

Copyright

by

Dana Arreola

August 2015

ALL RIGHTS RESERVED

THE IMPACT OF GUIDED READING AND DIRECT INSTRUCTION ON  
VOCABULARY AND COMPREHENSION DEVELOPMENT OF FIFTH GRADE  
STUDENTS: IMPLICATIONS FOR SCHOOL AND DISTRICT LEADERS

A Doctoral Thesis Presented to the Faculty of the College of Education

University of Houston

In Partial Fulfillment of the

Requirements for the Degree

of

Doctor of Education in Professional Leadership

by

Dana Arreola

Houston, Texas

August 2015

THE IMPACT OF GUIDED READING AND DIRECT INSTRUCTION ON VOCABULARY  
AND COMPREHENSION DEVELOPMENT OF FIFTH GRADE STUDENTS:  
IMPLICATIONS FOR SCHOOL AND DISTRICT LEADERS

A Doctoral Thesis for the Degree  
Doctor of Education  
by  
Dana Arreola

Approved by Doctoral Thesis Committee:

---

Dr. Robin McGlohn, Co-Chairperson

---

Dr. Angus MacNeil, Co-Chairperson

---

Dr. Robert Borneman, Committee Member

---

Dr. Steven Busch, Committee Member

---

Dr. Wayne W. Emerson, Committee Member

---

Dr. Robert H. McPherson, Dean  
College of Education

August 2015

## Acknowledgements

Obtaining a doctoral degree is unquestionably the highlight of my educational journey. This is something that I have desired to accomplish for many years. I am truly grateful for my supportive family; my husband Eric, my sons; Devin, Darrell, and Eric and my mother Edna for their continuous prayers, love and encouragement throughout this journey.

Thank you, Dr. McGlohn for supporting me and always pushing me to produce my best work. Your guidance and encouragement will forever be appreciated. I would like to thank all of my professors for their knowledge and insight throughout this process. My sincere appreciation goes to Dr. Robert Borneman, Dr. Steven Busch, Dr. Angus MacNeil, and Dr. Wayne Emerson for serving on my Doctoral Thesis Committee.

THE IMPACT OF GUIDED READING AND DIRECT INSTRUCTION ON  
VOCABULARY AND COMPREHENSION DEVELOPMENT OF FIFTH GRADE  
STUDENTS: IMPLICATIONS FOR SCHOOL AND DISTRICT LEADERS

A Doctoral Thesis Presented to the  
Faculty of the College of Education  
University of Houston

In Partial Fulfillment  
Of the Requirements for the Degree

Doctor of Education  
in Professional Leadership

by

Dana Arreola

August 2015

Arreola, Dana "THE IMPACT OF GUIDED READING AND DIRECT INSTRUCTION  
ON VOCABULARY AND COMPREHENSION DEVELOPMENT OF FIFTH GRADE  
STUDENTS: IMPLICATIONS FOR SCHOOL AND DISTRICT LEADERS"

Unpublished, Doctoral Thesis, University of Houston, July 2015

Abstract

Reading instruction for older students with reading difficulties is a topic increasingly in need of well-informed support and research-based guidance. Recent reform efforts have resulted in positive literacy results in the primary grades, but far too many students are advancing to secondary schools without the prerequisite literacy skills to be successful in history, literature, mathematics, and science. The purpose of this study was to examine trends and differences that exist in vocabulary and reading comprehension mean scores over a period of nine months. The study determined if differences exist in mean gain vocabulary scores and mean gain reading comprehension scores as measured by Istation's Indicators of Progress (ISIP) Advanced Reading; and vocabulary and reading comprehension scores were examined to determine if significant differences exist in vocabulary and reading comprehension beginning of year and end of year scores of students receiving guided reading and students receiving direct instruction as their reading approach.

This study utilized archived ISIP Advanced Reading vocabulary and reading comprehension scores from 237 fifth grade students in one large urban school district during the 2013-14 school year; 119 students were taught by two teachers who utilized Guided Reading as an instructional approach in one elementary school and 118 students were taught by two teachers who utilized Direct Instruction as an instructional approach in another elementary school.

Data treatment and analyses were divided into three phases including: 1) examining trends in mean vocabulary and reading comprehension scores of students instructed using guided reading and students instructed using direct instruction over a nine month period of time; 2) conducting independent *t*-tests to examine if there are significant differences in beginning of year and end of year vocabulary and reading comprehension mean gain scores in each of the classes that utilized the guided reading approach and each of the classes that utilized the direct instruction approach; and 3) conducting an ANOVA test to compare differences that exist in the vocabulary and reading comprehension mean gain scores among classes that received the guided reading approach and classes that received the direct instruction approach.

The findings of this study revealed important differences in student performance gains, from beginning of year to end of year, for those taught using the guided reading approach and those taught using the direct instruction approach for both vocabulary and reading comprehension. Both direct instruction classes had statistically significant and medium size gains in vocabulary and reading comprehension (with large size vocabulary gains in one of the Direct Instruction classes), whereas only one of the Guided Reading classes had statistically significant gains in their vocabulary scores, although not in reading comprehension scores.

When comparing scores from the beginning of the year to the end of the year, results revealed that students taught with direct instruction exhibited significantly greater gains in both vocabulary and reading comprehension scores than those taught with guided reading approaches. In addition, comparing mean gains scores across instructional methods and classes, it is evident that one of the Direct Instruction classes had the largest

gains in the vocabulary scores during the 2013-2014 academic school year, while both direct instruction classes had moderate size gains in comprehension.

Findings from this study may be used to inform school and district leaders how guided reading and direct instruction impact achievement gains in vocabulary and reading comprehension among fifth graders. These findings may also assist school leaders in their decisions regarding the appropriate reading programs to implement for students from similar school contexts.



## Table of Contents

Chapter	Page
I. Introduction .....	1
Introduction.....	1
Background of the Problem .....	2
Statement of the Problem.....	5
Purpose of the Study .....	5
Significance of the Study .....	6
Research Questions .....	8
Research Design.....	9
Assumptions, Limitations and Delimitations of the Study.....	10
Definition of Terms.....	11
II. Literature Review .....	13
Introduction.....	13
Individual and Societal Consequences of Illiteracy .....	14
Developmental Stages of Learning to Read.....	16
No Child Left Behind Act (2001) and Reading Assessments.....	18
Texas Statewide and District-Wide Assessments .....	21
Encouraging Reading Development in the Classroom .....	24
Poverty and Literacy .....	30
Environmental Factors that Encourage Reading Development .....	31
Early Literacy Instruction and Adolescent Academic Success.....	44
Reading Instructional Approaches .....	48
Summary .....	57
III. Methodology .....	61
Research Design.....	61
Setting .....	63
Orange Hill School.....	64
Instructional Program.....	67
Pleasant Valley School.....	69

Instructional Program.....	72
Participants.....	73
Instrument .....	76
Validity.....	77
Procedures.....	79
Limitations of the Study.....	81
IV. Results.....	83
Introduction.....	83
Results .....	83
Phase 1.....	84
Phase 2.....	86
Phase 3.....	94
Summary.....	97
V. Conclusions and Discussions of Results.....	98
Introduction.....	98
Discussion.....	100
Implications for School Leaders.....	104
Implications for Further Research.....	107
Conclusion.....	109
References.....	111
Appendix A: ISIP Advanced Reading Test-Retest Reliability .....	127
Appendix B: Pearson Product Moment Correlations for ISIP Advanced Reading and External Measures for Grade 5 .....	129
Appendix C: Pearson Product Moment Correlations for ISIP Advanced Reading and STAAR for Grade 5 .....	131

