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Effects of Balanced Literacy Instruction, Gender, and SES on Student Literacy Achievement

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EFFECTS OF BALANCED LITERACY INSTRUCTION, GENDER,
AND SES ON STUDENT LITERACY ACHIEVEMENT

by

Kerry Schneider

Dissertation

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DEDICATION

This dissertation is dedicated to my wife, Kay, who has supported me throughout our lives together. She has helped me to believe that I am capable of being more than I thought I could be. Her devotion and love inspire me every day.

ABSTRACT

by
Kerry Schneider
Harding University
May 2017

Title: Effects of Balanced Literacy Instruction, Gender, and SES on Student Literacy Achievement (Under the direction of Dr. David Bangs)

The purpose of this study was to add to the limited available research related to the effects of balanced literacy instruction, gender, and SES on literacy achievement for third- and fifth-grade students in western Arkansas. Student literacy scale scores included in the study were from eight elementary schools, four of which participated in Workshop instruction and four that did not participate in Workshop instruction. The independent variables for Hypotheses 1 and 2 were instruction and gender; the independent variables for Hypotheses 3 and 4 were instruction and SES. The dependent variable for Hypotheses 1 and 3 was literacy achievement as measured by the 2015 PARCC literacy assessment for third-grade students. The dependent variable for Hypotheses 2 and 4 was literacy achievement as measured by the 2015 PARCC literacy assessment for fifth-grade students. A review of related literature revealed a variety of effects of instruction, gender, and SES on student literacy achievement.

This causal-comparative study was conducted using third- and fifth-grade student PARCC literacy scale scores from eight elementary schools from four western Arkansas school districts within an 85-mile radius of each other. The sample for this study included

students from four school districts ranging in size from 4A to 7A. Of the eight elementary schools, four schools from one school district used Workshop instruction, and four schools from three school districts did not use Workshop instruction. The population from which the sample was taken included 722 third-grade students and 787 fifth-grade students. Students from the four schools that used Workshop instruction included 284 third-graders, approximately 53% female with SES ranging from 48% to 85%. While students from the four schools that did not use Workshop instruction included 438 third-graders, approximately 46% female with SES ranging from 37 % to 81%. Fifth-grade students from the four schools that used Workshop instruction numbered 293, approximately 52% female with SES ranging 56% to 85%. Finally, fifth-graders from the four schools that did not use Workshop numbered 494, approximately 50% female with SES ranging from 36% to 80%.

A 2 x 2 factorial ANOVA was used to analyze data collected for each of the four hypotheses. The results of this study indicated, for Hypotheses 1 and 2, no significant interaction existed between instruction and gender. Similarly, for Hypotheses 3 and 4, no significant interaction existed between instruction and SES. For the main effect of instruction, significant findings resulted from Hypotheses 1 and 2, for both third- and fifth-graders. However, the main effect of instruction was not significant for instruction for Hypotheses 3 and 4 for either third- or fifth-graders. For the main effect of gender, significance was found for Hypotheses 1 and 2 for third- and fifth-grade students. Likewise, for the main effect of SES, a significant result was found for Hypotheses 3 and 4 related to literacy achievement. Of the effect sizes for all the significant results, only

SES in Hypotheses 3 and 4 rose to the level of medium effect size; all other significant results fell in the small effect size range.

Many of the studies reviewed revealed that instruction, gender, and SES affect student achievement in a variety of ways. This study found that students who did not participate in Workshop instruction outperformed students who did participate in Workshop instruction for Hypotheses 1 and 2. In addition, there was evidence that females outperformed males on literacy achievement, and SES non-participants outperformed SES participants. The findings related to gender and SES are similar to other research findings relative to those variables. The findings of this study are comparable to previous research results related to the effects of balanced literacy instruction, gender, and SES on student achievement.

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CHAPTER I

INTRODUCTION

Now, more than ever in the United States, accountability for student achievement drives education reform. Sahlberg (2006) noted that globally, nations and regions have expressed expectations for increased student achievement as applied to economic development. He added that school administrators and teachers work diligently to reform education to provide opportunities for student growth and success. Literacy instruction is a major component of every school's program to provide their students with avenues to improve achievement.

Researchers offer a variety of opinions on how literacy instruction is related to student achievements. Cunningham (1990) advised that phonics has been the most controversial issue in reading instruction. She pointed out that research indicates that several useful types of phonics instruction exist, but no research base supports the superiority of any one particular type. Cunningham added that to become good readers and writers, students must understand how to decode words. In addition to decoding, Liang and Dole (2006) pointed out that comprehension is an integral part of the process of learning to read. Liang and Dole discussed aspects of five instructional frameworks associated with teaching reading comprehension. They noted that implementation of some or all of these frameworks would help to improve comprehension of reading and literacy for students. Supporting evidence related to the importance of comprehension is

provided by Clark and Graves (2005) and Caccamise (2011). Clark and Graves (2005) provided that scaffolding can be used as an effective tool to improving student improvement. Also, Caccamise (2011) argued that writing skills are essential in the development of reading comprehension skills.

Despite the method, learning to read is arduous. In fact, Pressley (2002) pointed out that learning to read is painfully difficult for some students, and often parents believe that their children's difficulty in learning to read is linked to the reading curriculum. He added that, in recent years, the curriculum has been some form of whole-language instruction. Pressley warned that the nature of whole language literacy instruction created barriers for students that may be at-risk for reading failure.

A different concept relating to literacy instruction is balanced literacy. Archer (2008) described balanced literacy instruction based on the theory that there are many different learning styles for children who are learning to read. In using a balanced literacy approach, teachers choose and implement a variety of instructional strategies to address individual student's learning needs. Mermelstein (2013) reported that balanced literacy instruction is difficult to define because a number of different approaches are referred to as balanced literacy. However, Fountas and Pinnell (2012) offered that balanced literacy instruction must include both decoding instruction and reading comprehension.

In comparison, while phonics instruction is widely accepted as an effective tool for learning to read in early learning, research indicates that it loses some measure of effectiveness as learners progress. As Pressley (2002) noted, while the whole-language approach to teaching literacy has proven some small measure of success, it also often provides struggling students with insurmountable difficulties. The concept of balanced

literacy represents a concept that over the past two decades has been found to be effective in addressing multiple learning styles for a greater portion of learning readers.

The importance of effective literacy instruction has also been noted by, among others, The National Commission on Excellence in Elementary Teacher Preparation for Reading Instruction (2003); Cambourne (1995); Anderson, Hiebert, and Wilkinson (1985); Bridge, Winograd, and Haley (1983); and Cantrell (1999). Each contributed factors that affect literacy achievement. Cambourne (1995) noted the importance of student expectations, while Anderson et al. (1985) and Bridge et al. (1983) offered that multiple and varied instructional methods must be included in the instructional program. Cantrell (1999) added that providing opportunities for language study and inquiry was important. This study looked at the effectiveness of a specific literacy instruction model as it relates to literacy achievement. It is important that educators select an instructional model that provides all students opportunities to improve achievement.

Statement of the Problem

The purposes of this study were four-fold. First, the purpose of this study was to determine by gender the effects of students who participated in Readers Writers Workshop instruction compared to students who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment for third-grade students in eight western Arkansas schools. Second, the purpose of this study was to determine by gender the effects of students who participated in Readers Writers Workshop instruction compared to students who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment for fifth-grade students in eight western Arkansas schools. Third, the purpose

of this study was to determine by SES the effects of students who participated in Readers Writers Workshop instruction compared to students who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment for third-grade students in eight western Arkansas schools. Fourth, the purpose of this study was to determine by SES the effects of students who participated in Readers Writers Workshop instruction compared to students who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment for fifth-grade students in eight western Arkansas schools. SES was determined by the students' lunch status, free/reduced or regular paid lunch.

Background

Research related to reading instruction is extensive and varied. Most of the research supported one form of instruction or another. Initial reading instruction in this country began with the look-say or whole word method. Schantz and Zimmer (2005) noted that the publication, *Why Johnny Can't Read, and What You Can Do About It* by Rudolph Flesch (1955), led to this instructional method's discontinuation due to its perceived lack of effectiveness. Reading instruction methods currently being employed include but are not limited to phonics, whole language, and balanced literacy. Some studies support phonics instruction, and some support whole-language instruction. Still, others support balanced literacy instruction. The common thread of all research is that reading instruction is a vital component of every curriculum. Slavin, Karweit, and Wasik (1992) noted, "Success in the early grades does not guarantee success throughout the school years and beyond, but failure in the early grades does virtually guarantee failure in later schooling" (p. 11). Slavin et al. found that students who experience some degree of

failure in early grades did not recover and continued to experience failure throughout their school years. Here the researcher attempted to provide the reader with information related to phonics, whole language, and balanced literacy instruction.

Effects of Phonics and Whole-Language Instruction

Reading instruction is the cornerstone of every curriculum. Flury (2002) noted experience indicates that phonics instruction never presented serious teaching obstacles, and all children learned to read in their first year of school. Flury added that identified students with dyslexia and Attention Deficit Disorder learn to read when exposed to appropriate phonics instruction. Also, Flury noted phonics was an effective type of literacy instruction until the mid to late 1940s. At that time, Flury found that some education experts began to relax education standards and adopted a progressive curricular philosophy. Flury cited two phonics instruction models that have proven to be successful for students of all ages. Included in these were the *Step by Step* program developed by Mona McNee to help her child with Down's Syndrome learn to read and an updated version renamed c-a-t = CAT, developed with retired computer programmer Brian Gilbert and available for free to the public via the Internet. Flury concluded that phonics instruction is a tried and true instructional model and that the irrational and irresponsible attitude of the pedagogical establishment is what needs to be challenged.

Other effects of reading instruction techniques were considered. An experimental study conducted by Foorman, Fletcher, Francis, Schatschneider, and Mehta (1996) studied the effects of four different beginning reading programs for first- and second-grade struggling readers. Two of the treatments included phonics instruction, and the other two were whole-language instruction strategies. The study involved 285 students

from 65 classrooms in eight urban schools. This study found that the phonics instruction programs were more effective, with the direct code treatment proving superior followed by the embedded code approach. Direct code was characterized by direct instruction in letter-sound correspondence practiced in decodable text. Embedded code included less direct instruction in systematic sound-spelling patterns embedded in connected text. Foorman et al. (1996) did find that students exposed to the whole-language treatments displayed a better attitude toward reading. In a similar study Stahl, Suttles, and Pagnucco (1996) found that students who participated in phonics instruction were more likely to score higher on academic achievement tests, but students who took part in whole-language instruction demonstrated greater motivation and a better attitude toward reading.

Another reading study, conducted by Cunningham (1990), involved kindergarten and first-grade students. Participants received one of two forms of instruction in phonemic awareness. The study involved 84 students who received training twice a week for 10 weeks. The results suggested a positive relationship between phonemic awareness and reading achievement at the beginning stage of reading development. In addition, the study revealed that students participating in one type of instruction—reflection upon and discussion of the value of phonemic awareness—performed better than students participating in the other type of instruction—skill and drill form of instruction.

Essentially, this study found that both forms of phonics instruction improved student achievement (Cunningham, 1990). Also, Anthony and Francis (2005), noted, “research shows that it is a single, unified ability that manifests itself in a variety of

phonological skills that emerge in a predictable sequence” (p. 258). They provided that the development of phonological awareness is critical for learning to read.

Whole-language instruction, on the other hand, is an instructional model that gained popularity in this country in the 1970s and 1980s. Bomengen (2010) described whole language as a method of teaching children to read by recognizing words as whole pieces of language. She points out that whole-language instruction abandons the phonetic practice of decoding in favor of language being a complete system of making meaning with words functioning in relation to each other in context.

Finally, a study was conducted with English Language Learners. Over an 18-week period, Terrell (1999) studied 84 students who were divided into four groups: two identified as higher intermediate groups and two identified as lower intermediate groups. One group of each category participated in a whole-language curriculum, and the other participated in a phonemic awareness curriculum. Terrell concluded that whole-language instruction was of greater benefit to students identified in the lower intermediate group, but phonemic awareness significantly improved reading and writing achievement for both higher and lower intermediate groups.

Research conducted by Bomengen (2010) indicated that both phonics- and whole-language instruction are effective forms of instruction. Phonics instruction is more effective for some students and has been found to produce more significant results related to scores on standardized tests. A position statement issued by the International Reading Association (1997) noted that the teaching of phonics is an important aspect of beginning reading instruction, primary grade reading teachers include phonics teaching in their instructional programs, and phonics instruction is most effective when it is embedded in

the context of a total reading/language arts program. On the other hand, the whole-language instructional model has been found to demonstrate advantages for students on reading and language achievement. The distinction between these two instructional approaches is that they are most often delivered exclusively of each other. The balanced literacy instructional model most often includes selected characteristics of both phonics and whole-language instruction.

Effects of Balanced Literacy Instruction

Balanced literacy is an instructional approach designed to employ some different practices and procedures coordinated to offer each learner maximum opportunity to improve reading achievement. Archer (2008) indicated that balanced literacy represents the theory that there are many different learning styles for children who are learning to read. A truly balanced literacy program will implement with fidelity an instructional program designed to address the learning styles of all learners to facilitate the individual needs of each student. Archer noted that essential elements of a balanced literacy program included shared writing, read-aloud, interactive writing, shared reading, writing workshop, reading workshop, guided reading, independent reading, and word study. One such program is an instructional model introduced by Lucy Calkins called Readers Writers Workshop.

Calkins, who is the founder and director of the Teachers College Reading and Writing Project, developed a balanced literacy instructional model supported by the Teachers College Reading and Writing Project at Columbia University. The conceptual design of Workshop was explained by Feinberg (2007) as a method of employing seminal research-based instructional practices in a structured environment. Workshop

instruction involves phonemic awareness, phonics, fluency, vocabulary, and comprehension.

Another quantitative study involving learning to read was a meta-analysis reported by Bus, van Ijzendoorn, and Pellegrini (1995). This statistical study included 3,820 subjects and 33 studies spanning 27 years. Bus et al. found that joint reading between parents and pre-school children had a positive effect on language skills, emerging literacy, and reading achievement. It is interesting to note that the study found that SES did not influence the outcomes. Another relatively large study, Elley (1992), involved over 200,000 students from 32 countries. Elley found that the amount of reported out-of-school reading was positively related to individual students' reading achievement levels. The 1992 National Assessment of Educational Progress studied out-of-school reading of fourth-grade students in 42 states. Mullis, Campbell, and Farstrup (1993) reported that the National Assessment of Educational Progress found that students who read for fun almost every day outside of school scored higher on the National Assessment of Educational Progress assessment of reading achievement than children who read for fun only once or twice a week. Also, students who read for pleasure outside of school only once or twice weekly outscored children who read for fun outside of school only once or twice a month. Also, students who read for pleasure outside of school only once or twice monthly, in turn, outscored children who hardly ever or never read for fun outside of school.

Another study of reading achievement was conducted in Fiji. This study by Elley and Mangubhai (1983) included 614 students in 32 fourth- and fifth-grade rural school classrooms. Here, researchers provided 250 high-interest books to the students in the

experimental group and found that students in the experimental group progressed in reading comprehension at twice the rate of students in the control group. Anderson, Wilson, and Fielding (1988) studied reading achievement as it related to the amount of time students spent reading. The study involved 155 fifth-grade students in seven classrooms. Students recorded in daily logs the amount of time they spent on a wide variety of activities. The study found reading books was the best predictor of reading achievement between second and fifth grade. Furthermore, Taylor, Frye, and Maruyama (1990) found that the amount of time reading is significantly related to reading achievement. They had 164 fifth- and sixth-grade students keep daily reading logs. The study found that reading in school during reading time contributed more significantly to reading achievement than did reading at home. Consequently, each of these studies found that time spent reading had a positive effect on student achievement.

