as a part of this study.

Implementation of any Reading program requires an adjustment period and the study was part of the evaluation of a new program. Another study, a longitudinal analysis, should be conducted after the model has been used for a longer period of time. Future studies would allow teachers time to adjust to having varied teaching methods and differentiation structure within the class period. The research recommends the development of teaching methods to help higher achieving students, those originally testing in the upper 75th percentile, maintain student reading levels and making the Block Reading Model effective for those students.

Conclusion

The purpose of this study was to determine the effectiveness of a Northern Middle Tennessee School System's new Block Reading Model based on the *Big Block Model* developed by Arens, Loman, Cunningham & Hall (2005). The model was first used during the 2011-2012 school year which was a bridge-to-practice year with teachers receiving training before the school year started and then continually providing additional training throughout the 2011-2012 school. The second school year, 2012-2013, was a school year of full classroom implementation. Based on the *t*-tests conducted on the STAR Reading data collected during the first two school years of implementation (2011-

2012 and 2012-2013), the researcher concluded that the Block Reading Model used by the school system was most effective for students who were originally in testing in the lower 25th percentile. First, these scores indicated some statistically significant gains in the second year of implementation over the first year. Secondly, the scores reflected statistically significant differences when comparing the data for the whole group scores as well as students testing in the upper 75th percentile group.

The researcher recommends further study of the current Block Reading Model in the school system that was the focus of this study, as well as additional study and analysis of the effectiveness of the *Big Block Model*. It is also recommended that the school system complete and maintain comprehensive demographic data within the STAR Reading Program to assess the effectiveness of the Block Reading Model using the available data for ethnicities, socio-economic status, and gender. This would allow the study to be comparable in scope and validity with other studies conducted on similar data.

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APPENDICES

Appendix A

Austin Peay State University Institutional Review Board Approval



**AUSTIN PEAY STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD**

Date: 11/19/2013

RE: Study 13-057: Block reading model and framework based on Big Block Model and student reading levels

Dear Toni Hamlin,

Thank you for your recent submission to the IRB. We appreciate your cooperation with the human research review process.

This is to confirm that study 13-057: Block reading model and framework based on Big Block Model and student reading levels, was reviewed and it was determined that it qualifies for exemption from further review and has been approved.

Exemption is granted under the Common Rule 45 CFR 46.101 (b) (4); the research involves only the use of existing data and the data is recorded in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.

You may conduct your study as described in your application, effective immediately. IRB requests a closed study report for study 13-057 to be submitted to irb@apsu.edu on or before 11/19/2014.

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. Some changes may be approved by expedited review; others require full board review. You are required to report completion of this study within one calendar year. If you have any questions or require further information, you can contact me by phone (931-221-6106) or email (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

Appendix B

Permission from school district to conduct study

may begin per Dr.
Board meeting.

Stewart, Gary

Stewart, Gary
FW: approval
image001.jpg; image002.png

Subject:
Attachments:

-----Original Message-----
From: "Beverly Corbin" <beverly.corbin@rcstn.net>
Sent: Monday, February 10, 2014 10:53am
To: toni.hamlin@rcstn.net
Subject: approval

Your request for STAR reading data project has been approved, and you may begin per Dr. Cash. The request will still be a part of the consent agenda at the March 3 Board meeting.

Beverly B. Corbin

Director of Schools Office

"How beautiful a day can be when kindness touches it" George Elliston



Robertson County Schools
2121 Woodland Street
Springfield, Tennessee 37172
615.384.5588 FAX 615.384.9749
website: www.rcstn.net

Appendix C
Middle School Reading Framework

---Robertson County Middle School Reading Framework---

Common Core State Standards					
Phonemic Awareness and Phonics	Vocabulary	Fluency	Comprehension		
Comprehension (30 Minutes) --- 1/3 Literature, 2/3 Content Text and Informational Text					
Before:	Prior knowledge, vocabulary, connections, predictions, questioning (whole group) Use selected text to support instruction of grammar skills				
During:	Inferring, clarifying, vocabulary in context, embed grammar SPIs during reading, continue predictions, questioning (small group) Book Clubs/Literature Circles				
After:	Summarizing, evaluating, application (whole group -- small group)				
<i>---Cite textual evidence daily; steady and intentional increase of text complexity (see CCSS Appendix B)---</i>					
Working With Words (15 Minutes)					
Word Wall Options			Noted Resources		
<ul style="list-style-type: none"> • Greek-Latin words • Prefixes, Suffixes • Spelling Patterns • High-Frequency Words • Tennessee Academic Vocabulary • 12 Powerful Words 			<ul style="list-style-type: none"> • <i>The Teacher's Guide to Big Blocks</i>, p. 192-95 • <i>Bringing Words to Life: Robust Vocabulary Instruction</i> by Isabel Beck and others • Tennessee Academic Vocabulary (strategies) • jc-schools.net/powerfulwords/12powerfulwords.ppt • http://podcast.rcstn.net/rla • http://jc-schools.net/tutorials/vocab/strategies.html 		
<i>---Tier One, Tier Two, Tier Three Vocabulary Words---</i>					
Writing (25 Minutes)					
<ul style="list-style-type: none"> • <u>Mini-lesson</u> on grammar lesson from pacing guide (10-15min.); can be used as a bell-ringer, etc. • Student choice (journal writing) • Writing arguments, informative/explanatory texts, and narratives • Conferencing regarding writing (during SSR) • Sharing of writing, demonstrating command of the conventions of grammar 					
<i>---Writing based on text required weekly---</i>					
Self-Selected Reading/Data Sharing (15-20 Minutes)					
<ul style="list-style-type: none"> • REQUIRED! Conferencing <u>at least once a week with every student</u>; should also share data (STAR, Discovery Education, Common Assessments) and writing during this time (2-4 min. per student) • Read aloud to students weekly – teacher lead from different genres, topics and authors (5-8 min.) • Student-selected reading (AR book, fiction, nonfiction material, magazine, brochures) • Complete daily reading log (<i>The Teacher's Guide to Big Blocks</i>, p. 37-41) • <i>Quick Writes</i>: a response to the reading (1-3 min., <i>The Teacher's Guide to Big Blocks</i>, p. 37) <p style="margin-left: 40px;">Option: a mini-lesson on how to select a book and strategies that effective readers use</p> <p style="margin-left: 40px;">Option: student sharing what has been read, such as a book commercial</p>					
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Close Reading with Complex Text					
At a minimum, this should occur no less than twice per 9 weeks as noted in Pacing Guides. --See attached Close Reading Protocol--					