## List of Tables

Table	Page
Table 1. Texas Education Agency Recommended Reading Diagnostic Instruments.....	23
Table 2 Orange Hill School Student Characteristics (2013-2014) .....	65
Table 3 Orange Hill School Teacher Characteristics (2013-2014).....	67
Table 4 Pleasant Valley School Student Characteristics (2013-2014) .....	70
Table 5 Pleasant Valley School Teacher Characteristics (2013-2014).....	71
Table 6 Demographic Characteristics of Participant Classes .....	75
Table 7 Direct Instruction Class 1 Vocabulary Descriptive Statistics.....	86
Table 8 Direct Instruction Class 2 Vocabulary Descriptive Statistics.....	88
Table 9 Direct Instruction Class 1 Comprehension Descriptive Statistics.....	89
Table 10 Direct Instruction Class 2 Comprehension Descriptive Statistics.....	90
Table 11 Guided Reading Class 1 Vocabulary Descriptive Statistics.....	91
Table 12 Guided Reading Class 2 Vocabulary Descriptive Statistics.....	92
Table 13 Guided Reading Class 1 Comprehension Descriptive Statistics.....	93
Table 14 Guided Reading Class 2 Comprehension Descriptive Statistics.....	94
Table 15 Mean Gain Scores.....	96

## List of Figures

Figure	Page
Figure 1 Monthly Class Means for Guided Reading Class 1 with Trendline.....	84
Figure 2 Monthly Class Means for Guided Reading Class 2 with Trendline.....	84
Figure 3 Monthly Class Means for Direct Instruction Class 1 with Trendline .....	85
Figure 4 Monthly Class Means for Direct Instruction Class 2 with Trendline .....	85

# **CHAPTER 1**

## **Introduction**

### **Introduction**

Confident and competent reading, writing, and critical thinking are essential skills for success in the 21st century (Meltzer & Jackson, 2010). When students are given opportunities to develop robust literacy skills, they are likely to enjoy productive educational experiences (Murphy, 2004). Unfortunately, the classroom can become a discouraging place for those who struggle to obtain a rich portfolio of literacy skills in elementary grades (Balfanz, Herzog, & Mac Iver, 2007; Hernandez, 2011).

The two primary components of literacy are vocabulary and comprehension. These two skills are very closely related, and both are required for students to become competent readers. Thus, reading instruction programs have long focused on these abilities and various pedagogical practices have been tried to foster these skills among students of all ages. Two of the most widely implemented reading instruction programs today are guided reading instruction and direct reading instruction. In guided reading lessons, students are grouped by reading ability and instructed to read and discuss a given text within a small group. In direct instruction, teachers follow a particular lesson sequence to ensure that students all understand the text before moving on to more difficult lessons.

This study examined trends and differences that exist in vocabulary and reading comprehension gain scores of fifth-grade students who were instructed with guided reading and fifth grade students who were instructed with direct instruction over the course of the 2013-2014 school year.

## **Background of the Problem**

Many factors contribute to reading failure in upper elementary grade students. (Lubliner, 2004). When students are faced with reading unfamiliar vocabulary words and text passages that they are unable to comprehend, they may develop a habit of skimming the surface of the text and never really understanding what they read (Lubliner, 2004). These ineffective reading habits begin at the foundation level in primary grades and become more apparent when students are required to read with an understanding of vocabulary and comprehend text in upper elementary grades (Chall, 1983; Coddling, 2001; Hernandez, 2011).

When reading deficiencies are not identified and treated during the early school years, literacy problems may worsen and require a wide range of interventions. Some adolescents have difficulty decoding words and this affects fluent reading (Biancarosa & Snow, 2006). Though fluent reading is necessary for text comprehension, some students may read fluently, but do not have a strategy for comprehending the meaning of text. (Biancarosa & Snow, 2006). Literacy is central to academic success in all content areas (Allington, 2002), yet adolescents report receiving no help with strategies for comprehending content area class materials despite having the most reading difficulties in these classes (Heller & Greenleaf, 2007; Pitcher, Martinez, Dicembre, Fewster, & McCormick, 2010). Therefore, fifth grade may be one of the last opportunities to take advantage of students' relatively high levels of academic motivation compared to middle and high school years (Chall & Jacobs, 2003).

Reading instruction for older students with reading difficulties is a topic increasingly in need of well-informed support and researched-based guidance (Deshler,

2005). Recent reform efforts have resulted in positive literacy results in the primary grades, but far too many students are advancing to secondary schools without the prerequisite literacy skills to be successful in history, literature, mathematics, and science (Moats, 2001). An inability to read and comprehend text is a pervasive problem facing many secondary school students. More than five million high school students do not read well enough to comprehend their textbooks or other written material that is required for their grade levels (Hock & Deshler, 2003). According to the National Assessment of Educational Progress (NAEP), 26% of high school students cannot read material generally deemed essential for daily living, such as road signs, newspapers, and bus schedules (Grigg, Daane, Jin, & Campbell, 2003).

The National Center for Education Statistics (2004) reported only 31% of America's eighth grade students—and roughly the same percentage of twelfth graders—meet the National Assessment of Educational Progress standard of reading proficiency for their grade level. Among low-income eighth, graders, just 15% read at a proficient level (National Center for Education Statistics, 2004). In a typical high-poverty urban school, approximately half of the incoming ninth-grade students read at a sixth- or seventh-grade level (Balfanz, McPartland, & Shaw, 2002).

School leaders have a tremendously powerful influence over the success of any given reading instruction program. High quality, dedicated school leaders, especially principals, are crucial for ensuring high levels of student literacy. The need for the identification and implementation of effective reading programs has heightened the importance of quality leadership in the area of literacy (Murphy, 2004). Principals must be literacy leaders; the skills and knowledge necessary for effective literacy leadership

are an important subset of instructional leadership that provide a framework that transcends all areas of leading for learning (Dowell, Bickmore, & Hoewing, 2012). The role of a literacy leader is necessary at all levels (Booth & Rowsell, 2007). Principals who are true literacy leaders shape the entire learning environment to promote literacy enhancement.

Vocabulary and reading comprehension are the two primary pillars of solid literacy education. Vocabulary development refers to the process of learning and internalizing new words and their meanings. Vocabulary knowledge is strongly correlated with reading comprehension, as knowledge of word meanings is essential for understanding the message of a text (Carver, 1994; Wagner, Muse, & Tannenbaum, 2007). A limited vocabulary can dissuade students from reading, which further impairs both vocabulary development and comprehension (Joshi, 2005).

Two popular and increasingly utilized strategies to improve elementary student literacy instruction are guided and direct reading instruction. Guided reading instruction involves teachers working with small groups of students who exhibit similar literacy skills. The teacher guides these groups through increasingly difficult concepts by providing a text that is easy to read yet still challenges students to actively engage in problem solving. Direct reading instruction relies much more on teacher-directed explicit instruction of word and concept meanings. Lessons are carefully outlined for teachers to follow in a clearly defined sequence.