Another study, conducted in San Diego, California, sought to examine the effectiveness of instructional balanced literacy programs on student achievement. Bitter, O'Day, Gubbins, and Socias (2009) studied the balanced literacy instructional programs used in 101 classrooms in 9 high-poverty elementary schools. The study found a shift in focus on reading comprehension instruction and on students' active engagement in making meaning from text. Also, teachers' use of higher-level questions and discussion about text increased substantially from that found in a prior study using the same instrument in similar classrooms in other schools. Finally, analyses of instruction and student outcome data indicate that teacher practices related to the higher-level meaning of the text, writing instruction, and strategies for accountable talk were associated with growth in students' reading comprehension.

Fiscal Consideration

The design of this study was to determine if a significant difference could be found on literacy achievement based upon participation in a specified type of balanced literacy instruction. School administrators share a responsibility to identify and select appropriate instructional materials and programs to best facilitate student and community needs. For administrators, the cost is a significant determining factor in choosing materials and programs. Limitations of resources compel school administrators to select the most effective programs that are available based upon fiscal constraints.

Finding effective programs that are available within a school district's budget can be a challenging undertaking. For example, Fienberg (2007) noted that it was reported that Teachers College Reading and Writing Project charges schools up to \$1,200 per day to provide professional development training for teachers. In addition, she noted that New York City school chancellor Joel Klein signed a three-year \$5.4 million contract to establish Workshop as the literacy program for the schools in his district. The Arkansas school district represented in this study that used the Workshop model is reported to have expended approximately \$275,000 of categorical funds during the 2014-2015 school year to facilitate the professional development requirements related to the implementation of the program. That sum was in addition to operating dollars that were spent to provide for materials for teachers and classrooms. The expenditure for materials needed to facilitate literacy programs was similar among each of the schools represented in the study.

Hypotheses

The initial review of the literature suggested that students exposed to balanced literacy instruction would be better prepared to demonstrate reading comprehension than

students that were not exposed to a balanced literacy instruction model. There is little evidence of research related to Arkansas students instructed using Workshop. Therefore, the researcher generated the following hypotheses.

1. No significant difference will exist by gender between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment.
2. No significant difference will exist by gender between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment.
3. No significant difference will exist by SES between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment.
4. No significant difference will exist by SES between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment.

Description of Terms

Balanced literacy. As defined by Archer (2008), balanced literacy is a theory based on the idea that there are many different learning styles for children who are learning to read. Utilizing a combination of teaching methods will teach a greater range of students more effectively.

Basal reader. As defined by WordIQ (2014), basal readers are textbooks used to teach reading and associated skills. Basal readers are usually published anthologies that combine previously published short stories, excerpts of longer narratives, and original works and are integrated into an established literacy instructional program.

Guided reading. As defined by Marshall (2008), guided reading is an instructional strategy in which students are assigned to small groups, given their books, and the teacher works with each student to develop individual skills.

Independent reading. As defined by Marshall (2008), independent reading allows students to choose the books they want to read. Students learn to read for enjoyment, and they understand that reading is an important skill. He indicated that students learn to appreciate the importance of improving reading skills by being allowed to read for pleasure.

Interactive writing. As defined by Mermelstein (2013), interactive writing is a process in which the teacher and students compose text together.

Look-say. As defined by the Psychology Wiki (2014), the look-say method is a spatial-holistic method to learn a language. This teaching and learning method requires students to memorize words or to recognize words by looking at their first and last letters. Often this method is taught by using slides or cards, each with a picture next to the word,

teaching children to associate the whole word with its meaning. Other names to this approach include whole word method, sight method, or configurational reading.

Partnership for Assessment of Readiness for College and Careers (PARCC). As defined by PARCC (2015), PARCC is a series of high-quality assessments designed to address assessment needs of states who adopted more rigorous academic standards in 2010 and 2011. PARCC assessments are aligned to adopted educational standards and are designed to test students of all achievement levels on what they are learning.

Phonics approach. As defined by Flury (2002), phonics is a literacy skill which enables students to decode and read words. Systemic Phonics teaches children the sounds of letters and the combination of letters that are used to form words.

Read aloud. As defined by Marshall (2008), read aloud is an instructional strategy in which teachers read aloud to students thus modeling correct strategies and behavior.

Reading workshop. As defined by Atwell (1987, 1988) and Lause (2004), Reading workshop includes reading sessions that encourage and support independent reading of literature. Hewitt (1996), Oberlin and Shugarman (1998), and Swift (1993) added that reading workshop traditionally includes reading mini-lessons, independent silent reading, and reader response tasks.

Reading and Writing Workshop. As defined by Porter-Magee (2013), Reading and Writing Workshop, developed by the Teachers College Reading and Writing Project at Columbia University, is an integrated curriculum that combines research-based reading and writing strategies into a comprehensive literacy program.

Scaffolding. As defined by Wood, Bruner, and Ross (1976), scaffolding is a “process that enables a child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his unassisted efforts” (p. 90).

Socioeconomic status (SES). As defined by the American Psychological Association (2006), SES is defined as the social standing or class of an individual or group. It is often measured as a combination of education, income, and occupation. Students identified as low SES often experience inequities in access to resources.

Shared writing. As defined by Mermelstein (2013), shared writing is a process in which the teacher composes a variety of texts with her students while students listen and focus on using meaning and structure as they compose meaning.

Shared reading. As defined by Marshall (2008), shared reading is the practice of students and the teacher reading together to afford students the opportunity to discover new words and their meanings.

Whole language. As defined by Bomengen (2010), whole language is a method of teaching children to read by recognizing words as whole pieces of language. The whole-language philosophy promotes that language should not be broken down into letters and combinations of letters and decoded, instead of language is a complete system of making meaning, with words functioning in relation to each other in context.

Word study. As defined by Marshall (2008), word study provides students the opportunity to work with words through fun and engaging activities. Students learn words and the sounds they make, root words, suffixes and prefixes, and how to derive the meaning of words.

Writing workshop. As defined by Mermelstein (2013), writing workshop is a process in which teachers work one on one or with small groups to improve the quality of student writing.

Significance

Research Gaps

There is a significant amount of research related to literacy instruction and its effect on student achievement. A substantial amount of the research compares phonetic instruction to whole-language instruction or whole-language instruction to the balanced literacy instruction approach. After reviewing some of the literature available, there appear to be some gaps in the research.

First, only a select few schools in Arkansas have adopted and are using with fidelity the Workshop curriculum. Evidence indicates that some individual schools are employing some portions of the Workshop curriculum but that only one school district uses the curriculum in all schools district-wide and actively participates in professional development delivered by members of the project. Second, no research could be found comparing the achievement of Arkansas students that participated in Workshop instruction and students that participated in some other forms of literacy instruction.

Possible Implications for Practice

Upon completion, this study will assist school districts and school administrators in Arkansas and throughout the region. This study will join the body of research related to the selection and implementation of appropriate and effective literacy curricula designed to improve student achievement. This objective examination of the hypotheses

will provide evidence that will assist school administrators with the selection of effective reading and writing programs.

Process to Accomplish

Design

A quantitative, causal-comparative strategy was used in this study. All four hypotheses were a 2 x 2 factorial between-groups design. The independent variables for the first two hypotheses were literacy instruction (participation in Workshop versus no participation) and gender (male versus female). The independent variables for the final two hypotheses were literacy instruction (participation in Workshop versus no participation) and SES (free/reduced lunch versus regular lunch status). The dependent variable for all of the hypotheses was literacy achievement measured by the PARCC assessment.

Sample

The study used third- and fifth-grade students in four western Arkansas elementary schools. Two of the elementary schools chosen were schools in a school district that used the Workshop model for literacy instruction. The other two elementary schools were in school districts that did not use the Workshop model for literacy instruction. The individual schools were paired, and the demographics of race and SES for all schools were comparable. Of the two individual pairs of schools, one pair represented schools that demonstrated a high level of poverty (greater than 70%) and one pair of schools that demonstrated a low level of poverty (less than 55%).

Instrumentation

According to the 2014-2015 PARCC Score Report Interpretation Guide (New Mexico Public Education Department, 2015), PARCC is an assessment developed to measure student achievement in English language arts/literacy and mathematics based on the learning standards established by the Common Core State Standards for students in Grades 3-8 and high school. Thacker, Dickinson, and Becker (2014) noted that the PARCC evaluation system was designed to:

1. Build pathways to college and career readiness for all students,
2. Create high-quality assessments that measure the full range of the Common Core State Standards,
3. Support educators,
4. Better use technology for assessment,
5. Advance accountability at all levels.

In the spring of 2015, the students participated in the PARCC assessment exams for literacy. The exams consist of multiple-choice and open-response questions designed to assess student achievement.

Data Analysis

To address the first two hypotheses, two 2 x 2 factorial analysis of variances (ANOVAs) were conducted using Workshop participation by gender as the independent variables and literacy achievement measured by student scores on the PARCC literacy exam as the dependent variable. To address the final two hypotheses, two 2 x 2 factorial ANOVAs were conducted using Workshop participation by SES as the independent variables and literacy achievement measured by the PARCC literacy exam as the

dependent variable. To test the null hypotheses, a two-tailed test of significance was conducted with a probability set at .05.

CHAPTER II

REVIEW OF RELATED LITERATURE

Classroom instruction, SES, and gender are all factors that have varying degrees of influence upon student achievement in schools. Each of these three factors affects the level of student achievement in the United States and in nations around the globe that are striving to improve education to improve economic development. The comprehensive literature review in this chapter provides a research-based foundation to support this study and its findings. The literature review is organized into sections which will address the effects of poverty, gender, and methods of instruction upon student achievement. First, this study discusses findings related to the consequences of poverty on student achievement. Included are reports of efforts that have been made by governments, communities, schools, and parents to reduce the effects of poverty on student performance. Following the discussion related to poverty is a study reviewing findings related to the consequences of gender on student performance. Included in this study are discussions of findings related to the approaches used to combat the effects of gender stereotyping. Finally, a discussion reviewing results related to the effects of instructional methods on student achievement, along with discussions of findings related to a variety of instructional methods and effectiveness of each is included.

Poverty

A significant number of studies have been conducted over the past several decades to try to define the effects of poverty on children. The overwhelming conclusion from all of these studies is that poverty has a profound and lasting effect on the cognitive, social, and educational development of children. Studying the effects of poverty and neglect has found that children exposed to each exhibited impaired executive function, attention, processing speed, language, memory, and social skills. Evans (2004) further noted that children of poverty experience greater disadvantages than other kids, often being forced to confront environmental issues that include family turmoil, violence, and instability. He also noted that children of poverty experience substantially inferior living conditions. These conditions included overcrowding, poor quality drinking water, dangerous neighborhoods, parental neglect, and less access to books and educational opportunities. He held that each of these factors contributed to the overwhelming detriment of children who are living in poverty.

A study by Loughan and Perna (2012) also examined the adverse effects of poverty and neglect on the development of children's brains and cognitive abilities. Previous researchers studying the effects of poverty and neglect found that children exposed to each exhibited impaired executive function, attention, processing speed, language, memory, and social skills. Loughan and Perna collected data on 65 children age 11 years who experienced both poverty and neglect. This collected information included data related to developmental delays, a diagnosis of Attention Deficit Hyperactivity Disorder, learning disorders (reading, mathematics, or written expression), and emotional/behavioral disorders. The study found that more than half of the children

demonstrated a below average IQ score and that a significant number of the sample demonstrated below average academic ability, memory testing, and executive functioning. All of the children were diagnosed with emotional or behavioral disorders. The results of this study indicated that children who experience poverty and neglect would likely demonstrate some degree of detriment.

The effects of poverty on children are mitigated by many factors. Brooks-Gunn and Duncan (1997) noted that the depth of poverty, the family income, and the timing of poverty in a child's lifetime have significant effects upon the degree of the detriment that a child will experience. This research reviewed the results of many studies related to family income and its effect on students. They noted that the findings from the studies concluded that family income has a significant influence on children and that the effects are more significantly related to academic achievement than emotional outcomes. Also, the review of related studies indicated that depth, timing, and length of exposure to poverty was a mitigating factor in determining the degree of effect. Children exposed to poverty at an early age were more likely to experience some degree of difficulty in completing school than were children who were exposed to poverty at an age beyond the early developmental years. Brooks-Gunn and Duncan offered that greater development of early intervention programs may significantly improve the probability of improving student development and achievement. The findings of this study indicate that governments, communities, and schools need to address the issues of children of poverty at an early age. Strengthening educational and nutritional programs for preschool age children may help to combat the detrimental effects of poverty.

Poverty and Achievement

The factors that contributed to the persistence of the achievement gap between children of poverty and students who were not impoverished were examined by Barton (2004). In reviewing the research related to the gap, Barton identified 14 factors that correlated poverty with achievement. These factors were divided into two groups. The first group of factors addressed issues that affect students before and beyond school. He identified those factors like birth weight, lead poisoning, hunger, and nutrition, being read to as young children, television watching, parent availability, student mobility, and parent participation. The second group of factors was related to school issues. Those factors included rigor of curriculum, teacher experience and attendance, teacher preparation, class size, technology-assisted instruction, and school safety. He compared each of the factors based upon race and family income and found that minority students experienced a significant difference for all factors based upon race and that minority students still experienced a significant difference in 11 of the 14 factors based upon family income.

Evidence consistent with most other research related to poverty and student achievement is that students of poverty experience significant developmental delays including language acquisition, literacy development, achievement in reading, and general success in school. Barton (2004) also noted that the researchers found a significant correlation between the amount of television that children watched and their educational development deficit. Children of poverty tend to watch significantly more television and have significantly fewer meaningful interactions with parents, another factor contributing to developmental delays.

Also, Barton (2004) found no significant relationship between the quality of leadership, pedagogy, or professional development related to student achievement. However, he noted that experienced teachers, teacher preparation, and technology-assisted instruction were included in practices that did display a significant relationship to improved student achievement. Reduced class size appeared to have little effect, but a positive disciplinary climate and safe schools were significant factors related to improved student achievement.

Barton (2004) concluded that research did not identify a single set of strategies that could be employed to address the achievement gap. He offered that it was clear that both school and non-school issues must be considered to address the significant issues that students of poverty face. He noted that social problems have created many of the non-school issues and that those factors are not easily addressed or remedied. In school, practices have had some degree of success in dealing with issues, but the research does not identify how much success and whether or not those practices will continue to close the gap. Simply put, no single set of practices have yet been identified that will adequately address the achievement gap issue.

Similarly, Lacour and Tissington (2011) studied the effects that lack resources, due to poverty, upon student achievement. Like Barton (2004), Lacour and Tissington (2011) reviewed studies related to the effects of poverty on student achievement. They reported that it was evident that the disadvantages that students of poverty experienced created a significant detriment to their individual development and achievement. Low-income students scored significantly lower across the board than did mid-upper income students. They further added that the mother's education level offered another source of

disadvantages for low-income children noting the significantly less interaction and education related emphasis in families where mother's educational attainment was low.

Lacour and Tissington (2011) offered recommendations to address closing the achievement gap that included strategies by the government, both federal and state, and schools and school districts. They suggested that government policies must be modified to address specific student needs and to commit adequate and appropriate resources to ensure the effectiveness of programs. They agreed with Barton (2004) that schools must modify programs to ensure for a greater possibility of student success and that specific strategies include multiple assessments to aid in improving achievement and modification of school policies and the environment to address specific student needs. Both Barton (2004) and Lacour and Tissington (2011) offered that communities and families must contribute to the process of closing the gap. That process would be facilitated by ensuring that all stakeholders understand and value the importance of education. Both studies concluded that only when all parties contribute to the process will reform become meaningful and efficient.