## **Statement of the Problem**

Literacy success is vital for academic and overall success in adulthood. In the U.S., only one-third of middle school children can read in a deep, comprehensive sense (Reardon, Valentine, & Shores, 2012). Literacy skills develop rapidly during elementary school years and readers who struggle in third grade are more likely to remain poor readers in adolescence and adulthood. Low literacy contributes to poor health and poverty, as adults who cannot read fluently have difficulty following doctors' instructions or navigating typical bureaucratic paperwork, such as tax and state benefit paperwork. Illiteracy has real costs for society, as well as individuals. Each year, low adult literacy costs \$225 billion, calculated by the loss of revenue due to non-participation in the workforce and crime, as over 65% of inmates are functionally illiterate (National Institute of Child Health and Human Development, 2000a).

Providing effective reading instruction to children at early ages may be vital to ensuring that all children have the opportunity to become successful, productive adults who are fluent, competent, and confident readers. School leaders, therefore, must understand which reading instruction programs are truly effective at improving literacy skills, especially vocabulary and comprehension abilities.

## **Purpose of the Study**

The purpose of this study was to examine trends and differences that exist in vocabulary and reading comprehension gain scores of students instructed with guided reading and students instructed with direct instruction. This study determined if differences exist in mean gain vocabulary scores and mean gain reading comprehension scores as measured by the ISIP Advanced Reading. Specifically, this study examined

archived beginning of year (BOY) and end of year (EOY) ISIP vocabulary and reading comprehension scores of fifth grade students from two different schools utilizing two different reading approaches (guided reading and direct instruction) during the 2013-2014 school year. Mean scores were analyzed to examine trends in vocabulary and reading comprehension Advanced ISIP mean scores over a period of nine months. The ISIP vocabulary and reading comprehension mean gain scores were examined to determine if significant differences exist in vocabulary and reading comprehension BOY and EOY scores of students receiving guided reading and students receiving direct instruction as their reading approach. Additionally, gains in achievement in both vocabulary and reading comprehension were compared between students receiving guided reading as their instructional approach and students receiving direct instruction as their instructional approach to determine if significant differences exist.

Findings from this study may inform school and district leaders regarding how two different approaches (guided reading and direct instruction) compare related to achievement gains in vocabulary and reading comprehension. These findings may help school leaders' decisions regarding the appropriate reading programs to implement for students from similar school contexts.

### **Significance of the Study**

The No Child Left Behind Act (2001) directed schools to ensure that all students read at grade level by the third grade. However, many children continue to struggle with reading comprehension and adequate vocabulary development for years after third grade, even into secondary school (Allington, 2002). It is important to focus on literacy beyond

the third grade; fifth grade vocabulary development and syntactic awareness has a great impact on reading comprehension (Mokhtari & Niederhauser, 2013).

Many different reading instruction programs have been introduced to improve early literacy, but the effectiveness of such programs remains unclear. This literature review in this study will provide an overview of several reading instructional programs. However, guided reading and direct instruction reading approaches were used in this study because that is the reading approach utilized on the two campuses selected for this study. The purpose of this study was to examine trends and differences that exist in mean scores of students instructed with guided reading and students instructed by direct instruction. The study was also conducted to determine if differences exist in vocabulary and reading comprehension between students who received guided reading as their instructional approach to reading and those who received direct instruction as their instructional approach to reading. By examining archived ISIP vocabulary and reading comprehension scores of fifth grade students from two different schools utilizing two different reading approaches (guided reading and direct instruction) and determining if there are significant differences in vocabulary and reading comprehension gains, leaders will be better informed regarding the value of each reading approach. This will also contribute to the body of knowledge and guide campus and district leaders as they consider what reading approach to choose for their particular setting.

This study examined trends and differences that exist in fifth-graders' vocabulary and comprehension abilities from September 2013 to April 2014 using ISIP Advanced Reading assessment scores. Specifically, the study addressed the gap in knowledge of the impact of guided reading and direct instruction on vocabulary and reading

comprehension abilities, as measured with ISIP Advanced Reading. Identifying significant differences in ISIP Advanced Reading mean gain scores of students taught using guided vs. direct reading instruction, may support school leaders in identifying the best approach for teaching reading.

### **Research Questions**

This study was guided by ten research questions:

1. What trends exist in vocabulary mean scores of students instructed with guided reading?
2. What trends exist in reading comprehension mean scores of students instructed with guided reading?
3. What trends exist in vocabulary mean scores of students instructed with direct instruction?
4. What trends exist in reading comprehension mean scores of students instructed with direct instruction?
5. What differences exist in vocabulary BOY and EOY scores of students instructed using guided reading?
6. What differences exist in reading comprehension BOY and EOY scores of students instructed using guided reading?
7. What differences exist in vocabulary BOY and EOY scores of students instructed using direct instruction?
8. What differences exist in reading comprehension BOY and EOY scores of students instructed using direct instruction?

9. What differences exist among vocabulary mean gain scores when comparing guided reading and direct instruction approach to teaching reading?
10. What differences exist among reading comprehension mean gain scores when comparing guided reading and direct instruction approach to teaching reading?

### **Research Design**

This quantitative study utilized descriptive and inferential statistics to examine trends and differences that exist in mean gain scores of students instructed with guided reading and students instructed by direct instruction. Archived ISIP vocabulary and reading comprehension achievement scale scores from fifth grade students in 2013-2014 were collected from students in two different classes from one campus receiving guided reading instruction and students in two different classes from another campus receiving direct instruction as a reading approach. Mean scores were examined to determine trends that exist over a period of nine months, and t-tests were conducted to determine if significant differences exist in mean gain vocabulary scores and mean gain reading comprehension scores as measured by the ISIP Advanced Reading between students who received guided reading as their instructional approach to reading and those who received direct instruction as their instructional approach to reading. Specifically, this study first examined trends in archived ISIP vocabulary and reading comprehension scores of fifth grade students from two different schools utilizing two different reading approaches (guided reading and direct instruction) during the 2013-2014 school year. Next, scores were examined to determine if there are significant differences in vocabulary and reading comprehension BOY and EOY scores of students receiving guided reading and students receiving direct instruction as their reading approach. Additionally, gains in achievement

in both vocabulary and reading comprehension were compared between students receiving guided reading as their instructional approach and students reading direct instruction as their instructional approach to determine if significant differences exist.

### **Assumptions, Limitations and Delimitations of the Study**

This study was delimited to non-special education students enrolled in Grade five during the 2013-2014 school year at two elementary school campuses within the same large, urban school district in Texas. This study has been designed with the following limitations:

1. Although the researcher took steps to address some of the confounding variables that may influence achievement scores beyond the instructional approach (such as comparable student groups and some teacher quality variables), it was difficult to control all confounding variables that may influence vocabulary and reading comprehension scores (i.e. parent involvement, other reading interventions and instructional modifications).
2. An assumption was made that the guided reading and direct instructional approaches within each of the four classrooms are being implemented with fidelity based on principals' verification and observations of instruction. Even with this increased assurance of implementation, there still could have been variation in implementation across each of the classrooms, which was a limitation of this study.
3. Vocabulary and reading comprehension scores were collected monthly upon a students' first assessment when they logged into the ISIP during that month. Not every student logged into the system on the same date of the month; therefore the

variation in time for taking the assessment could have, in fact, reflected differences that were based on receiving extra instruction if a student logged in later in the month compared to a student who logged in earlier.