Poverty and Schools

The detrimental effects of poverty on student achievement have been researched extensively. Research conducted by Payne (1996) indicated that teachers and administrators who work with children of poverty must understand their role. This role is not to resolve all of the issues that individual children of poverty face, but to provide a support system, role models, and opportunities to learn, which will increase the likelihood of success. She noted that educators often seek to address causes of issues to fix an individual or group of individuals. Though providing financial resources to

impoverished families may create some degree of relief, it will not serve to change their lifestyles. She added that often families of poverty live the way that they do because they chose to and offered that the chief responsibility of educators is to teach children of poverty the necessary skills to help them make choices that will enable them to overcome the disadvantages of poverty.

Similarly, Renchler (1993) provided a comprehensive look at the disadvantages that children of poverty face as they enter school and what is being done to combat those issues. While Payne (1996) focused on teacher and administrator roles, Renchler (1993) noted that programs had been developed to address poverty-related issues and needs for both pre-school and school-age children. All of these programs were designed to reduce disadvantages and provide opportunities and skills to help students become productive adults. Also, he provided data indicating that children of poverty tend to experience significantly greater educational and developmental disadvantages, and they are more likely to drop out of school rather than complete the educational process. He stated that studies have indicated that students who drop out tend to earn between \$20,000 and \$200,000 less during their lifetimes than do their counterparts who complete school. An example given indicated that the dropouts from the class of 1981 represented approximately \$238 billion in lost wages or approximately \$68 billion in lost tax revenue. Studies have found that the cost of intervention programs for children of poverty have yielded long-term savings of up to \$4.75 per every dollar spent.

Programs that have been developed to combat the effects of poverty have been successful to some extent but carry with them issues of their own. Money provided to support federal programs represents less than 10% of local budgets. Other pre-school

programs have made some progress in preparing students to enter school, but often these programs are limited and underfunded. Further, Renchler (1993), like Payne (1996), found that resources and attitudes have a profound effect on the performance of children of poverty. He noted that studies have indicated that children of poverty often attend schools that are less adequately funded than schools of children from greater economic circumstances. One study reported that SAT scores for students improved as much as 18 points on combined scores on mathematics and verbal sections per \$100 additional spent on classroom instruction. He also found a correlation between poor performance and parents' attitudes toward education. Studies indicated that mitigating the negative effects of parental influence created better advantages for students. For education reform to be successful as related to providing opportunities for children of poverty, schools and governments must recognize the need to provide adequate and equitable funding for all schools, and programs must be developed to address the underlying causes that foster the issues that children of poverty face.

Research conducted by Rothstein (2008) appeared to concur with Renchler (1993) when he also found that closing the achievement gap between children of poverty and their less disadvantaged counterparts must include both educational and social reform. Rothstein (2008) noted that to try to close the achievement gap through educational reform with no attempt to reform SES inequalities would be counterproductive and would most likely lead to unfair and unwarranted condemnation of schools and teachers. He added that teachers should not consider the economic circumstances of individual students and should concentrate on developing improved classroom practices to address the issue of the gap that was flawed. Both Payne (1996) and Rothstein (2008) noted that

teachers understand children of poverty come to school with significant disadvantages and work daily to address those issues that cannot be ignored or marginalized. Rothstein offered that both economic and educational reforms are necessary to accomplish significant improvement and concluded that both depend on each other and without one the other will remain unfulfilled.

In a related study, Reardon (2013) compared the findings of 12 studies that included information related to family income and student achievement. Each study measured student achievement based on standardized test scores of mathematics and reading. His purpose was to try to determine if there existed any definitive information indicating whether or not the achievement gap between children from low-income and high-income had increased or decreased. The information from the studies provided analysis of student achievement that spanned the previous three decades and found that the achievement gap had grown significantly over the past 30 years. Moreover, college enrollment and completion rate for high-income children had increased significantly compared to low-income students. On a positive note, he found that even though the achievement gap is significant when students enter school, it does not appear to increase significantly during school age years.

Reardon (2013) found that the achievement gap has continued to grow as a result of the growing economic gap in the nation. He, like Renchler (1993), offered that schools must play a key role in stemming the negative effects of the gap between society and individuals. He suggested that schools devote resources toward early intervention programs designed to negate the ill effects of poverty for students and establish after-school programs or lengthen the school day or year to enable students' greater

opportunities to take advantage of programs. He also noted that school administrators adequately allocate funding to ensure quality programs, well-trained teachers, and academic resources for students. He concludes that without a significant shift in the focus of reform, the nation is headed toward dire consequences.

Finally, Reeves (2009) provided evidence that high-poverty schools have experienced some degree of success in improving student achievement. He noted characteristics of 90/90/90 schools (90% free and reduced lunches, 90% minority, and 90% of students meeting or exceeding state educational standards for achievement), and he offered some explanation as to why those schools have been successful. Some of the common characteristics shared by successful schools included a clear focus on academic achievement, clear curriculum choices, and frequent assessment of student progress and opportunities to improve. Along with Renchler (1993) and Reardon (2013), he credited success to practices consistently applied by a highly trained and motivated group of teachers and administrators. All agreed that the training and dedication of teachers and the consistent application of programs is a key factor to the success of each program. Reeves (2009) goes on to offer that the federal government's push to measure the effectiveness of schools based on test scores alone is ineffective at best. He stated that the assumption that high test scores indicated a good school and low test scores indicated a poor school is a flawed concept and added that even without an examination of the true causes of improved or poor performance there is no significant measure of accountability.

Gender and Achievement

In addition to poverty, gender appears to have some effect on individual student's achievement. Research has been conducted attempting to determine the effect that gender

plays upon student's ability to achieve. Machin and McNally (2004), Hartley and Sutton (2013), Heyder and Kessels (2013), and Hyde (2005) conducted separate research to examine the differences between male and female students and how it affects individual achievement, the stereotypes that students face and how it affects achievement, the structure of schools and how it affects student achievement, and the similarities between males and females and how it affects achievement.

Studying the effects of gender on student achievement, Machin and McNally (2004) examined the achievement gap that existed between male and female students in the United Kingdom. They studied the difference in academic achievement between males and females at both the primary and secondary level of education. Machin and McNally noted that internationally an achievement gap existed between achievement by male and female students, but the issue appeared to be more significant in the United Kingdom. To determine the causes and effects of the gender gap, they analyzed the changes in achievement over a period focusing on the benchmarks established at the end of primary and compulsory education. They examined the cause and effect of changes to the educational system that may be contributing factors to the gender achievement gap.

Machin and McNally (2004) examined the extent to which social factors such as language and SES were significant contributing factors to the achievement gap was examined. They found that female students outperformed male students at both the primary and secondary level, and the gap between female and male performance increased significantly at the end of primary education, age 11, and at the conclusion of compulsory education, age 16. In their examination of data, they discovered that females outperform males in language from the beginning of primary education through the end

of compulsory education and that even though males tend to outperform females in mathematics early in education, females have greater overall mathematic achievement by the end of compulsory education.

Varied samples of programs that were being applied by schools to address the gender gap were researched by Machin and McNally (2004), and no significant measurable improvement was found. Two programs that appeared to have some degree of positive effect upon the achievement gap were the National Literacy Project and the National Numeracy Project. Each of these programs was delivered to primary school students and focused upon gender-related deficiencies for students. The results were that males showed improved performance in literacy and females showed improvement in mathematics. The gender achievement gap, however, experienced little significant change.

Overall, the final results were that even though performance improved, the gender achievement gap experienced little significant change. Machin and McNally (2004) noted the marked increase in the achievement gap between the end of primary and compulsory education. Programs designed to address closing the gap, they suggested, should be designed to address issues for students between the ages of 11 and 16 years. Also, they advocated that the gender achievement gap was insignificant before the establishment of the current accountability system, the General Certificate of Secondary Education. They noted the changes in assessment, instruction, and student accountability favor females over males. They concluded the most significant measure that should be implemented to address the gender achievement gap was to restructure the accountability system to

ensure that it addressed learning and testing styles that are favored by both sexes—not one sex over the other.

While research has indicated that commonly held perceptions related to gender often affect student achievement, Spencer, Steele, and Quinn (1999) found that merely telling women of expectations related to an assessment had a significant effect on individual performance. They administered an assessment to a group of men and women, and half of the group of women with high mathematic performance levels were told that the assessment showed gender differences while the other half of the women and men were told that the assessment had no gender biases. The result was the women who were told the test exhibited gender bias performed significantly lower than the other women and men participants. They noted that the establishment of negative expectations influenced student achievement.

In a related study, Hartley and Sutton (2013) examined the effects that negative gender-related stereotypes had upon student perceptions. They performed three separate studies to determine children's perceptions related to stereotypes and academic abilities. In the first study, they gave 238 children a series of scenarios that showed a child with good behavior or performance or a child with poor behavior or performance. They found that, when asked, children more often associated good behavior or performance to females and poor behavior or performance to males. In addition, they found that children also thought that adults believed the same as they did about the perceived behavior or performance related to gender. The second study involved 162 children ages 7 and 8 years. In this study, researchers told the children that boys typically performed worse than girls on academic tasks. The results indicated that boys' test scores in reading,

writing, and mathematics declined when compared to the control group. In the third experiment, 184 students ages 6 to 9 were told that boys and girls were expected to perform equally well on scholastic aptitude tests. The result was boys' performance improved when compared to the control group. Hartley and Sutton concluded that perceived societal and educational expectations had a negative impact on student performance and suggested that schools refrain from promoting those beliefs or programs that support those stereotypes.

Research supporting the idea that the structure of schools promotes stereotypes was conducted by Heyder and Kessels (2013). Heyder and Kessels studied the idea that one of the reasons for lower academic achievement for boys is associated with the feminine nature of school structures that impede or inhibit boys' self-concept and academic achievement. Heyder and Kessels noted that male students perform lower than female students on important academic indicators in many of the nations around the world. A great deal of research related to the gender achievement gap indicated that there was not a lower cognitive potential for males compared to females, but non-cognitive variables had more significant effects on males than females. To complete their study, Heyder and Kessels provided 122 ninth-grade students with questionnaires related to a male-dominated stereotype—mathematics and a female-dominated stereotype—language. Prior to conducting their experiment, Heyder and Kessels reviewed research related to studies of gender stereotyping, general perceptions of school, and student attitudes related to schools. To support their hypothesis, Heyder and Kessels referenced three specific areas of research including:

1. Studies related to gender stereotyping of academic domains and its effect on students' motivation and performance.
2. Studies related to aspects of general feminism of schools.
3. Studies related to a demonstration of male attitudes related to the unsuitability of academic engagement and masculinity.

Studies related to stereotypes of academic domains indicated that most often mathematics is considered a male-dominated discipline, but language is considered to be either gender neutral or female dominated. Heyder and Kessels noted that there is a significant relationship between an individual's interest and performance as related to a specific academic domain, and stereotyping specific subjects does have an effect on student performance. Studies related to the general feminism of schools revealed there was little concrete evidence indicating that neither male nor female students perceive schools as feminine. However, they noted a general perception exists that schools are more suited for femininity than for masculinity.

Finally, examination of studies related to negative attitudes of male students, as related to academic engagement as not masculine, revealed little supporting evidence. Heyder and Kessels (2013) noted that support for these claims had been derived from a general perception from male students that excelled academic performance promotes a negative non-masculine persona and may be why some male students struggle to excel in school. Upon completion of their study, Heyder and Kessels concluded that there was not enough evidence to support the theory that the general connotation that schools are feminine was significant with relation to negative male attitudes and academic performance. Even though this study did not find that the majority of male students link

school to female, there is evidence that perceived male and female stereotypes affect student performance in relation to specific academic disciplines.

Almost all of the research related to the effect of gender on academic achievement has concentrated on the differences between males and females. Hyde (2005) conducted a meta-analysis of gender-related studies and offered an alternate hypothesis. Her contention was that there is very little difference between the cognitive abilities of males and females with the exception of a small number of significant areas. She called her theory the Gender Similarities Theory. To conduct the meta-analysis, Hyde studied statistical data from a large number of studies that had been completed to determine differences in behavior and attitudes of males and females. To accomplish her analyses, she divided the research into six categories including:

1. Studies that assessed cognitive variables, such as abilities.
2. Studies that assessed verbal and non-verbal communication.
3. Studies that assessed social or personality variables, such as aggression or leadership.
4. Studies that assessed measures of psychological well-being, such as self-esteem.
5. Studies that assessed motor behavior, such as throwing distance.
6. Studies that assessed miscellaneous constructs, such as moral reasoning.

The results of the meta-analysis indicated evidence that there was little significant difference between males and females related to cognitive variables, communication, social and personality values, psychological well-being, and to some extent motor behavior. Hyde noted there was some evidence of significant difference between males

and females. The areas that indicated a significant difference included motor performance, particularly throwing velocity and throwing distance. She noted these motor differences tended to increase after puberty when physiological changes become more prominent. In addition to the difference in motor performance, Hyde noted that the analysis indicated differences in some areas of sexuality, particularly attitudes about sex and areas of aggression, with the difference in physical aggression being more significant than verbal aggression.

In addition to finding a limited number of significant differences between males and females, Hyde's (2005) meta-analysis found evidence that gender-related differences tend to fluctuate with age indicating that determining exact differences between males and females is nearly impossible. Hyde concluded that the meta-analysis indicated that theories supporting gender differences are less reliable; furthermore, the development of social and educational programs aimed at addressing those issues is wasteful and can be detrimental in numerous areas including women's opportunities in the workplace, couple conflict and communication, and analysis of self-esteem issues among adolescents.

Subsequent studies conducted by Hyde, Lindberg, Linn, and Williams (2008) and Hyde and Metz (2009) suggested that males and females share similar cognitive abilities in mathematics. Hyde et al. (2008) reported there was no gender difference for students from Grades 2 through 11 for mathematics skills. Hyde and Metz (2009) reported that even though males tend to score higher than females on mathematics, the gender gap is closing and that the gap is not significant in most countries that demonstrate greater gender equality. The results of this study suggest that gender differences in mathematics achievement are largely due to cultural and environmental factors.

Instruction, Schools, and Achievement

In addition to both poverty and gender, researchers have found that classroom instruction has a significant effect on student achievement. Sahlberg (2006) noted that improving student achievement is the driving factor behind global and national educational reform. Even though schools across the nation and around the world work to provide instructional programs that offer students greater opportunities to achieve, the educational gap continues to grow. Wienclaw (2015) suggested that the gap continues to grow due to the inequality between schools. She noted that one contributing factor to increasing the gap is the widening of the focus of education in general. She noted the trend in education around the nation and world of late has been to widen the focus to include some social issues. She stated that the widening of focus has served to decrease the amount of time that schools spend on basic instruction related to reading, writing, and mathematics. Also, a restructuring of the classroom has allowed students to learn at their respective paces and not be forced to endure the former rigor of traditional classroom instruction. Wienclaw also noted that the shift in accountability had created an environment in which standardized test serves as the single measure of intelligence. She pointed out that in most cases the limited focus of these tests tends to portray an incomplete if not an inaccurate determination of students' achievement. She suggested many standardized tests are limited in their measurement of cognitive abilities and often contain some cultural and gender biases. Wienclaw offered another contributing factor to expanding the achievement gap is the biases that exist related to teacher expectations. She concluded that efforts to realign methods of instruction and curricular focus, accountability testing, and teacher training are essential to creating an educational

environment that is more normal across the nation and better suited to provide for the needs of students.

In a report published in 2005, the Center for Public Education reviewed research and reported that a significant link exists between teacher quality and student achievement. The report offered three basic premises that are essential to reforming schools. These basic principles included the following:

1. Teacher knowledge and ability are the most important influences on what students learn.
2. Recruiting, preparing, and retaining quality teachers are key elements for improving schools.
3. Schools must focus on providing teachers the ability to teach to successfully facilitate necessary reform.

Outlined in the report were the essential qualities that teachers possess that are most beneficial to student achievement. They included content knowledge, experience, training and credentials, and academic ability. Evidence from the research indicated an individual teacher's content knowledge strongly predicts student achievement. A major or minor in the teacher's field of study provided strong evidence of improved student achievement. The research reviewed also indicated a positive correlation between years of experience and student achievement. It was notable that the research indicated schools with higher numbers of inexperienced teachers experienced a greater degree of drop outs. Some studies provided evidence that student achievement is significantly greater when properly certified teachers are present in the classrooms. Also, the report noted teachers who demonstrated greater academic abilities tended to improve student achievement more

significantly than teachers who did not demonstrate similar abilities. The report concluded that efforts by schools to improve student achievement should include the following elements:

- Recruiting programs to attract and employ teachers with strong academic credentials.
- Develop collaborations with teacher training programs to ensure adequate and appropriate preparation of candidates.
- Encourage post-secondary institutions to recruit top candidates to enter education.
- Develop, establish, and maintain intensive induction programs to ensure appropriate preparation for new teachers.

The research review provided significant evidence indicating that appropriately prepared teachers are an essential element to providing for significant and meaningful reform and a subsequent reduction of the achievement gap.

A brief history of educational policy making and its relationship to literacy instruction was offered by Shanahan (2014). He began by noting that constitutionally, education was designated as a right and responsibility of individual states. However, with the implications that lagging state educational programs had on economic issues, the federal government became more involved with establishing policies and programs aimed at improving achievement nationwide. Shanahan noted that federal intervention into educational policy and performance began with the establishment of Title I programs to address lagging literacy achievement. As educational programs across the nation continued to perform less and less effectively, the involvement of the federal government

became more substantial. The establishment of No Child Left Behind in 2002 signaled the high point of federal involvement in the development of a nationwide educational policy. Mandated testing, reporting, and accountability requirements of No Child Left Behind served to create a more normal educational system throughout the nation.

Shanahan noted that the degree of federal control of education was mitigated by the fact that with regulation came a greater degree of research-based curriculum development. That development, along with the adoption of the Common Core State Standards, signaled the beginning of what could become a nationwide curriculum. Shanahan noted those developments had a profound effect on the development of literacy programs and instruction. New emphasis was placed on the instruction of fundamental literacy skills and the responsibility for decision making related to classroom instruction was shifted to classroom teachers. He concluded the recent paradigm shift in policy making would continue into the future to ensure that essential literacy instruction is delivered in a manner most advantageous for improvement of achievement.

A significant amount of research has been conducted related to the effectiveness of individual and varied forms of literacy instruction. Research related to the importance of effective literacy instruction was conducted by Cambourne (1995); Anderson et al. (1985); Bridge, Compton-Hall, and Cantrell (1997); and Cantrell (1999). Both Anderson et al. (1985) and Bridge et al. (1997) expressed the importance of individualized instructional programs for each student. Cantrell (1999) noted the importance of language study and inquiry, and Cambourne (1995) added that student expectations were significant contributors to overall effectiveness.

Significant research has been conducted related to the effectiveness of phonics instruction. Cunningham (1990) studied phonics instruction and noted that while several effective forms of phonics instruction exist, research has yet to identify a single superior method. She added that decoding was an essential skill in the development of good readers and writers. Along with decoding, Liang and Dole (2006) added that comprehension is a fundamental skill of literacy instruction. Phonetic skills related to the development of student comprehension were provided by Clark and Graves (2005) and Caccamise (2011). Clark and Graves (2005) offered evidence related to the importance of scaffolding, and Caccamise (2011) argued the importance of the development of writing skills. Flury (2002) indicated that phonics instruction does not present teaching obstacles and that most students learn to read during the first year of school. A study conducted by Cunningham (1990) compared the effectiveness of two different forms of phonics instruction. The results indicated that both forms of instruction improved student achievement. Finally, Anthony and Francis (2005) found the development of phonological awareness to be a critical factor related to learning to read.

A different method of literacy instruction is whole language. Pressley (2002) noted that whole-language instruction has demonstrated success for some readers, but also has provided struggling students with insurmountable difficulties. Bomengen (2010) indicated that whole-language instruction abandons the phonetic practice of decoding in favor of reading by recognizing words as whole pieces of language. She found that both phonics and whole-language instruction were effective forms of instruction but that phonics instruction was found to have a more significant effect in relation to standardized test scores.

Studies comparing the effectiveness of phonics versus whole-language instruction were conducted by Foorman et al. (1996), Stahl et al. (1996), and Terrell (1999). Each of these studies found evidence that students benefited from both types of instruction. All three noted that phonics instruction was found to have a more significant effect on student achievement compared to the whole-language instruction. However, Terrell (1999) found that whole-language instruction was more beneficial for some students, and Foorman et al. (1996) and Stahl et al. (1996) found that whole-language students displayed greater motivation and a better attitude toward reading.

An additional program related to literacy instruction is balanced literacy. Archer (2008) described a balanced literacy instructional program as one that addresses the learning styles of individual students by employing a variety of instructional methods. Mermelstein (2013) added that balanced literacy is difficult to define due to the number and variety of different instructional methods that are being employed. However, Fountas and Pinnell (2012) offered that all balanced literacy programs must include both decoding instruction and reading comprehension.

Research related to balanced literacy concepts included Elley (1992); Elley and Mangubhai (1983); Anderson et al. (1988), and Taylor et al. (1990). Each of these studies found that the time that students devote to reading and the quality of the materials provided contributed to the effectiveness of the instructional program. Another study conducted by Bitter et al. (2009) found raised expectations, related to instruction, contributed to improved student achievement.

Another significant issue related to literacy instruction was teacher concerns related to addressing issues of struggling learners. Ganske, Monroe, and Strickland

(2003) conducted a study to examine teachers' issues related to literacy instruction. Specifically, 191 teachers responded to a survey by submitting questions they had related to instructional practices designed to address the needs of struggling readers and writers. Respondents to the survey were from seven different states along the eastern coast of the United States and included teachers of kindergarten through middle school with the significant majority being first through sixth-grade teachers. Participants were classified as induction-year teachers, first-year teachers, developing teachers, second- or third-year teachers, or seasoned professionals with four or more years of teaching experience in their field.

Respondents submitted 420 questions related to individual concerns for dealing with issues of struggling learners (Ganske et al., 2003). The researchers reviewed all of the questions and categorized them into nine groups. The nine categories included the following:

1. Skill and strategies
2. Variability in students' literacy levels and linguistic abilities
3. Time organization and classroom management
4. Motivation
5. Family involvement
6. Testing and assessment
7. Background knowledge
8. Classroom environment
9. Materials

The researchers found the primary concern of induction-year teachers was variability, or the ability to work with students of different levels of abilities. Experienced teachers also expressed concern related to variability and added that problems were often elevated due to large class sizes. Even though experienced teachers, both developing teachers and seasoned professionals, expressed concern with variability, their primary concern was related to how to develop strategies to support struggling readers and writers. Induction-year teachers expressed little concern for time management or organizational issues in contrast to both developing teachers and seasoned professionals. Nearly one-fourth of experienced teachers asked how to arrange for small group instruction, how to find additional time to spend with struggling students, and how to provide adequate feedback to students without being consumed by the overload. A significant portion of all three groups of teachers expressed concern with motivating struggling students, specifically seeking strategies to inspire students who had both tuned out and those who had not yet been excited by learning. Ganske et al. (2003) noted the issues presented were shared concerns of teachers from different grades and states and that they shared a common theme. They concluded that teachers want assistance in helping struggling learners. They offered the suggested interventions provided were fairly general, and individual teachers would need to work to develop strategies to address the specific needs of their students.

Research has explored the effectiveness of some instructional programs and theories to determine their effect upon student achievement. Clay (2001) developed some programs and theories related to instruction directly related to emergent literacy.

McNaughton (2014) reviewed the influence of the theories and programs developed by Marie Clay on the continued development of instruction for emergent literacy. He noted

that at the completion of her longitudinal reading study in 1966, Clay was one of the first to offer evidence that learning before school was a significant contributing factor to emergent literacy. Her findings helped lead to the understanding that an individual's developmental knowledge was significantly influenced by his or her development before the beginning of formal instruction. Previously, it was believed that literacy instruction began with formal classroom instruction. Clay's initial emergent literacy program, Reading Recovery, was developed to address individual developmental issues and to shape instruction to address individual student needs. Clay noted the need to understand individual student's developmental patterns required that teachers be highly knowledgeable, highly adaptable, and highly strategic experts.

McNaughton (2014) reviewed the major components of Clay's Reading Recovery program including roaming around the known, children's resources, assessing, scaffolding, and adaptive expertise. Roaming around the known refers to the process in which teachers take the time to get to know and understand students' developmental backgrounds. Children's resources refer to the process of employing a child-centered view of instruction including cognitive processes, strategic learning and performance, problem-solving, and self-regulation. Clay's concepts related to assessment have been developed into practices used to determine individual student progress related to literacy. A key concept developed by Clay was an emphasis on errors where appropriate analysis of students' errors enables teachers to shape better instruction. The process of scaffolding refers to the process in which beginning teaching is considered a form of tutoring. This process builds the instructional program around the needs of the student. Adaptive expertise refers to the necessity of emergent literacy teachers to be extensively trained to

address the specific needs of individual students better. McNaughton concluded that the work of Marie Clay is both historical and contemporary. Her concepts and programs helped to change the way educators thought with respect to emergent literacy learning. In addition, her practices, procedures, and programs that originated from her findings continue to develop and are used today to address the specific needs of learners.

Also, Noble (1995) and Jones (2000) each addressed issues related to Reading Recovery programs. Noble (1995) questioned the degree to which Reading Recovery should be implemented within a school to ensure the needs of emerging literacy learners were being addressed. She noted that states, districts, and schools struggle to find appropriate resources to address the growing needs of emerging learners. Noble noted reallocation of federal funds, Title I, and restructuring of teaching assignments could serve to create more Reading Recovery teaching positions. She suggested that full implementation of the Reading Recovery program should be used to create an atmosphere in which needs of students are addressed proactively rather than reactively. She concluded the shift to full implementation should create an environment in which learning issues for emergent learners are greatly reduced or eliminated during their primary years. Jones (2000) offered a strategic plan for teachers who were working within the Reading Recovery model. He noted decision making for Reading Recovery teachers requires skills of observation and thoughtful analysis that many teachers have not had to learn to teach in a regular classroom. Jones compared the decision-making related to teaching Reading Recovery to action research, noting that decisions that must be made involve a complex process in which the teacher essentially develops an individual curriculum for each learner. He offered a problem-solving model for teachers

as well as a list of 13 questions that Reading Recovery teachers should ask themselves to determine if they are meeting the needs of students. Jones concluded by noting that Reading Recovery teachers must realize that continued improvement in their teaching effectiveness depends on their ability to improve as analysts and problem-solvers of individual students' learning and their teaching. He noted that every time an emerging learner is successful, the teacher improves their skills which greatly increases the probability of success for future learners.

With a similar purpose, Stahl (2009) compared interventions developed by Marie Clay such as Picture Walk, Donna Ogle with Know-What to Learn-Learn, and Russell Stauffer with Directed Reading-Thinking Activity. All of these methods share a common goal to teach comprehension through the employment of similar learning strategies. Stahl administered all three of the interventions to 31 struggling second-grade students in a random order. She found all students made similar gains on vocabulary acquisition. Although all of the interventions showed positive gains for students, she noted that DRTA results showed the greatest gains overall. Stahl concluded the test indicated a variety of interventions could be applied to help emerging readers to increase their vocabulary and comprehension skills.

Additional information related to literacy instruction was contributed by Kuhn, Schwanenflugel, and Meisinger (2010). Kuhn et al. offered speculation related to the relative importance of reading fluency and its relationship to the assessment of student achievement. They noted that the shift in the importance of the role of fluency was directly related to its identification as an area of review by the National Reading Panel. Due to that shift of emphasis, fluency has become an instructional component that is

often responsible for driving major instructional decisions. Kuhn et al. noted that a number of definitions and instructional strategies related to fluency exist. They added that accuracy, automaticity, and prosody are significant components and that the way that these elements are viewed relative to their individual importance significantly influences how they are taught and assessed.

Kuhn et al. (2010) reviewed some definitions of fluency and instructional methods that were being implemented. As a result of their review, they offered their definition of fluency. “Fluency combines accuracy, automaticity, and oral reading prosody which, taken together, facilitate the reader’s construction of meaning. It is demonstrated during oral reading through ease of word recognition, appropriate pacing, phrasing, and intonation” (p. 240). They continued, “It is a factor in both oral and silent reading that can limit and support comprehension” (p. 240).

The authors concluded by restating that instruction and assessment were determined by fluency and emphasis of selected elements (Kuhn et al., 2010). “It is critical that we establish assessments, and instruction, that assist learners in becoming truly fluent readers rather than just fast ones” (Kuhn et al., 2010, p. 246). They added that viewing fluency as part of individual students’ reading development would lead to more effective literacy instruction.

Conclusion

Research has indicated poverty, gender, and classroom instruction all have some degree of influence upon student achievement. Slavin et al. (1992) found that students who experience failure during the early years of education rarely recover and tend to continue to experience some degree of failure throughout their education years. It is

evident that poverty is the most influential contributing factor when considering the achievement gap. Disadvantages that children of poverty face greatly hamper their ability to compete with peers who come from homes which provide greater resources and parental involvement and communities that demonstrate a higher value for education, better living conditions, and a culture that is more supportive of children and their individual social and physical needs. A great deal of the research findings and recommendations addressing issues related to poverty stress significant reform for both educational and social programs.

Research has also found that the effects of stereotyping in schools have some measure of influence on student achievement. However, there is conflicting evidence on how much effect gender exerts upon overall student achievement. Also, a significant amount of research has linked quality classroom instruction to academic achievement. Teacher preparation and instructional programs have been found to be important contributing factors related to student achievement. Students who are exposed to and participate in research-based educational programs have been found to be more successful at demonstrating greater academic achievement.

Researchers have found a number of factors contribute to students' academic achievement. It is evident the most significant influencing factor is the students' condition related to poverty. Simply, students that suffer from the conditions of poverty perform at a significantly lower level than students who do not. To some degree gender and classroom instruction also affect student achievement. The significance of both gender and instruction are less defined than poverty. Research has not found significant evidence that any single specific instructional program is significantly more effective at

improving student achievement. Also, research has indicated other contributing factors affect student achievement. These factors contribute to student achievement alongside the variables addressed in this study. Evidence exists indicating that there is, to some degree, a connection between the variable included herein and their effect on student achievement.

CHAPTER III

METHODOLOGY

The review of the literature provided significant evidence related to the effect that instruction, poverty, and gender have on student achievement. Case studies examined provided evidence that each variable demonstrates a varied degree of influence. Research related to instruction often found that specific instructional methods had some effect on student achievement. Research related to poverty found a variety of detrimental effects that students experience due to poverty. Finally, research related to the influence of gender found varying degrees of effect on student achievement.

A significant amount of research has been conducted related to the effectiveness of individual and varied forms of literacy instruction. Research related to the importance of effective literacy instruction was carried out by Cambourne (1995), Anderson et al. (1985), Bridge et al. (1997), and Cantrell (1999). Both Anderson et al. (1985) and Bridge et al. (1997) expressed the importance of individualized instructional programs for each student while Cantrell (1999) noted the importance of language study and inquiry. Cambourne (1995) added that student expectations were significant contributors to overall effectiveness and Cunningham (1990) studied phonics instruction, noting that while several effective forms of phonics instruction exist, research has yet to identify a single superior method.