- a. Assessments occurred on different dates for different students. Some students may have learned more than others simply due to delay in testing.
  - b. This study only focused on the vocabulary and comprehension subtests of ISIP Advanced Reading, and other subtest results may have been affected differently by guided or direct reading instruction.
  - c. This study's findings were not generalizable to other ISIP assessment scores, such as ISIP Early Reading.
4. The structure in which the teachers have been taught to administer programs as it relates to vocabulary development and comprehension were not controlled. There was no way to control how the teachers administer the teachings of vocabulary development and comprehension in relation to the reading programs through ISIP Advanced Reading.
  5. Results were not generalizable because samples in the study were limited to only four classrooms within two school settings in one large urban school district.

### **Definition of Terms**

*Adolescent literacy:* A set of skills and abilities that students need in fourth grade through twelfth grade in order to read, write, and think about text materials they encounter (Jacobs, 2008).

*Comprehension:* A reader's ability to understand and respond correctly to written text (Fountas, 1996).

*Direct reading instruction:* An approach to teaching that is skills-oriented, and the teaching practices it implies are teacher-directed. It emphasizes the use of cognitive skills which are broken down into small units, sequenced deliberately, and taught explicitly (Carnine, Silbert, Kame'enui, & Tarver, 2009).

*Guided reading:* A teaching approach designed to help individual readers build an effective system for processing a variety of increasingly challenging texts over time (Fountas & Pinnell, 1996).

*Istation's Indicators of Progress (ISIP) Advanced Reading:* Web-based educational software program that includes assessment and intervention programs in reading, math, and interdisciplinary studies.

*Proficient readers:* Those that exhibit such qualities as understanding the purposes of reading, applying prior knowledge, processing the structures of print, self-monitoring, applying strategies, and reading meaningful text (Endriss & Nygren, 1998).

*Vocabulary development:* The process of learning and internalizing new words and their meanings. The three tiers of vocabulary are basic words known before entering school, words that appear frequently in school texts and the meanings of which are familiar to students, and uncommon words with esoteric origins (Beck, McKeown, & Kucan, 2002).



## **CHAPTER 2**

### **Literature Review**

#### **Introduction**

Literacy is not just about the technical ability to decipher text, but is defined as reading with understanding (National Council of Teachers of English, 2006). Reading with understanding involves making purposeful connections between the text and the reader's experience through social and cognitive processes. A 2010 United Nations report in provided the following definition of literacy:

Literacy is the ability to identify, understand, interpret, create, communicate, and compute, using printed and written materials associated with varying contexts.

Literacy involves a continuum of learning in enabling individuals to achieve his or her goals, develop his or her knowledge and potential and participate fully in community and wider society. (p. 21)

Therefore, researchers have moved away from using dichotomous terminology to categorize individuals as "literate" or "illiterate" and have adopted a continuum for measuring literacy in various contexts. This concept of situated literacies is useful for understanding global literacy issues. Of course, literacy also requires proficient word recognition and using context clues to comprehend the meaning of unfamiliar words and phrases. This literature review outlined the history of school reform and reading assessments; reading development, with emphasis on vocabulary and comprehension development; environmental factors that encourage literacy, such as family support and principals who are literacy leaders; the importance of early literacy instruction for adolescent academic success; and the supporting evidence for both guided and direct reading instruction.

## **Individual and Societal Consequences of Illiteracy**

Twenty percent of the world's adult population cannot read or write (Richmond, Robinson, & Sachs-Israel, 2008). Illiteracy is an especially significant issue for low-income countries where only about 61% of adults are literate (Richmond et al., 2008). Much of today's world is inaccessible to those who lack the ability to communicate via written text. Illiterate adults are vulnerable in many ways because they must depend on others to facilitate important transactions in their lives. In 2003, the United Nations called for a Literacy Decade to target worldwide illiteracy, and used the slogan "Literacy as Freedom" to highlight the human rights aspect of literacy education. Literacy, like education in general, is a complex issue because it intersects with other societal challenges, such as poverty and gender inequality. The priority populations served by this initiative were illiterate and out-of-school children, especially girls, and illiterate adults, especially women (Richmond et al., 2008). While literacy is often viewed as primarily a concern for youth education, adult literacy continues to demand attention and resources.

**Illiteracy in the U.S.** Fluent reading and writing skills are essential for children and adults to live productive lives in 21<sup>st</sup> Century United States. U.S. studies have explored the consequences of illiteracy on individuals and society. For adults in the U.S., functional illiteracy means that one cannot competently perform everyday tasks such as reading a prescription drug label, obtaining a driver's license, navigating public transportation, or opening a bank account. Nearly 25% of U.S. adults have low literacy levels, as reported by the International Adult Literacy Survey, which measures document literacy, prose literacy, and quantitative literacy (Blum, Goldstein, & Guérin-Pace, 2001). More troublingly, the National Assessment of Adult Literacy reported in 2004 that 50%

of U.S. adults could not read a book at the eighth grade level (Kutner, Greenberg, Baer, 2005). On average, adults at the lowest levels of literacy earn less than \$250 per week, have high rates of unemployment, are three times more likely to receive government assistance (e.g., food stamps) and ten times more likely to live below the poverty line compared to fluent readers (Hernandez, 2011).

To combat illiteracy in adults, educational and social policies should focus on providing children with solid reading instruction early in life. Students who read below grade level as early as third grade are much more likely to remain struggling readers throughout their lives. While only four percent of third grade proficient readers drop out of high school, 17% of non-proficient third grade readers drop out, and this number increases to 26% when adding one year of poverty (Hernandez, 2011). As these students progress into increasingly difficult studies, they are more likely to drop out of high school than their literate peers. Individuals without a high school degree can expect to earn substantially less money over their lifetimes than those who graduate high school (Hernandez, 2011).

Adults who are poor readers cannot prepare their children for academic success because they cannot model fluent literacy in the home. Parents who do not or cannot read to their children frequently, provide books and other reading materials, and encourage literacy overall disadvantage their children by limiting exposure to words and language during early life (Ravilland, 1999).

Socioeconomic disparities remain a troubling reality in literacy rates in the U.S. The average literacy skills of Black and Hispanic students have been approximately three years behind those of Asian and white students, and students from low-income families trail their peers by five years (Reardon et al., 2012). Among fourth graders, 50% of

Asian/Pacific Islander students and 43% of white students have been proficient readers while only 19% of Hispanic, 18% of American Indian/Alaska Native, 17% of African American students have scored at or above proficiency in reading (National Center for Education Statistics, 2011). While these gaps remain concerning, they have narrowed considerably within the past 40 years (Reardon et al., 2012). Across racial and ethnic groups, females outperform males (Reardon et al., 2012).

### **Developmental Stages of Learning to Read**

The gradual process of awareness of letters as symbols to decoding sounds to fluent reading occurs on a different timeline for every child. Students who enter school at the same chronological age may differ greatly in reading development. Chall (1983) suggested that children pass through six distinct stages of reading development. Teachers could use these reading stages to estimate each student's literacy instruction needs and provide appropriate ongoing assessment and support.