One example of literacy instruction examined was the whole-language method. Pressley (2002) advocated that whole-language instruction has demonstrated success for some readers but also has provided struggling students with insurmountable difficulties. Research by Bomengen (2010) indicated that whole-language instruction abandons the phonetic practice of decoding in favor of reading by recognizing words as whole pieces of language. She found that both phonics and whole-language instruction were effective forms of instruction but that phonics instruction was found to have a more significant effect as related to standardized test scores.

An additional literacy instruction program reviewed was balanced literacy. Archer (2008) described a balanced literacy instructional program as one that addresses the learning styles of individual students by employing a variety of instructional methods. Mermelstein (2013) added that balanced literacy is difficult to define due to the number and variety of different instructional methods that are being employed. However, Fountas and Pinnell (2012) argued that all balanced literacy programs must include both decoding instruction and reading comprehension. The common thread of all research reviewed is that instruction is a vital component of every curriculum. “Success in the early grades does not guarantee success throughout the school years and beyond, but failure in the early grades does virtually guarantee failure in later schooling” (Slavin et al., 1992, p. 11). Slavin et al. (1992) found that students who experienced some degree of failure in early grades did not recover and continued to experience failure throughout their school years.

Studies conducted in efforts to define the detrimental effects of poverty on children have found that exposure to poverty has a profound and lasting effect on the

cognitive, social, and educational development of children. Many factors mitigate the effects of poverty on children. Brooks-Gunn and Duncan (1997); Payne (1996); and Renchler (1993) each studied the effect of poverty on student achievement. Brooks-Gunn and Duncan (1997) noted that the depth of poverty, the family income, and the timing of poverty in a child's lifetime have a significant effect on the degree of the detriment that a child will experience. Children exposed to poverty at an early age were more likely to experience some degree of difficulty in completing school than were children that were exposed to poverty at a time beyond the early developmental years. Both Payne (1996) and Renchler (1993) agreed with Brooks-Gunn and Duncan (1997) that depth, timing, and length of exposure to poverty were mitigating factors in determining the degree of effect.

Payne (1996) indicated that teachers and administrators who work with children of poverty must understand their role. This role is not to resolve all of the issues that individual children of poverty face but to provide support systems, role models, and opportunities to learn, which will increase the likelihood of success. In a similar fashion Renchler (1993) provided a comprehensive look at the disadvantages that children of poverty face as they enter school and what is being done to combat those issues.

Renchler, like Payne (1996), found that resources and attitudes have a profound effect on the performance of children of poverty.

In addition to instruction and poverty, gender appears to have some effect on student achievement. Research has been conducted attempting to determine the effect that gender plays upon student's ability to achieve. Gender-related issues that have been examined include differences between male and female students and their effects on

individual achievement as well as similarities between males and females and how those similarities affect achievement. Also the effects of stereotypes that students face and how they affect achievement and the structure of schools and how that affects student achievement were examined.

Research has indicated that commonly held perceptions related to gender often affect student achievement. Studies conducted by Machin and McNally (2004), Spencer et al. (1999), Hartley and Sutton (2013), and Hyde (2005) examined a variety of gender-related issues to determine the effect on student achievement. Machin and McNally (2004) studied the achievement gap that existed between male and female students using various samples of programs that schools applied to address the gender gap. They determined that no significant measurable improvement was found. Spencer et al. (1999) studied the establishment of negative expectations and found evidence that they do influence student achievement. In a similar study, Hartley and Sutton (2013) examined the effects that negative gender-related stereotypes had upon student perceptions and concluded that perceived societal and educational expectations had an adverse impact on student performance. They further suggested that schools refrain from promoting those beliefs or programs that support those stereotypes.

Finally, a study conducted by Hyde (2005) examined the effect of gender similarities opposed to differences in student achievement. Even though Hyde studied gender similarities as opposed to gender differences, she found evidence that there was little significant difference between males and females related to cognitive variables, communication, social and personality values, psychological well-being, and to some extent motor behavior. Hyde concluded that theories supporting gender differences are

less reliable and the development of social and educational programs aimed at addressing those issues is wasteful and can be detrimental in numerous areas.

Taking into account the variables of instruction, SES, and gender, the researcher generated the following hypotheses.

1. No significant difference will exist by gender between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment.
2. No significant difference will exist by gender between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment
3. No significant difference will exist by SES between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment
4. No significant difference will exist by SES between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers

Workshop instruction on literacy achievement as measured by the PARCC assessment.

The six goals of this chapter were to (1) explain the research design of this study, (2) describe the subject and explain the sample selection process, (3) identify and describe the instrumentation, (4) explain the data collection process, (5) provide justification for the analytical method used, and (6) note any limitations of the study.

Research Design

The quantitative research design used for this study was a causal-comparative, non-experimental design. Participants included third- and fifth-grade students from eight western Arkansas schools in four school districts, all of whom participated in the PARCC assessment in the spring of 2015. The PARCC assessments were mandated by the State of Arkansas in the spring of 2015 as an accountability tool to measure individual student and school progress. Because the test was mandated and therefore employed in every school, no manipulation of the primary independent variable—instruction—was possible. Johnson and Christensen (2012) indicated that a causal-comparative approach would be appropriate for this study.

A 2 x 2 factorial between groups design was used to analyze each of the four hypotheses. The independent variables for the first two hypotheses were literacy instruction (participation in Workshop versus no participation) and gender (male versus female). The independent variables for the final two hypotheses were literacy instruction (participation in Workshop versus no participation) and SES (free/reduced lunch versus regular lunch status). The dependent variable for all of the hypotheses was literacy achievement measured by the PARCC assessment.

Sample

The study used data from third- and fifth-grade students' PARCC literacy scores from eight western Arkansas elementary schools. Four of the elementary schools chosen were schools in a school district that used the Workshop model for literacy instruction, while the other four elementary schools were in school districts that did not use the Workshop model for literacy instruction. The individual schools were paired, and demographics related to race and SES for all schools were comparable. Of the two individual groups of schools, one group represented schools that demonstrated a high level of poverty (SES ranged from 76% to 83%) and the other group of schools demonstrated a low degree of poverty (SES ranged from 36% to 63%).

Students identified to participate in the study were third- and fifth-grade students at eight elementary schools located in western Arkansas. Demographics for the eight schools indicated that the majority of the populations were White (an average of 80.3%) with an average of 10.3% Hispanic and 9.4% represented by other races. The average percent of students receiving special education services was 13.4%. The total population of all eight schools was 4,676 students.

Instrumentation

Thacker et al. (2014) noted that the PARCC evaluation system was designed to do the following:

1. Build pathways to college and career readiness for all students
2. Create high-quality assessments that measure the full range of the Common Core State Standards
3. Support educators

4. Better use technology for assessment
5. Advance accountability at all level

In the spring of 2015, the students participated in the PARCC assessment exams for literacy. According to the 2014-2015 PARCC Score Report Interpretation Guide, PARCC is a multiple-choice and open-response question assessment designed to measure student achievement in English language arts/literacy and mathematics based on the learning standards established by the Common Core State Standards for students in Grades 3-8 and high school.

Data Collection Procedures

After obtaining Institutional Review Board approval, the researcher obtained demographic information related to the schools involved in the study from individuals in the districts, from media sources sponsored by the districts, and from the Arkansas Department of Education. The data collected included location, grade level populations, ratios of male versus female students, and SES status for the individual schools and third- and fifth-grade students within each school. Individual student names were replaced with numbers to ensure anonymity and to maintain confidentiality. The Arkansas Department of Education Data Center supplied data from each school to the researcher, and the data provided included PARCC literacy exam scores for third- and fifth-grade students from each school. Excel spreadsheets were created for the data collected, and samples were randomly drawn from each stratified grouping to create equally sized samples.

Analytical Method

Data analysis was accomplished by using IBM Statistical Packages for the Social Sciences Version 23 (Pallant, 2013). Data collected was coded according to school status

based on the instruction, participation in Workshop versus no participation, individual students' gender, and individual students' SES status. Each hypothesis was analyzed using the following statistical analysis. First, a pre-analysis of data was completed to verify the number of participants by grade level, instructional status, gender, and SES status to ensure appropriate numbers for sampling. Next, data were analyzed to check for outliers and to ensure homogeneity of variance per the Levene's statistic.

To address the first two hypotheses, two 2 x 2 factorial ANOVAs were conducted using Workshop participation by gender as the independent variables and literacy achievement measured by student scores on the PARCC literacy exam as the dependent variable. The first hypothesis considered data related to third-grade students and the second hypothesis considered data related to fifth-grade students. To address the final two hypotheses, two 2 x 2 factorial ANOVAs were conducted using Workshop participation by SES as the independent variables and literacy achievement measured by the PARCC literacy exam as the dependent variable. As in the first two hypotheses, the third hypothesis considered data related to third-grade students and the final hypothesis considered data related to fifth-grade students. To test the null hypotheses, a two-tailed test of significance was conducted with the probability set at .05 level of significance.

Limitations

To better facilitate understanding and more clear interpretation of results, it is important to note research limitations. The limitations associated with this research study include the following. First, the design of the study was causal-comparative and non-experimental. The research design itself was a limitation. The researcher was not able to manipulate the independent variable nor randomly assign participants. This type of study

produces less conclusive evidence. However, the design of the study did not appear to exceed the ordinary circumstances experienced when existing data are used for research purposes.

Second, the limited number of participants represented a limitation. Student data was collected from third- and fifth-grade students at eight elementary schools from four different school districts in western Arkansas; thus, research was confined to students in those grades, schools, and districts. Therefore, the quantitative procedures were limited and allowed for generalizations that were restricted in nature and are not readily applicable to all students, schools, districts, and circumstances.

Third, testing may have had some effect on internal validity. Student participants of this study took the PARCC test, a newly developed instrument, for the first time during the 2015 school year. Also, testing was accomplished electronically for the first time. Even though the instrument was new and the format of testing had changed, it is important to note that all student participation was consistent therefore testing was not considered a major limitation.

Fourth, the relation of this study and the gaps in other research that has been conducted was a limitation. There is a significant amount of research related to literacy instruction and its effect on student achievement. A significant amount of the research compares phonetic instruction to whole-language instruction or whole-language instruction to the balanced literacy instruction approach. After reviewing some of the literature available, there appear to be some gaps in the research. This study sought to find a corresponding relationship between a specific instructional model, Workshop, and other instructional models that may or may not have been similar in nature.

All school administrators are responsible for providing appropriate instructional programs designed to improve student achievement. Examination of the effects of the independent variables, SES and gender, on the dependent variable, literacy instruction, may provide some degree of assistance during the process to select appropriate instructional programs. Regardless of the limitations above, the researcher proposes that the results of this study may provide information that could be of assistance for administrators when deciding the direction of the school's or district's literacy instructional model.

CHAPTER IV

RESULTS

The purpose of this quantitative research study was to determine the effects of Workshop literacy instruction by gender and SES on literacy achievement of students in eight schools in Western Arkansas. The independent variables were the type of instruction (Workshop versus No Workshop), gender (male versus female), and SES (free/reduced lunch versus regular lunch). The dependent variable was literacy achievement as measured by scale scores from the 2015 PARCC Examination. Using IBM Statistical Packages for the Social Sciences Version 23, a factorial ANOVA was performed to examine each of the four hypotheses (Pallant, 2013). Before completing the statistical analysis, assumptions of normality, homogeneity of variance, and independence of groups were checked. Also, data were screened to eliminate abnormalities. The results of the analysis are found in this chapter.

Hypothesis 1

Hypothesis 1 stated that no significant difference will exist by gender between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment. Screening for data abnormalities resulted in several cases being removed from the sample. Of the scale scores reported and removed, 18 used alternate assessments, and two students did

not complete the assessment. Therefore, 20 cases were removed. To test for normality, skewness and kurtosis were examined, and both were between 1 and -1. Kolmogorov-Smirnov (KS) statistics and histograms were used to test for normality with $p > .05$ for each group, indicating that the data were normally distributed across all groups. KS results for males with Workshop, $D(124) = 0.05, p = .200$; females with Workshop, $D(151) = 0.05, p = .200$; males with no Workshop, $D(229) = 0.03, p = .200$; and females with no Workshop, $D(199) = 0.03, p = .200$. No student was a member of more than one group indicating independence. Finally, Levene's test for equality of variances was conducted within ANOVA and indicated homogeneity of variance across groups, $F(3, 699) = 0.50, p = .682$. Table 1 displays the group means and standard deviations.

Table 1

Descriptive Statistics for Gender by Instruction for Third-Grade 2015 PARCC Examination Literacy Scale Scores

	Third-Grade Literacy							
	Male			Female			Total	
Instruction	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Workshop	124	717.28	37.81	151	727.79	38.59	723.05	38.53
No Workshop	229	725.74	36.13	199	735.05	34.75	730.07	35.76
Total	353	722.77	36.89	350	731.92	36.58	727.32	36.99

To test this hypothesis, a 2 x 2 factorial ANOVA was conducted using type of instruction (Workshop versus No Workshop) by gender (male versus female) on literacy achievement. The results of the ANOVA are displayed in Table 2.

Table 2

Factorial ANOVA Results from Third-Grade 2015 PARCC Examination Literacy Scale Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>ES</i>
Instruction	10260.10	1	10260.10	7.63	.006	0.011
Gender	16311.18	1	16311.18	12.18	.001	0.017
Instruction*Gender	59.16	1	59.16	0.04	.834	0.000
Error	935868.12	699	1338.87			

Note: Adjusted R Squared = .022

Based on the interaction of the two independent variables, no significant interaction effect existed; therefore, there was not enough evidence present to reject the null hypothesis, $F(1, 699) = 0.04$, $p = .834$, $ES = 0.000$. The interaction between gender and instruction predicted approximately 2% of literacy achievement. Given there was no significant interaction between the variables of instruction and gender, the main effect of each variable was examined separately. The main effect for instruction was significant with a small effect size, $F(1, 699) = 7.63$, $p = .006$, $ES = 0.011$. In addition, the main effect for gender was significant with a small effect size, $F(1, 699) = 12.18$, $p = .001$, $ES = 0.017$. Figure 1 shows the means for third-grade literacy achievement as a function of instruction and gender.

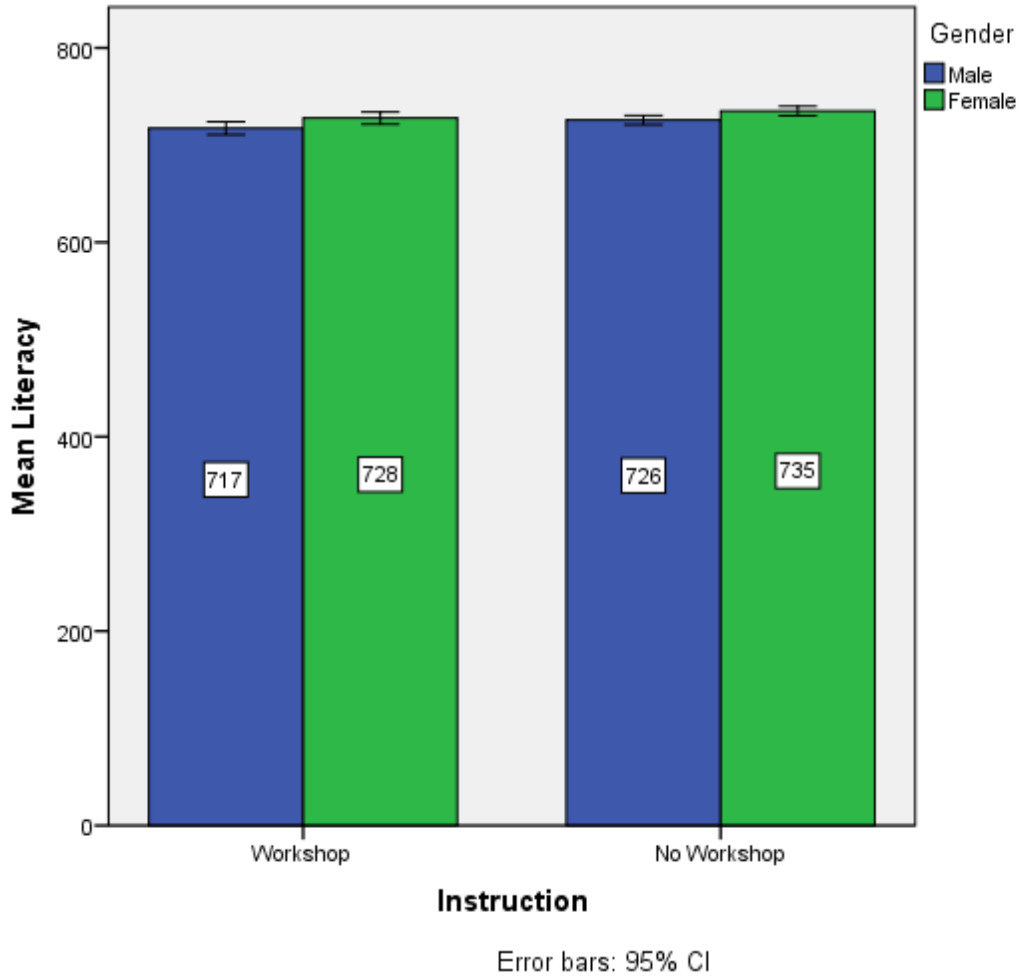


Figure 1. Means for third-grade literacy achievement as a function of instruction and gender.

For the main effect of gender, the results of the analysis indicated that, on average, the mean of the female students ($M = 731.92$, $SD = 36.58$) was significantly higher compared to the means of the male students ($M = 722.77$, $SD = 36.89$). Additionally, for the main effect of type of instruction, the results indicated that, on average, students with no Workshop instruction ($M = 730.07$, $SD = 35.76$) performed significantly higher compared to students with Workshop instruction ($M = 723.05$, $SD = 38.53$). Post Hoc testing was not conducted because neither of the independent variables

contained more than two groups. Overall, the results indicate no combined effect of instructional type and gender. However, when considered independently, both instruction type and gender exerted a significant influence on students' literacy achievement.

Hypothesis 2

Hypothesis 2 stated that no significant difference will exist by gender between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment. Screening for data abnormalities resulted in several cases being removed from the sample. Of the scale scores reported and removed, 15 used alternate assessments, and one student did not complete the assessment. Therefore, 16 cases were removed. To test for normality, skewness and kurtosis were examined, and both were between 1 and -1. Kolmogorov-Smirnov (KS) statistics and histograms were used to test for normality with $p > .05$ for each group, indicating that the data were normally distributed across three of the four groups. KS results confirmed normal distributions for male Workshop participants, $D(137) = 0.07, p = .092$; female Workshop participants, $D(150) = 0.07, p = .051$; and male Workshop non-participants, $D(242) = 0.03, p = .200$. Data indicated that the distribution of females not participating in Workshop was slightly deviated from normal, $D(245) = 0.06, p = .022$. Despite the observed violations of normality, analysis of data was conducted using ANOVA was deemed appropriate because ANOVA is considered robust on violations of the assumption of normality (Pallant, 2013). No student was a member of more than one group. Finally, Levene's test for equality of variances was conducted within ANOVA and indicated the assumption of variance was violated, $F(3,$

770) = 3.33, $p = .018$. However, ANOVA is reasonably robust to the violation of the assumption of variance when group sizes are similar (Pallant, 2013). Table 3 displays the group means and standard deviations.

Table 3

Descriptive Statistics for Gender by Instruction for Fifth-Grade 2015 PARCC Examination Literacy Scale Scores

	Fifth-Grade Literacy							
	Male			Female			Total	
Instruction	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Workshop	137	726.77	30.84	150	738.05	30.43	732.67	31.09
No Workshop	242	732.67	26.18	245	741.15	28.30	736.93	27.57
Total	379	730.53	28.06	395	739.97	29.12	735.35	28.98

To test this hypothesis, a 2 x 2 factorial ANOVA was conducted using type of instruction (Workshop versus No Workshop) and gender (male versus female) on literacy achievement. The results of the ANOVA are displayed in Table 4.

Table 4

Factorial ANOVA Results from Fifth-Grade 2015 PARCC Examination Literacy Scale Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>ES</i>
Instruction	3649.18	1	3649.18	4.47	.035	0.006
Gender	17626.73	1	17626.73	21.62	.000	0.027
Instruction*Gender	353.77	1	353.77	0.43	.510	0.001
Error	627825.40	770	815.36			

Note: Adjusted R Squared = .029

Based on the interaction of the two independent variables, no significant interaction existed; therefore, there was not enough evidence present to reject the null hypothesis, $F(1, 770) = 0.43, p = .510, ES = 0.001$. The interaction between gender and instruction predicted approximately 3% of variance in literacy achievement. Given there was no significant interaction between the variables of instruction and gender, the main effects were examined separately. The main effect for instruction was significant with a small effect size, $F(1, 770) = 4.48, p = .035, ES = 0.006$. In addition, the main effect for gender was significant with a small effect size, $F(1, 770) = 21.62, p < .001, ES = 0.027$. Figure 2 shows the means for fifth-grade literacy achievement as a function of instruction and gender.

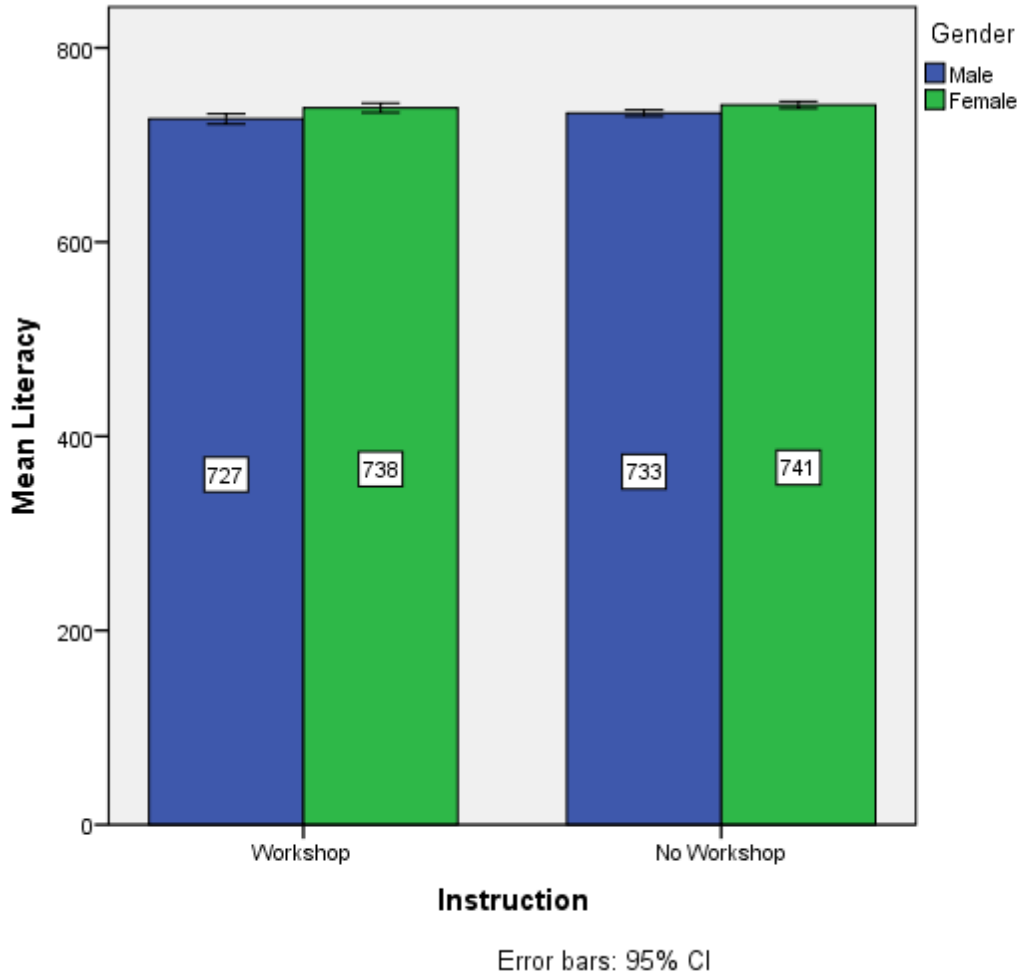


Figure 2. Means for fifth-grade literacy achievement as a function of instruction and gender.

For the main effect of gender, the result of the analysis indicated that, on average, the mean of the female students ($M = 739.97$, $SD = 29.13$) was significantly higher compared to the mean of the male students ($M = 730.53$, $SD = 28.06$). Also, for the main effect of type of instruction, the results indicated that, on average, students with no Workshop instruction ($M = 736.93$, $SD = 27.57$) performed significantly higher compared to students with Workshop instruction ($M = 732.67$, $SD = 31.09$). Post Hoc testing was not conducted because neither of the independent variables contained more than two

groups. Overall, the results indicated no combined effect of instruction type and gender. However, when considered independently, both instruction type and gender exerted a significant influence on students' literacy achievement.

Hypothesis 3

Hypothesis 3 stated that no significant difference will exist by SES between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment. Screening for data abnormalities resulted in several cases being removed from the sample. Of the scale scores reported and removed, 18 represented alternate assessments, and two students did not complete the assessment. Therefore, 20 scores were removed. To test for normality, skewness and kurtosis were examined, and both were between 1 and -1. Kolmogorov-Smirnov (KS) statistics and histograms were used to test for normality with $p > .05$ for each group, indicating that the data were normally distributed across all groups. KS results for SES participants with Workshop, $D(176) = 0.56, p = .200$; SES participants without Workshop, $D(236) = 0.04, p = .200$; SES non-participants with Workshop, $D(99) = 0.07, p = .200$; and SES non-participants without Workshop, $D(192) = 0.03, p = .200$. No student was a member of more than one group indicating independence. Finally, Levene's test for equality of variances was conducted within ANOVA and indicated homogeneity of variance across groups, $F(3, 699) = 0.64, p = .588$. Table 5 displays the group means and standard deviations.

Table 5

Descriptive Statistics for SES by Instruction for Third-Grade 2015 PARCC Examination Literacy Scale Scores

Instruction	Third-Grade Literacy							
	SES Participant			SES Non-participant			Total	
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Workshop	176	714.14	36.63	99	738.89	36.85	723.05	38.53
No Workshop	236	723.13	35.67	192	738.60	34.06	730.07	35.76
Total	412	719.29	36.32	291	738.70	34.97	727.32	36.99

To test this hypothesis, a 2 x 2 factorial ANOVA was conducted using type of instruction (Workshop versus No Workshop) by SES (free/reduced lunch versus regular lunch) on literacy achievement. The results of the ANOVA are displayed in Table 6.

Table 6

Factorial ANOVA Results from Third-Grade 2015 PARCC Examination Literacy Scale Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>ES</i>
Instruction	2996.84	1	2996.84	2.36	.125	0.003
SES	64115.81	1	64115.81	50.44	.000	0.067
Instruction*SES	3409.87	1	3409.87	2.68	.102	0.004
Error	888471.53	699	1271.06			

Note: Adjusted R Squared = .071

Based on the interaction of the two independent variables, no significant interaction effect existed; therefore, there was not enough evidence present to reject the null hypothesis, $F(1, 699) = 2.68, p = .102, ES = 0.004$. The interaction between SES and instruction predicted approximately 7% of variance in literacy achievement. Given there was no significant interaction between the variables of instruction and SES, the main effects were examined separately. The main effect for instruction was not significant, $F(1, 699) = 2.36, p = .125, ES = 0.003$. However, the main effect for SES was significant with a medium effect size, $F(1, 699) = 50.44, p < .001, ES = 0.067$. Figure 3 shows the means for third-grade literacy achievement as a function of instruction and SES.

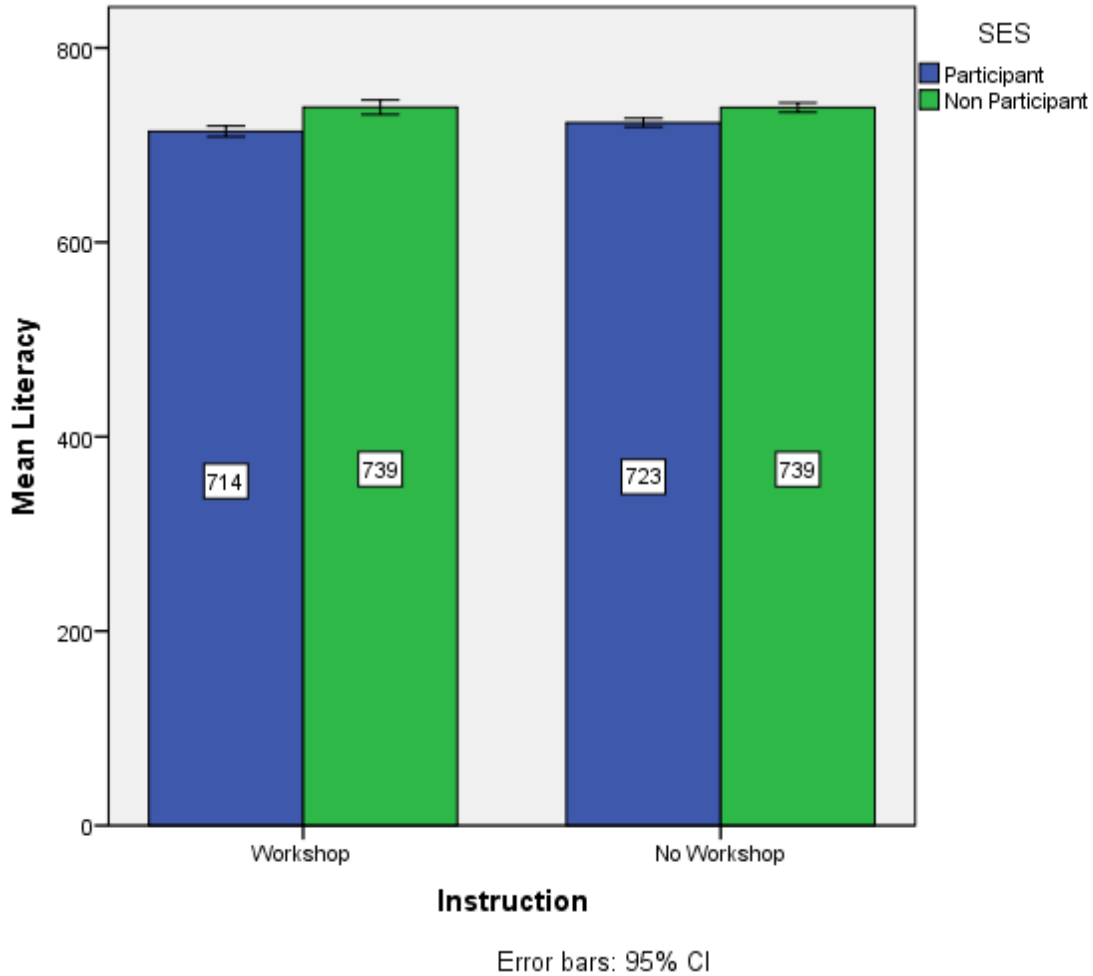


Figure 3. Means for third-grade literacy achievement as a function of instruction and SES.