Stage zero is the prereading stage, spanning from birth to approximately Kindergarten-age. In the prereading stage, children accumulate knowledge of spoken language followed by written language. Awareness of the symbolic meaning of words for physical objects and intangible ideas emerges during this time. Also, children become familiar with the existence of written words and letters through exposure to books and other written language (e.g., stop signs). As children learn to speak and manipulate language, they are also gathering information about other characteristics of words such as rhyme, alliteration, and compound words (Chall, 1983).

Following prereading, Stage one is initial reading or "decoding," which occurs around ages six to seven. The key milestone of this stage is learning to associate letters with their corresponding phonemes. Importantly, children must internalize the arbitrary

relationships between letters and sounds, as well as the rules and exceptions to those rules. During this stage, instructional approaches can either focus on sight word recognition or phonemic awareness (Chall, 1983). The benefits and shortcomings of these instructional approaches have been discussed later in this literature review.

Stage two of reading development occurs around ages seven through nine, and is primarily concerned with confirming lessons of Stage one to improve fluency. This stage involves repetitive reading of familiar texts to allow children to concentrate on common words, increasing recognition of letters, words, and sounds. Apart from the technical practice of decoding words, children must also gain confidence in their reading abilities. Therefore, re-reading well-known books is important for building students' self-confidence regarding literacy. Those who believe themselves to be competent readers are more likely to voluntarily read for pleasure (Richardson, Morgan, & Fleener, 2011). This is crucial for entering into the next stage of reading development, in which children move from simply decoding words and phrases to "reading to learn" (Richardson et al., 2011).

Stage three marks a monumental shift in reading emphasis. No longer are children expected simply to sound out words and phrases. Now, students are expected to have built a literacy foundation that allows them to read for the purpose of learning new information, rather than reading as an end in itself (Richardson et al., 2011). This stage begins in Grade 4 and continues through middle school. During this stage, the gap between fluent and struggling readers swiftly begins to widen. Allington (2002) described this phenomenon plainly as, "You can't learn from books you can't read" (p.1). The present study was focused on the literacy development of fifth graders because this is such a crucial transition, which significantly impacts later literacy and overall academic success of adolescents (Allington & Johnston, 2002; Maclellan, 1997)

In Stages four and five, which begin in high school and continue throughout adulthood, students use the skills learned in Stage three to evaluate multiple perspectives. In Stage three, materials are usually presented in a one-sided manner. In Stage four, however, conflicting viewpoints and controversies are dealt with by the reader. Clearly the literacy skills of Stage three must be mastered for students to be able to first understand then synthesize multiple data points and ideas. Stage five mainly consists of honing evaluative skills such that a reader can choose the appropriate resource to read for a given purpose (Chall, 1983).

In many ways the five stages of reading are built like a skyscraper. To be successful, each stage depends on the stage before it. If the stage before it is missing or incomplete then we have a precarious building. Therefore, teachers may use these reading stages to monitor students' progress and provide the necessary differentiated instruction to ensure that all students are making progress towards becoming proficient and fluent reader at the end of every grade level.

### **No Child Left Behind Act (2001) and Reading Assessments**

President George W. Bush signed The No Child Left Behind Act (NCLB, 2001) as a reauthorization of the Elementary and Secondary Education Act on January 8, 2002, in an attempt to ensure that all students receive a quality reading education and reach proficiency in the core subject areas. Although reading standards became more stringent, instructional approaches were slow to adapt to the changes mandated by NCLB (2001). For example, many schools continue to rely on textbooks as the primary printed source of curriculum delivery even though the average secondary student reads below the level of many content-area texts (Allington, 2005).

The foundation of current reading development programs is Reading First - a framework created with the approval of the NCLB (2001). The purpose of this initiative was to gather data regarding the most effective instructional and assessment tools for teaching elementary reading. Through the Reading First program, many different states and districts have received support to research various methods of literacy instruction. This initiative has provided considerable resources for improving the literacy skills of the nation's youngest schoolchildren, with the goal of helping every child to master the basics of reading by the end of third grade. Reading First is relevant to this study because it is through this program that students are introduced to essential literacy skills. These skills provide the basis of the reading programs (guided and direct reading instruction) evaluated in this study.

**Assessments.** The passage of NCLB (2001) ushered in a new era of high-stakes testing for all levels of education. With NCLB annual academic assessments became mandatory for many students starting as early as kindergarten, and the achievement of student test score standards became required to qualify for school funding (Kubiszyn & Borich, 2005). Tests are simply tools that can help teachers and students assess their learning progress when used in the correct setting and manner or discourage and impede student educational achievement when misused. Evidence of testing validity must be assessed when a test is administered especially among students of diverse racial, economic, or social backgrounds, especially among non-native English learners (Kubiszyn & Borich, 2005). The pressure felt at the local, state, and federal levels concerning student test scores and school funding has fueled a new industry of academic assessment software developers.

**Vocabulary.** In the early 20th century, vocabulary tests were fairly straightforward, using fill-in-the-blank and multiple-choice formats with minimal context to aid comprehension (Pearson, Hiebert, & Kamil, 2007). These tests primarily measured prior vocabulary knowledge and not one's ability to decode word meaning from context. As time passed, the importance of contextualization became increasingly recognized and assessment tests began to incorporate whole passages of text. This was a positive development supported by the mounting evidence that vocabulary strongly predicts comprehension skills, and that the two are closely intertwined (Carver, 1994; Pearson et al., 2007; Wagner et al., 2007).

Word selection for vocabulary assessment is frequently guided by a three-tier system designed by Beck et al. (2002). In this system, Tier two words are best suited for assessment tests because they are less commonly used words. For example, *perambulate* instead of *walked*, or *parched* instead of *thirsty* (Pearson et al., 2007).

**Comprehension.** Reading comprehension is recognized as a more complex task than understanding isolated vocabulary words. One important metric is the long-standing National Assessment of Educational Progress (NAEP) framework, first administered in 1969 (Pearson & Hamm, 2005). Over the years, this instrument has been validated as one of the most important indicators of reading understanding. The 2009-2011 NAEP this reading framework was recently updated after with the following changes:

- an assessment design based on current scientific reading research;
- use of international reading assessments to inform the NAEP framework;
- more focused measurement of vocabulary;
- measurement of reading behaviors (cognitive targets) in a more objective manner;
- distinction of cognitive targets relevant to literary and informational text;



- use of expert judgment, augmented by readability formulas, for passage selection;
- testing of poetry at grade four in addition to grades eight and twelve; and a
- special study of vocabulary to inform development of the assessment.

The importance of vocabulary in reading comprehension development is readily apparent in this framework. The overarching goal of this framework is to have assessment tools (e.g., text passages, question structure, etc.) “reflect the complex interaction of the reader, the text, and the context of the assessment” (National Assessment Governing Board, 2010, p. 13)

### **Texas Statewide and District-Wide Assessments**

Since the 1980s, Texas has implemented strict assessment standards for public school students. In 2012, the State of Texas Assessments of Academic Readiness (STAAR) replaced the previously used Texas Assessment of Knowledge and Skills (TAKS) as the annual assessment tool for the state. The STAAR program includes annual assessments for reading and mathematics (Grades three through eight), writing (Grades four and seven), science (Grades five and eight), and social studies (Grade eight) (Texas Education Agency, 2014). STAAR test scores are important for districts, local schools, and individual students and teachers. Sufficiently high STAAR scores are required to qualify for program funding in Grades three through eight. Furthermore, students are required to pass the STAAR Grade five reading and math minimum standards to enter Grade six, and pass the STAAR Grade eight reading and math minimum standards to enter Grade nine.

Several reading diagnostic tools have been developed to prepare students for these high-stakes tests. The Texas Education Agency (2014) published the Commissioner’s List of Reading Instruments, which provides schools with several valid and reliable

diagnostic instrument options for kindergarten, and grades one, two and seven. Table 1 presents the recommended assessment instruments for 2014-2015.

Table 1

*Texas Education Agency Recommended Reading Diagnostic Instruments*

<b>Kindergarten</b>	<b>Grade 7</b>
Dynamic Indicators of Basic Early Literacy Skills, <i>Next</i> (DIBELS, <i>Next</i> ) easyCBM	Istation's Indicators of Progress, Advanced Reading (ISIP-AR)
Istation's Indicators of Progress, Early Reading (ISIP-ER)	Reading Analysis and Prescription System (RAPS 360)
mCLASS: Reading 3D-Text Reading and Comprehension (TRC)	Texas Middle School Fluency Assessment (TMFSA)
Measures of Academic Progress (MAP)	Woodcock Johnson III Diagnostic Reading Battery (WJIII DRB)
Phonemic Awareness and Phonics Inventory (PAPI)	
Phonological Awareness Literacy Screening (PALS)	
Reading Analysis and Prescription System (RAPS 360)	
Texas Primary Reading Inventory (TPRI)	
Woodcock Johnson III Diagnostic Reading Battery (WJIII DRB)	
<b>Grade 1</b>	<b>Grade 2</b>
Dynamic Indicators of Basic Early Literacy Skills, <i>Next</i> (DIBELS, <i>Next</i> ) easyCBM	Dynamic Indicators of Basic Early Literacy Skills, <i>Next</i> (DIBELS, <i>Next</i> ) easyCBM
Istation's Indicators of Progress, Early Reading (ISIP-ER)	Istation's Indicators of Progress, Early Reading (ISIP-ER)
mCLASS: Reading 3D-Text Reading and Comprehension (TRC)	mCLASS: Reading 3D-Text Reading and Comprehension (TRC)
Measures of Academic Progress (MAP)	Measures of Academic Progress (MAP)
Phonemic Awareness and Phonics Inventory (PAPI)	Phonemic Awareness and Phonics Inventory (PAPI)
Phonological Awareness Literacy Screening (PALS)	Phonological Awareness Literacy Screening (PALS)
Reading Analysis and Prescription System (RAPS 360)	Reading Analysis and Prescription System (RAPS 360)
Texas Primary Reading Inventory (TPRI)	Texas Primary Reading Inventory (TPRI)
Woodcock Johnson III Diagnostic Reading Battery (WJIII DRB)	Woodcock Johnson III Diagnostic Reading Battery (WJIII DRB)
Scholastic Reading Inventory (SRI)	Scholastic Reading Inventory (SRI)
STAR Reading	STAR Reading

*Note:* Table adapted from the Texas Agency Commissioner's List of Reading Instruments (2014)

Computer and web-based technological progress has provided software developers and educators with opportunities to collaborate, produce complex assessments and instructional programs for students of all ages and for a variety of subjects. One such program is ISIP, a computer-based program for reading instruction and assessment. ISIP utilizes computer-adaptive technology that automatically adjusts the difficulty level of reading prompts to an individual's unique abilities and needs (Mathes, 2014). ISIP test scores are used to test student abilities in early reading, advanced reading, Spanish, and math. ISIP tests are research-based, tailor assessments to individual student needs, generate instant reports for teachers to monitor student progress, and align with Common Core and state-specific standards (Mathes, 2014).

### **Encouraging Reading Development in the Classroom**

NCLB (2001) is based on the assumption that setting high standards and establishing measurable goals can improve individual outcomes in education. NCLB (2001) made the use of data a crucial priority to improve student achievement and increased the need for continuous improvement processes within schools (Bernhardt, 2004). Under NCLB (2001), the Reading First Initiative provided support to many different states and school districts to research instructional and assessment tools that effectively helped children achieve reading proficiency by the end of third grade. Policymakers ensured that considerable resources were available to improve the literacy skills of the nation's youngest schoolchildren.

Ensuring ongoing literacy development as students continue through elementary grades and into middle and high school years is a significant challenge for educators. Secondary school literacy skills are more complex and embedded in subject matter.

Additionally, older students are typically less interested in school-based reading as compared with elementary school students. In the U.S., only about 30% of eighth-grade students and 30% of twelfth-grade students met the National Assessment of Educational Progress standard of reading proficiency for their grade level in 2004 (National Center for Education Statistics, 2004). Among low-income eighth graders, just 15% read at a proficient level (National Center for Education Statistics). In a typical high-poverty urban school, approximately half of the incoming ninth-grade students read at a sixth- or seventh-grade level (Balfanz et al., 2002).

Successful districts provide students with appropriate instruction, continuously monitor program effectiveness, track student progress, efficiently allocate resources, and trouble-shoot where necessary (Meltzer & Jackson, 2010). Some key elements of a successful literacy development program include but are not limited to: (a) supportive and actively involved school leaders; (b) formal and informal assessments that guide the learning of students and teachers; (c) a research-based professional development program; (d) a comprehensive plan for strategic and accelerated intervention; and (e) highly skilled teachers in every content area who model and provide explicit instruction to improve comprehension (Phillips, 2005). Although the task is rigorous, a collaborative effort by administrators, faculty, and other key individuals can achieve a successful adolescent literacy program that could lead to successful student achievement of reading comprehension objectives (National Association of Secondary School Principals, 2005). A standards-based reading curriculum that is implemented district-wide assists students with literacy development throughout their K–12 educational experience so that students

do not have to languish or fail before getting targeted assistance (Meltzer & Jackson, 2010).

### **Vocabulary**

Vocabulary development refers to the process of learning and internalizing new words and their meanings. A wide, diverse vocabulary may increase students' reading proficiency. Children begin developing their vocabularies as infants, learning words from their parents and relatives. Learning accelerates with the introduction of more words once children enter school. Building a vocabulary through hearing and speaking words assists with the identification of other sounds and words that enhances comprehension (Report of the National Panel, 2000). The three tiers of vocabulary are basic words known before entering school; words that appear frequently in school texts, the meanings of which are familiar to students; and uncommon words with esoteric origins (Beck et al., 2002).

Explicit and implicit instruction are both widely used in schools to connect oral vocabulary and reading vocabulary. An example of explicit instruction is reviewing word lists prior to spelling tests. Independent reading at home is also encouraged to expand vocabulary. Vocabulary is developed more effectively with a balance of silent and spoken reading (Fountas, 2006). Technologies such as television, radio, internet videos, and other online sources of audio-visual media can also expose students to a variety of words and contexts (Linebarger & Walker, 2004; Sandholtz, Ringstaff, & Dwyer, 1997; Zucker, Moody, & McKenna, 2009).

Vocabulary is strongly correlated with reading comprehension, and some authors even use these terms interchangeably (Carver, 1994). Strong word recognition skills and a broad vocabulary greatly contribute to comprehension (Barton & Sawyer, 2003). A

poor vocabulary can demotivate students from reading outside of school, which can further limit exposure to new words and opportunities to expand vocabulary and comprehension (Joshi, 2005).