For the main effect of SES, the results of the analysis indicated that, on average, the mean of SES non-participant students ($M = 738.70$, $SD = 34.97$) was significantly higher compared to the mean of the SES participant students ($M = 719.29$, $SD = 36.32$).

Additionally, for the main effect of instruction, students with no Workshop instruction ($M = 730.07$, $SD = 35.76$) scored comparably to students with Workshop instruction ($M = 723.05$, $SD = 38.53$), no significant difference existed. Post Hoc testing was not conducted because neither of the independent variables contained more than two groups.

Overall, the results indicated no combined effect of instruction and SES. However, when considered independently, SES exerted a significant influence on students' literacy achievement.

Hypothesis 4

Hypothesis 4 stated that no significant difference will exist by SES between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment. Screening for data abnormalities resulted in several cases being removed from the sample. Of the scale scores reported and removed, 15 used alternate assessments, and one student did not complete the assessment. Therefore, 16 cases were removed. To test for normality, skewness and kurtosis were examined, and both were between 1 and -1. Kolmogorov-Smirnov (KS) statistics and histograms were used to test for normality with $p > .05$ for each group, indicating that the data were normally distributed for three of the four groups. KS results for SES participants with Workshop, $D(198) = 0.51, p = .200$; SES participants without Workshop, $D(255) = 0.05, p = .075$; and Non SES participants without Workshop, $D(232) = 0.04, p = .200$. Data indicated that the distribution for SES non-participants participating in Workshop was slightly deviated from normal, $D(89) = 0.10, p = .037$. Despite the observed violations of normality, analysis of data was conducted using ANOVA was deemed appropriate because ANOVA is considered robust on violations of the assumption of normality (Pallant, 2013). No student was a member of more than one group indicating independence. Finally, Levene's test for equality of variances was conducted within ANOVA and indicated homogeneity of variance across

groups, $F(3, 770) = 1.45, p = .227$. Table 7 displays the group means and standard deviations.

Table 7

Descriptive Statistics for SES by Instruction for Fifth-Grade 2015 PARCC Examination Literacy Scale Scores

	Fifth-Grade Literacy							
	SES Participant			SES Non-participant			Total	
Instruction	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Workshop	198	725.51	29.61	89	748.58	28.41	732.67	31.09
No Workshop	255	728.78	26.12	232	745.89	26.36	736.93	27.57
Total	453	727.35	27.71	321	746.64	26.92	735.35	28.98

To test this hypothesis, a 2 x 2 factorial ANOVA was conducted using type of instruction (Workshop versus No Workshop) by SES (free/reduced lunch versus regular lunch) on literacy achievement. The results of the ANOVA are displayed in Table 8.

Table 8

Factorial ANOVA Results from Fifth-Grade 2015 PARCC Examination Literacy Scale Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>ES</i>
Instruction	13.82	1	13.82	0.02	.892	0.000
SES	65852.69	1	65852.69	87.81	.000	0.102
Instruction*SES	1451.81	1	1451.81	1.94	.165	0.003
Error	577468.54	770	749.96			

Note: Adjusted R Squared = .107

Based on the interaction of the two independent variables, no significant interaction effect existed; therefore, there was not enough evidence present to reject the null hypothesis, $F(1, 770) = 1.94, p = .165, ES = 0.003$. The interaction between SES and instruction predicted approximately 11% of variance in literacy achievement. Given there was no significant interaction between the variables of instruction and SES, the main effect of each variable was examined separately. The main effect for instruction was not significant, $F(1, 770) = 0.02, p = .892, ES = 0.000$. However, the main effect for SES was significant with a medium effect size, $F(1, 770) = 87.81, p < .001, ES = 0.102$. Figure 4 shows the means for fifth-grade literacy achievement as a function of instruction and SES.

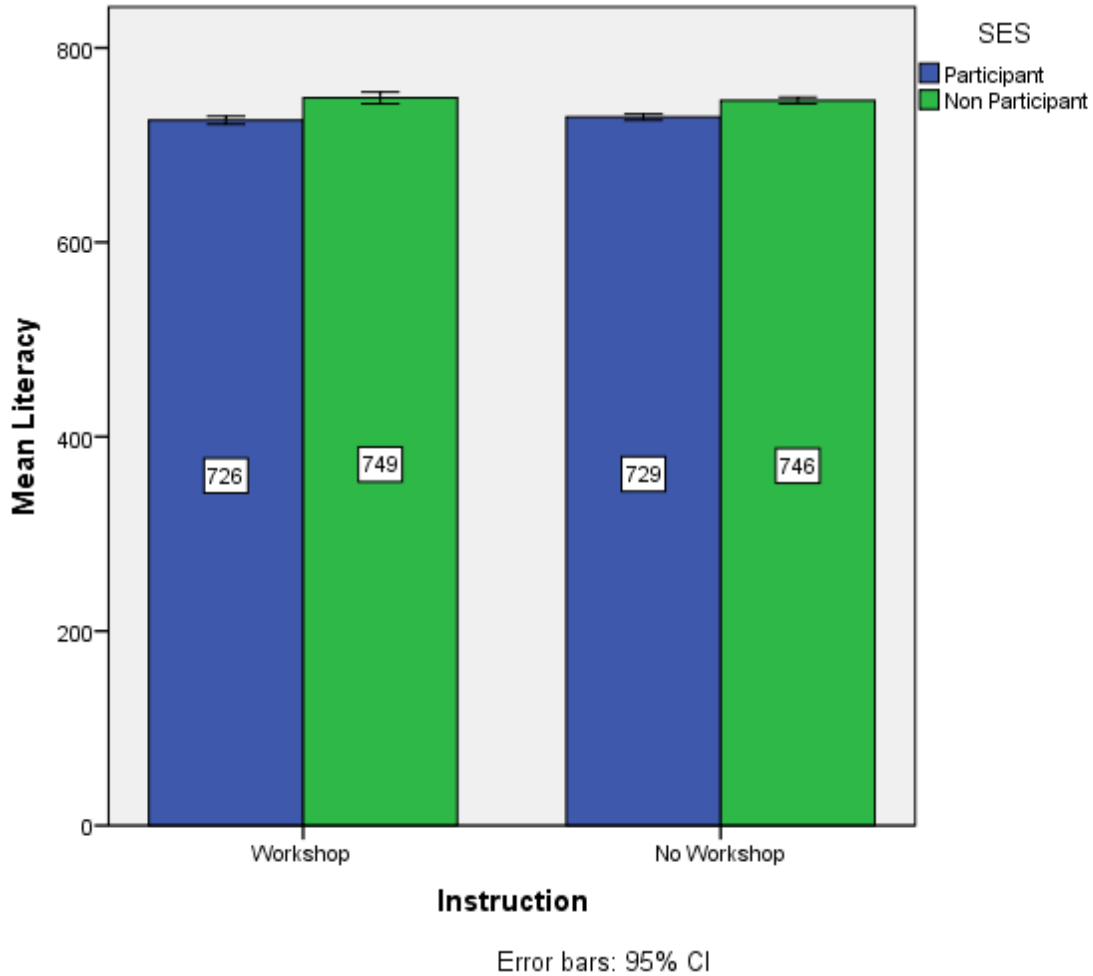


Figure 4. Means for fifth-grade literacy achievement as a function of instruction and SES.

For the main effect of SES, the results of the analysis indicated that, on average, the mean of the SES non-identified students ($M = 746.64$, $SD = 26.93$) was significantly higher compared to the mean of the SES identified students ($M = 727.35$, $SD = 27.72$). Additionally, for the main effect of instruction, students with no Workshop instruction ($M = 736.93$, $SD = 27.57$) scored comparably to students with Workshop instruction ($M = 732.67$, $SD = 31.09$), no significant difference existed. Post Hoc testing was not conducted because neither of the independent variables contained more than two groups.

Overall, the results indicated no combined effect of instructional type and SES. However, when considered independently, SES exerted a significant influence on students' literacy achievement.

Summary

The purpose of this study was to determine the effects of type of instruction in combination with gender or SES on literacy achievement for third- and fifth-grade students in eight Western Arkansas schools. See Table 9 for results of significance for interaction and main effect of variables.

Table 9

Summary of Statistically Significant Results for Hypotheses 1-4

Literacy Achievement ($p \leq .05$) by Hypothesis					
	H1 (3rd)	H2 (5th)	H3 (3rd)	H4 (5th)	
Instruction*Gender	.834	.510	Instruction*SES	.102	.165
Instruction	.006*	.035*	Instruction	.125	.892
Gender	.001*	.000*	SES	.000	.000

* Sig, $p \leq .05$

For Hypotheses 1 and 2, no significant interaction existed between instruction and gender. Similarly, for Hypotheses 3 and 4, no significant interaction existed between instruction and SES. For the main effect of instruction, significant findings resulted from Hypotheses 1 and 2, for both third- and fifth-graders. However, the main effect of instruction was not significant for instruction for Hypotheses 3 and 4 for either third- or

fifth-graders. For the main effect of gender, significance was found for Hypotheses 1 and 2 for third- and fifth-grade students. Likewise, for the main effect of SES, a significant result was found for Hypotheses 3 and 4 related to literacy achievement. Of the effect sizes for all the significant results, only SES in Hypotheses 3 and 4 rose to the level of medium effect size; all other significant results fell in the small effect size range.

CHAPTER V

DISCUSSION

Nations, states, communities, schools, administrators, teachers, and parents are actively seeking avenues to improve student achievement to stimulate economic growth (Sahlberg, 2006). A significant component designed to improve academic achievement is literacy instruction. Literacy instruction, having taken many forms throughout the history of education, is a constantly evolving entity. Pressley (2002) pointed out that learning to read is painfully difficult for some students, and often, parents believe that their children's difficulty in learning to read is linked to the reading curriculum.

Early literacy instruction relied heavily upon phonics instruction. Cunningham (1990) pointed out that research indicates that several useful types of phonics instruction exist, but no research base supports the superiority of any one particular type. For a short time, whole-language instruction became significant for literacy instruction. Pressley (2002) noted that although the whole-language approach to teaching literacy proved to have some small measure of success, it often provided struggling students with insurmountable difficulties. Recently, the balanced-literacy approach to literacy instruction has become popular.

In a balanced literacy approach, teachers choose and implement a variety of instructional strategies to address individual student's learning needs. Because a number of different instructional approaches are referred to as balanced literacy, it is difficult to

identify a single definition (Mermelstein, 2013). Archer (2008) argued that the balanced literacy instruction approach relies on the theory that there are many different learning styles for children who are learning to read. Researchers have offered evidence to support specific components that should be included in a balanced literacy instructional program. Cunningham (1990) noted that to become good readers and writers, students must understand how to decode words. Along with decoding, Liang and Dole (2006) pointed out that comprehension is an integral part of the process of learning to read. Additional research by Anderson et al. (1985), Bridge et al. (1983), Cambourne (1995), and Cantrell (1999) contributed factors that affect literacy achievement. Anderson et al. (1985) and Bridge et al. (1983) contended that multiple and varied instructional methods must be included in the instructional program. Cambourne (1995) championed the importance of student expectations, and Cantrell (1999) added that there was importance in providing opportunities for language study and inquiry. Finally, Fountas and Pinnell (2012) offered that balanced literacy instruction must include both decoding instruction and reading comprehension. This study examined the effectiveness of a specific literacy instruction model, Workshop, as it relates to literacy achievement. Regardless, of the diverse approaches proposed in the literature to improve reading achievement, there seems to be widespread agreement that educators select an instructional model that addresses individual student needs and provides all students opportunities to improve achievement.

For this study, the researcher examined the the effects of instructional model, gender, and SES on reading achievement measured by the PARCC literacy examination scores. This chapter will include conclusions for all four hypotheses, implications of this study's results in relation to the broader context of the literature, and recommendations

regarding potential implementation for practice, policy, and for future research considerations.

Conclusions

To address the four hypotheses, all the hypotheses were analyzed by a 2 x 2 factorial ANOVA. Hypothesis 1 and 2 used instruction and gender as the between-groups independent variables on third- and fifth-grade literacy achievement measured by the PARCC exam scale scores, respectively. Hypothesis 3 and 4 used instruction and SES as the between-group independent variables on third- and fifth-grade literacy achievement measured by the PARCC exam scale scores, respectively. To test the hypotheses, the researcher used a two-tailed test with a .05 level of significance. Interaction and main effects were examined for each of the hypotheses. The following hypotheses were tested and used to determine conclusions.

Hypothesis 1

Hypothesis 1 stated no significant difference will exist by gender between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment. Analysis of the ANOVA results showed that the type of instruction did not interact with gender on students' literacy achievement. Therefore, no significant interaction effect was noted between instruction and gender on literacy test scores for third-grade students, and the null hypothesis for the interaction effect was not rejected. However, the main effect for instruction was statistically significant. Third-grade students who did not participate in Workshop instruction performed better on the PARCC literacy exam compared to

students who participated in Workshop. Also, the main effect for gender was statistically significant. Female third-grade students outperformed male students on the PARCC literacy exam. Therefore, the main effect of both instruction and gender for third-grade students were significant, and the null hypotheses for both main effects were rejected.

Hypothesis 2

Hypothesis 2 stated no significant difference will exist by gender between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment. Analysis of the ANOVA results showed that the type of instruction did not interact with gender on students' literacy achievement. Therefore, no significant interaction effect was noted between instruction and gender on literacy test scores for fifth-grade students, and the null hypothesis for the interaction effect was not rejected. However, the main effect for instruction was statistically significant. Fifth-grade students who did not participate in Workshop instruction performed better on the PARCC literacy exam compared to students who participated in Workshop. Also, the main effect for gender was statistically significant. Female fifth-grade students outperformed male students on the PARCC literacy exam. Therefore, the main effect of both instruction and gender for fifth-grade students were significant, and the null hypothesis for both main effects were rejected.

Hypothesis 3

Hypothesis 3 stated no significant difference will exist by SES between third-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop

instruction on literacy achievement as measured by the PARCC assessment. Analysis of the ANOVA results showed that the instruction did not interact with SES on students' literacy achievement. Therefore, no significant interaction effect was noted between instruction and SES on literacy test scores for third-grade students, and the null hypothesis for the interaction effect was not rejected. The main effect of instruction was not statistically significant. Third-grade students who did not participate in Workshop instruction performed comparably on the PARCC literacy exam compared to students who participated in Workshop. The main effect of instruction for third-grade students was not significant; therefore, the null hypothesis was not rejected. The main effect of SES, however, was statistically significant. Third-grade students who participated in the free/reduced lunch program underperformed students who did not participate in the free/reduced lunch program on the PARCC literacy exam. The main effect of SES for third-grade students was significant, and the null hypothesis for SES main effects was rejected.

Hypothesis 4

Hypothesis 4 stated no significant difference will exist by SES between fifth-grade students in eight western Arkansas schools who participated in Readers Writers Workshop instruction and who did not participate in Readers Writers Workshop instruction on literacy achievement as measured by the PARCC assessment. Analysis of the ANOVA results showed that instruction did not interact with SES on students' literacy achievement. Therefore, no significant interaction effect was noted between instruction and SES on literacy test scores for fifth-grade students, and the null hypothesis for the interaction effect was not rejected. Also, the main effect of instruction

was not statistically significant. Fifth-grade students who did not participate in Workshop instruction performed comparably on the PARCC literacy exam compared to students who participated in Workshop. The main effect of instruction for fifth-grade students was not significant; therefore, the null hypothesis was not rejected. The main effect of SES, however, was statistically significant. Fifth-grade students who participated in the free/reduced lunch program underperformed students who did not participate in the free/reduced lunch program on the PARCC literacy exam. The main effect of SES for fifth-grade students was significant, and the null hypothesis for SES main effects was rejected.

In summary, the researcher found that the school district employing the Workshop model allocated significant resources to facilitate the requirements for participation in the program. The researcher found that students who did not participate in Workshop instruction performed better compared to students who received Workshop instruction for both third- and fifth-graders for the first and second hypotheses. In addition, female students performed better than male students for both third- and fifth-graders. Also, students who participated in SES performed less effectively than students that did not participate in SES for both third- and fifth-graders.

Implications

Interpretation of the results of this study is best facilitated by reflection of the context of the review of the literature. Research related to the influence of instruction, gender, and SES on student achievement has produced varied results. The importance of instruction was shown in research conducted by Sahlberg (2006) and Wienclaw (2015). Sahlberg (2006) noted that improving student achievement is a driving factor behind

global and national educational reform. He added that even though schools across the nation and around the world work diligently to offer instructional programs that provide students greater opportunities to achieve, the educational gap continues to grow.

Wienclaw (2015) further noted that one contributing factor to increasing the gap is the widening of the focus of education in general. She stated that the widening of focus of schools has served to decrease the amount of time that schools spend on basic instruction related to reading, writing, and mathematics. She also noted that the restructuring of the classroom allowed students the opportunity to experience less of the former rigor of traditional classroom instruction. Wienclaw argued that the shift in accountability has created an environment in which standardized testing serves as the single measure of intelligence. She pointed out that in most cases, the limited focus of these tests tends to portray an incomplete if not an inaccurate determination of students' achievement.

Additional research related to the effect of instruction on student achievement was contributed by Cambourne (1995), Anderson et al. (1985), Bridge et al. (1997), and Cantrell (1999). Both Anderson et al. (1985) and Bridge et al. (1997) expressed the importance of individualized instructional programs for each student. Cantrell (1999) noted the importance of language study and inquiry, and Cambourne (1995) added that student expectations were significant contributors to overall effectiveness.

Research related to the effectiveness of phonics instruction was conducted by Cunningham (1990), Liang and Dole (2006), Clark and Graves (2005) and Caccamise (2011). Each of these studies explored the effectiveness of specific components of phonics instruction and identified different individual components of phonics instruction as essential to effective instruction. Specific elements identified included decoding,

comprehension, scaffolding, and the development of writing skills. Additional studies conducted by Flury (2002) and Anthony and Francis (2005) explored the effectiveness of phonics instruction as a whole. Flury (2002) indicated that most students learn to read during the first year of school. Anthony and Francis (2005) found the development of phonological awareness to be a critical factor related to learning to read.

Another method of literacy instruction explored was whole language. Bomengen (2010) indicated that whole-language instruction abandons the phonetic practice of decoding in favor of reading by recognizing words as whole pieces of language. Phonics instruction, she noted, was found to have a more significant effect related to standardized test scores. Also, Pressley (2002) found that whole-language instruction has demonstrated success for some readers but provided some struggling students with insurmountable difficulties.

A final instructional method reviewed was balanced literacy. Research related to balanced literacy concepts included Elley (1992), Elley and Mangubhai (1983), Anderson et al. (1988), and Taylor et al. (1990). All of these studies concluded that the quality of materials and the time that students devote to reading contributed to the effectiveness of the instructional program. In addition, Bitter et al. (2009) added that raised teacher and student expectations contributed to improved student achievement.

All of the research findings mentioned herein are related to this study. These studies each sought to discern the effects of specific components of the variety of instructional models. However, a clear distinction exists between the goals and results of the studies above and this study. The aim of this study was to compare the effects of a specific instructional model, Workshop, employed by one set of schools to the variety of

instructional models being employed by the other schools. No research comparing the effects of the Workshop model as compared to other instructional models could be found. Therefore, this study should provide some new information related to the comparison between Workshop and other instructional models. Results of this study indicated that students who received some form of instruction other than Workshop outperformed students who received Workshop instruction for both third- and fifth-grade students. Moreover, the cost to facilitate the Workshop model for a school district should be considered when considering the implementation of this instructional model.

Information previously provided indicated that there are a number of conflicting theories related to the effects of gender on academic achievement. Research does not consistently support the commonly held concept that female performance is superior on literacy and that males are superior in relation to mathematics. For example, Machin and McNally (2004) found that females outperformed males at both the primary and secondary level, and the gap between the genders increased significantly from Age 11 through Age 16. In their examination of data, they discovered that females outperform males in literacy throughout their education, and even though males tend to outperform females in mathematics early in education, females have greater overall mathematics achievement by the conclusion of compulsory schooling. In a separate study, Hartley and Sutton (2013) examined the effects that negative gender-related stereotypes had upon student perceptions. They concluded that stereotypes had an adverse impact on student performance and suggested that schools refrain from promoting programs that support gender stereotypes.

Finally, Heyder and Kessels (2013) studied the idea that one of the reasons for lower academic achievement for boys was associated with the feminine nature of school structures that impede or inhibit boys' self-concept and academic achievement. They examined research related to studies of gender stereotyping, general perceptions of school, and student attitudes related to schools. Upon completion of their study, Heyder and Kessels concluded that there was not enough evidence to support the theory that the feminine nature of schools was significant with relation to negative male attitudes and academic performance. However, they noted that there is evidence that perceived male and female stereotypes affect student performance in relation to specific academic disciplines.

This study examined the effects of instruction and gender on literacy achievement. Female students outperformed male students for both third- and fifth-graders. These results were consistent with most of the results of gender related studies on literacy achievement. The mean scores for females were significantly higher compared to males for both third- and fifth-grade students.

Included in this study is information related to the effect of SES on literacy achievement. Research related to the effects of SES on student achievement consistently indicated significant detrimental effects. The overwhelming conclusion from all of these studies was that poverty has a profound and lasting effect on the cognitive, social, and educational development of children. Evans (2004) noted that children of poverty experience greater disadvantages than other children, often being forced to confront environmental issues that included family turmoil, violence, and instability. He added that children of poverty experience substantially inferior living conditions, which

included overcrowding, poor quality drinking water, dangerous neighborhoods, parental neglect, and less access to books and educational opportunities. A study by Loughan and Perna (2012) examined the adverse effects of poverty and neglect on the development of children's brains and cognitive abilities and found that children who experience poverty and neglect would likely demonstrate some degree of detriment. Finally, Brooks-Gunn and Duncan (1997) noted that many factors mitigate the effects of poverty on children. The depth of poverty, family income, and timing of poverty in a child's lifetime have significant effects upon the degree of the detriment that a child will experience. They concluded that children exposed to poverty at an early age were more likely to experience some degree of difficulty in completing school compared to children exposed to poverty at a time beyond the early developmental years.

This study examined the effects of instruction and SES on literacy achievement and found that identified students underperformed non-identified students for both third- and fifth-graders for all instructional models. Results found in this study were consistent with results of all SES related studies on literacy achievement. The mean scores were significantly higher for SES non-participants than SES participants for both third- and fifth-grade students.

Recommendations

Potential for Practice/Policy

The study was conducted in four school districts in western Arkansas and limited to third- and fifth-grade students only. The 2015 PARCC literacy test scores of third- and fifth-grade students from eight schools who received Workshop or did not receive Workshop literacy instruction were compared. Also, test scores of third- and fifth-grade

students by gender and by SES status were compared. The findings of this study may be helpful in assisting school administrators and teachers in selecting appropriate instructional programs to best facilitate individual student needs. First, school administrators must consider the effectiveness of instructional programs by choosing programs that best facilitate the needs of their students and community. Also, administrators must ensure fidelity of implementation for instructional programs. Protheroe (2008) noted, “a program or approach that is effective in other settings can be ineffective in yours if the way it is being implemented takes it far away from its original design” (p. 40). Instruction programs should be evaluated to determine their effectiveness on both gender and SES and should provide advantages for specifically identified students or populations if they are to be considered for adoption and implementation.

Second, school administrators must consider fiscal issues related to adoption and implementation of an instructional program. Even though it is imperative to select instructional programs that have been determined to best address student needs, the availability of financial resources must always be considered. The cost relative to the facilitation of the Workshop instructional model is considerable. Based on the results of this study, it appears that the financial commitment required may not be appropriate for some school districts. Administrators must always consider the return on the investment that they make on behalf of their students and community.

Third, school administrators must determine how to best address achievement gaps based on gender. Even though research related to the adverse effects of gender differences is inconsistent, there is evidence that some degree of discrepancy exists. School districts and schools must dedicate resources to provide teachers and parents with

information related to programs that are available to address gender-related academic issues. In addition, schools must be diligent in their efforts to ensure that appropriate actions are taken to ensure that stereotyping- and gender-related bias are avoided.

Fourth, school administrators must determine how best to address achievement gaps based upon SES. The State Legislature, Arkansas Department of Education, school districts, and schools must continue to commit resources to address the continued negative effects of poverty. Recent economic issues have served to increase the number of students experiencing those negative effects. Resources must be dedicated to addressing the specific needs of students of poverty, and individual schools and districts must continue to identify and implement research-based programs that have been determined to be most effective in addressing specific poverty-related student issues.

Fifth, school districts and schools must prioritize research-based professional development and parental involvement programs to address issues related to instructional programs, gender, and poverty. Teachers and parents must be aware of obstacles that hamper student achievement to appropriately address each and provide opportunities for improvement of achievement. Data generated by this study should provide teachers and administrators with information that may be helpful in determining appropriate choices that facilitate improved student achievement. A plethora of programs exist to address student needs, but it is imperative that administrators and teachers work together to select appropriate interventions to address the needs of individual students and the community effectively.

Future Research Considerations

This study found that students who participated in Workshop literacy instruction did not perform as well as students who did not participate in Workshop literacy instruction. Also, evidence from this study indicated that females outperformed males no matter the instructional method, and students identified as participants of poverty performed significantly less than students who were not identified as participants of poverty. To best evaluate the effectiveness of instructional programs and determine appropriate teacher training and interventions for issues related to both gender and poverty, the researcher recommends additional research in the following areas be considered:

1. A study should examine the effect of other independent variables such as ethnicity, migrant status, etc. on literacy achievement based on instruction.
2. A study should compare Workshop with a different specified program.
3. A study should examine the effects of instruction, gender, and SES on different grade levels.
4. A study should examine the effects of instruction, gender, and SES on academic achievement for different regions of the state and nation.
5. A 5- to 10- year longitudinal study should examine the effectiveness of Workshop instruction related to academic achievement.
6. A study should examine the effects of Workshop instruction comparing multiple school districts using Workshop instruction to multiple districts not using Workshop instruction.

7. A study should examine the effects of Workshop instruction, gender, and SES, comparing all schools in the single Workshop district to all schools in multiple districts throughout the state.
8. A study should compare the effectiveness of instruction including variables related to economic considerations and parental support for the instructional program.

The United States, the state of Arkansas, as well as nations around the world are constantly striving to identify effective means to improve academic achievement. In a description of educational policy-making and its relationship to literacy instruction, Shanahan (2014) noted that constitutionally, education was designated as a right and responsibility of individual states. The implications of lagging state educational programs on the economic environment prompted the federal government to become more involved with establishing policies and programs aimed at improving achievement. Shanahan noted that federal intervention into educational policy and performance began with the establishment of Title I programs and accelerated with the establishment of No Child Left Behind in 2002. Shanahan added that the adoption of the Common Core State Standards signaled the beginning of what could become a national curriculum. He concluded that the recent paradigm shift in policy-making should continue into the future to ensure that essential literacy instruction is delivered in a manner most advantageous for improvement of achievement. Literacy instruction is a major component of every school's program to provide their students avenues to improve achievement.

The topic of literacy instruction and its effect on student achievement has been a widely studied issue, with some taking a definite stance on the subject (Wienclaw, 2015).

An increase in accountability demands has placed pressure upon school districts to select literacy instructional programs that are best suited to their students' individual needs. Despite the efforts of governments and educators to improve achievement, it is evident that an achievement gap persists. Wienclaw (2015) suggested that the achievement gap continues to grow due to several factors. These factors included inequality between schools, the widening of the focus of education in general, and a restructuring of the classroom that has allowed students to learn at their pace and not forcing them to endure the former rigor of traditional classroom instruction. It also included the shift in accountability which has created an environment in which a standardized test serves as the single measure of intelligence, and the biases that exist related to teacher expectations. She concluded that efforts to realign methods of instruction and curricular focus, accountability testing, and teacher training are essential to creating an educational environment that is more normal across the nation and better suited to provide for the needs of students. For this study, the comparison of literacy instructional programs can provide data that may be useful in assisting administrators in the selection of a program that best fits the needs of the district and individual students. Although literacy instructional programs are numerous and widely varied, it is imperative that educators consider all issues related to the adoption of an instructional program when deciding which is best suited for their needs. School administrators are responsible for determining the best avenues to improve student achievement in their districts; choosing the most suitable literacy instructional program should facilitate that goal.

Research related to the effect of gender on academic achievement has produced varied results. One example of research related to the similarities as opposed to the

differences between the two genders was conducted by Hyde (2005) who hypothesized that there was very little difference between the cognitive abilities of males and females with some small exceptions. Hyde found that the significant differences between the sexes were predominantly physical in nature, including motor performance and sexuality. Further, she determined that the differences between the sexes increase with age. Subsequent studies conducted by Hyde et al. (2008) and Hyde and Metz (2009) suggested that that gender differences in achievement were mainly due to cultural and environmental factors. This study indicated that female students outperformed male students at a significant level of literacy achievement for both third- and fifth-graders. When gender-related issues are affecting student performance, school districts must determine how best to alleviate those matters to provide all students with equal opportunities for performance improvement. Educators must consider gender-related issues when developing and implementing reform efforts designed to improve student achievement.

Among researchers, there is no argument that children of poverty experience significant disadvantages relative to opportunities to achieve. Research contributed by Payne (1996), Renchler (1993), and Rothstein (2008) provided evidence related to the disadvantages that children of poverty face and the effectiveness of programs designed to address their issues. Payne (1996) offered that teachers and administrators who work with children of poverty must understand that their role is not to resolve issues that individual children of poverty face but to provide a support system, role models, and opportunities to learn, which will increase the likelihood of success. Renchler (1993) studied programs that had been developed to address issues related to poverty for pre-school age children

as well as programs designed to meet the needs of school -age children of poverty and noted that all of these programs were designed to reduce disadvantages and provide opportunities and skills to help students become productive adults. Renchler (1993), like Payne (1996), found that resources and attitudes had a profound effect on the performance of children of poverty and agreed that both economic and educational reforms are necessary to accomplish significant improvement. Rothstein (2008) concluded that both social and pedagogical programs depend on each other and without one the other will remain unfulfilled. This study found that students of poverty significantly underperformed non-identified students. Poverty is a pervasive issue that educators must address daily to best serve the needs of their students. Continued support for both social and educational programs represents a significant exercise for addressing issues related to poverty.

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APPENDIX



Status of Request for Exemption from IRB Review

(For Board Use Only)

Date: 10/20/16

Proposal Number: 2016-114

Title of Project: Effects of Balanced Literacy Instruction on Student Achievement

Principal Investigator(s) and Co-Investigator(s): Kerry [Schneider_kschneider@cedarvilleschools.org](mailto:kschneider@cedarvilleschools.org)

- Research exempted from IRB review.
 - Research requires IRB review.
 - More information is needed before a determination can be made. (See attachment.)
-

I have reviewed the proposal referenced above and have rendered the decision noted above.
This study has been found to fall under the following exemption(s):

1 2 3 4 5 6

In the event that, after this exemption is granted, this research proposal is changed, it may require a review by the full IRB. In such case, a ***Request for Amendment to Approved Research*** form must be completed and submitted.

This exemption is granted for one year from the date of this letter. Renewals will need to be reviewed and granted before expiration.

The IRB reserves the right to observe, review and evaluate this study and its procedures during the course of the study.

Rebecca O. Weaver

Chair
Harding University Institutional Review Board