### **Comprehension**

Comprehension is a reader's capacity to understand and react appropriately to written text, and is necessary for readers to actively construct meaning from text (Fountas & Pinnell, 1996; Wilhelm, 2013). The process of developing comprehension is complex process that can be taught (Ehren, 2009). Comprehension teaching strategies are necessary because readers do not simply just perceive the meaning within a text, but need to reference their own life experiences to establish meaningful connections (Wilhelm, 2013). Comprehension can also be defined as the point at which a relationship forms between a reader and a text. Comprehension is affected by a readers' maturity level, mood, basic vocabulary, and life experiences (Wilhelm, 2013). Therefore, the same text can be comprehended many different ways at different times in one's life.

Reading comprehension begins with a basic familiarity with the language and topic of the text. Unfamiliar subject matter, especially if it includes specialized vocabulary, will be difficult to comprehend. In addition to identifying the meaning of words and phrases, readers must also be able to relate to the text on a personal level. Readers rely on past experiences discover text meaning and build upon previous information to create new meanings (Wilhelm, 2013). Abstract thinking is crucial for reading comprehension, such as reliance on mental models (Merritt, 2010). An example of mental model creation is the act of imagining a beach scene, in which images of beaches visited, seen or heard via other sources, or previously imagined are recalled to

create a mental model of a beach. Visualizing the content of a written text significantly improves comprehension (Barton & Sawyer, 2003).

Questioning the text also aids in comprehension because it engages the reader more fully. Identifying when one is unable to comprehend a text is an important step in the comprehension process. When one cannot comprehend a text, abstraction becomes difficult and mental models cannot be clearly generated. Without mental models, readers can easily disengage from the effort of understanding the text. Yet, identifying a lack of understanding can also promote questioning and more concerted efforts of understanding the text. Comprehension is demonstrated by the ability to apply information acquired through reading to novel circumstances (Vorstius, Radach, Mayer, & Lonigan, 2013). Readers must have deeply understood the text and practically connected the meaning with other situations to do this.

### **Cooperative Learning**

Cooperative learning is an effective strategy for comprehension, because it enhances literacy skills in a student-to-student environment through concepts and designed techniques. Cooperative learning involves cognitive and affective aspects of reading comprehension, through two interrelated techniques (Dansereau, 1988). One technique is called MURDER, which stands for Mood, Understand, Recall, Detect, Elaborate, and Review. For this approach, two students in comfortable moods are given a text to read independently. When both students have read the text, one will summarize while the other listens and records points that he or she felt were missing or incomplete from the first student's summary. Then both students discuss the reading, and this discussion often encompasses personal experiences of the students, which aids



comprehension. Review of the material via oral summation is crucial for internalizing the material, both building new vocabulary and deeply comprehending the content of the text (Ross & DiVesta, 1976).

Jigsaw is another cooperative learning technique that structures student interdependence through the learning task rather than a grading system (Aronson, Blaney, Stephin, Sikes, & Snapp, 1978). This technique was first used to defuse racial tensions following desegregation in an Austin, Texas school. By encouraging positive communication and teamwork among diverse groups of students, the jigsaw method can help motivate students to achieve greater levels of scholastic success. When implementing jigsaw techniques in the case of literacy instruction, a teacher will assign different parts of a story to different teams of students. Once each individual student has their part, they will join other team members who were assigned the same part. These students then become experts on their parts of the story and must figure out ways to teach their part to the rest of their teammates. Each team member participates equally in this exercise and feels equally important, because each student has the chance to present their part of the story (Aronson et al., 1978; Dansereau, 1988).

### **Graphic Organizers**

Graphic organizers are effective aids for comprehension. Both organizers help students by connecting the student's knowledge base with the information read in the text. Graphic organizers are visual displays that utilize lines, arrows, and other components to diagram content, structure, and conceptual relationships (Kim, Vaughn, Wanzek, & Wei, 2004). Graphic organizers can make material more accessible to students by overcoming obstacles common to struggling readers, such as a limited

vocabulary or weak critical thinking skills. One example of a graphic organizer is the Venn diagram.

The process of creating a graphic organizer compels students to engage in active learning and aids comprehension. To convert text material into a flow chart, the student must verify how content of the text flows and organize it appropriately (Stull & Mayer, 2007). Once comfortable with the basic process of completing teacher-designed graphic organizers, students can then create their own graphic organizers, which strengthens cognitive processing and empowers students. Repeated use of organizers train students to apply the principles of diagramming concepts automatically, which helps students comprehend text quicker. Organizers are helpful for all students, but this tool is especially useful for students who encounter material with a substantial amount of unfamiliar vocabulary words and novel information (Kim et al., 2004). Many students have issues with comprehending and interpreting text while graphic organizers have a way of taking the information and turning it into something understandable.

Semantic organizers are a type of graphic organizer, specifically diagramming relationships between a central concept with related concepts. Semantic maps are effective tools because they enable students to focus on key vocabulary concepts, which also improves reading comprehension. For example, a teacher may show a video about sharks and then instruct students to make suggestions of key vocabulary words that relate to the topic of sharks. The use of semantic organizers can greatly improve comprehension skills, especially with students that have learning disabilities (Kim et al., 2004).

## **Poverty and Literacy**

Poverty can adversely impact literacy development. Children of low-income families have poorer overall health and limited access to health care. The reasons for compromised health among the poor are partially financial, but also include other risk factors of poverty. For example, children of low-income families are more likely to have been born prematurely, have poorer nutrition, lower immunization rates, and exposure to more environmental hazards such as lead paint (Vernon-Feagans, Hammer, Miccio, & Manlove, 2003). Compromised health status is related to cognitive impairments. For example, chronic ear infections in early childhood have been linked to later problems with reading and attention in school (Vernon-Feagans et al., 2003). Health problems can also be generally distracting from academic concerns, and may reduce a student's interest and motivation to become literate. Children of low-income families also suffer from environments that are not conducive to literacy development. Compared to middle-income families, low-income families visit the library 50% less frequently. Children who are not exposed to stimulating, language-rich environments may be at a disadvantage as compared to children who are exposed. The topic of word gaps is discussed in detail in the next section.

Unfortunately, socioeconomic achievement gaps have widened over time. Rising income inequality may contribute to this because high-income families spend much more money on their children's education today than in previous years. For example, the highest-income families in the 1970s spent 4.2 times more money annually on enrichment activities (e.g., music lessons, extracurricular sports, and hobbies) than the lowest-income families. In 2002, that ratio increased to 6.8 times more money spent

annually (Reardon et al., 2012). At the same time, family income levels have become more strongly associated with children's academic achievement.

In successful high-poverty and high-minority schools in California, the predominant teaching method is direct instruction, where student learning is directed by and centered on the teacher. However, a majority of teachers in America's elementary schools have rejected this proven approach in favor of a much less structured-and less effective-teaching style called "student-centered" learning (Izumi et al., 2002). Direct instruction could bridge the reading performance gap between economically disadvantaged students and middle class or more affluent students (Bereiter & Engelmann, 1966). The approach developed by Bereiter and Engelmann (1966) demonstrated that the accelerated pace and structure of the direct instruction time can substantially increase the rate of learning in disadvantaged students. A core element of the direct instruction model is that the program focuses on the concept of teaching fewer concepts at greater depth (Bereiter & Engelmann, 1966). Higher gains in student outcomes will be achieved when education programs are centered on focused mastery of skills (Binder, 1993).

### **Environmental Factors that Encourage Reading Development**

Student literacy is not simply the product of classroom reading instruction, but is guided and encouraged by other environmental factors. Family support has the greatest impact on a student's vocabulary, comprehension, and ultimate lifetime literacy and joy of reading (Baker, 2003). Reading development cannot be solely dependent upon the school system; it must be a part of the entire environment (Phillips, 2005). . In addition,

the wider school culture, as influenced by the principal as a literacy leader, is an important factor for encouraging literacy among elementary and secondary students.

### **Family Support**

Baker found that family involvement is a crucial factor for literacy development. Family support in relation to reading can be instrumental in the continual improvement of adolescent literacy. When parents actively work to make reading enjoyable, parents provide children with several advantages for later literacy success (Heroman & Jones, 2004). If parents have a clear understanding of the literacy needs of their children they can more easily provide the assistance necessary for adolescents to succeed. Case studies of three families living outside Chicago, IL found that parents who attended workshops designed to complement their children's tutorial program learned important skills to facilitate literacy learning (Rubert, 1993). Notably, instruction of parents in effective reading education techniques is nearly as important as direct instruction from parents to children (Rubert, 1993). This instruction involved not only academic skill training, but also encouraging parents to believe they were capable of teaching their children, because "as parents' perceptions about their ability to help their children changed, a positive cycle was set in motion as both parent and child came to a better understanding of one another" (Rubert, 1993, p.130). Providing parents with practical strategies, such as scripted questions to encourage deeper reading comprehension, can be an effective tool for improving student literacy (Rubert, 1993). After several years of declining end-of-grade reading scores, a parent involvement program was implemented for seventh-grade students that had several positive effects (Reglin, Cameron, & Losike-Sedimo, 2012).

Interestingly, increased parental engagement and skill development was found to improve both parent and child literacy (Reglin et al., 2012).

In a recent review of strategies to link home and school, Elish-Piper (2013) asserted that “parents play a key role in their children’s literacy development and school success” (p. 56). Promoting positive relationships between students, parents, teachers, and school leaders is essential for sustained gains in literacy for students of all ages (Elish-Piper et al., 2013). Parental involvement is especially critical at early ages to establish good communication skills in children, as well as building strong partnerships between parents and children, parents and teachers, and teachers and children (Elish-Piper et al., 2013; Reglin et al., 2012.).

Research has revealed a strong relationship exists between academic success and the amount out-of-school reading in which a student engages (Anderson, Fielding, & Wilson, 1988; Taylor, Frye, & Maruyama, 1990). Parental voluntary recreational reading, reading aloud to children, and engaging in discussions about books, are some of most important factors that influence how much a student reads outside of school (McKool, 2007). Limited television viewing and adequate free-time apart from organized extracurricular activities are also positively associated with more voluntary out-of-school reading (McKool, 2007).

Parental influence encompasses more than simply involvement in children’s school-work. The quality of a child’s home life also strongly influences his or her overall literacy. In a groundbreaking longitudinal study following children beginning at nine months old and ending at three years old, Hart and Risley (1995, 2003) found stark differences among families regarding language experience. These differences heavily

influenced the children as they learned to speak, setting a vocabulary growth trajectory that was nearly intractable in later elementary school years. Not surprisingly, children emulated parents in their vocabulary resources and language styles, such that 86-98% of words in a child's vocabulary were also present in his or her parent's vocabularies Hart and Risley (1995, 2003). Importantly, the size of a child's vocabulary, the average number of utterances per hour, and the average number of different words used per hour was directly related to parental socioeconomic status. Children of professional families reported approximately 1,100 words in their vocabularies, and roughly 300 utterances per hour and different words per hour. Children of working-class reported approximately 750 words in their vocabularies, with over 200 utterances per hour and different words per hour. Children of welfare families reported approximately 530 words in their vocabularies, with only 170 utterances per hour and nearly 150 different words per hour (Hart & Risley, 1995).

These results demonstrate a stark "word gap" in the number and type of words to which children are exposed during early life. This word gap widens as students age, and those with the smallest vocabularies face texts that are increasingly difficult to comprehend. Students who have been raised in an environment that cultivates vocabulary from birth enter kindergarten prepared to learn and perform at higher levels than those who are raised in a word-impooverished environment (Hart & Risley, 2003). Vocabulary use at age three was highly predictive of language skill by age ten (Walker, Greenwood, Hart, & Carta, 1994). Among fifth-grade students, Cunningham and Stanovich (1998) found that a child in the 90th percentile of reading ability may read more words in a single day than a student in the 10th percentile of reading ability would read in six

months outside of school (Cunningham & Stanovich, 1998). For students from low socioeconomic status families, schools must identify reading weaknesses and address them early with extra instruction to prevent greater reading failure in higher grades (Cunningham & Stanovich).

Supporting literacy learning outside of school is the responsibility of parents, grandparents, preschool and daycare teachers, childcare workers, and others who work with children. Rivalland (1999) suggested several ways for supporting literacy learning:

- Making children feel confident about their early language and literacy experiences
- Helping children actively inquire into the nature of languages, not just the English language
- Responding to children's questions about print and stories in sometimes quite explicit ways which will help them understand the literacy puzzle or become a 'literacy detective'
- Reading and discussing a range of print materials including stories, computer and TV, community and environmental texts
- Drawing attention of children to sounds, words and letters even when they may not yet show a great deal of interest in these aspects of literacy
- Encouraging children to make the best use of all of the available language and linguistic resources which can be accessed as part of the community
- Encouraging teachers to inform themselves about the interests and literacy practices their children enjoy and participate both at home and in the community



- Helping children learn to be independent and effective managers and organizers of their belongings. (p. 12)

### **Early Literacy Education**

School readiness is an important component for literacy readiness. In recent decades, preschool attendance has dramatically increased due to federal programs such as Head Start. In 1965, only five percent of three-year-olds, 16% of four-year-olds, and 60% of five-year-olds attended school. In 2005, over 40% of three-year-olds, over 70% of four-year-olds, and most five-year-olds attended school (Barnett & Yarosz, 2004). Today, most children enter kindergarten with basic letter recognition skills but only 30% can identify beginning sounds and 20% can identify ending sounds of words (Reardon et al., 2012). Children rapidly gain proficiency in these areas, however, so that 90% of first graders gain these skills, and 75% can also recognize words by sight. (Reardon et al., 2012).

School readiness skills improve a student's experience when transitioning into formal schooling. The factors that facilitate literacy learning are exposure to rich and diverse language use, caretakers who readily answer questions and actively demonstrate alphabetic principles and phonological concepts, encouragement to participate in reading activities (Ravilland, 1999).

The Education Commission of the States (2011) has provided the following policy recommendations for schools to improve early literacy education:

1. Pay particular attention to whether early literacy efforts are rooted in knowledge development in Pre-K and full-day kindergarten, and ensure the broadest access possible to such efforts in those grades;

2. Implement common core state standards as an opportunity to deeply integrate the acquisition of knowledge as part of literacy strategies and to ensure alignment across all levels;
3. Provide broad opportunities for preservice and in-service teachers to improve how they teach students to read and to strengthen their use (and school-wide use) of data that informs such instruction;
4. Use technology and other means to support early identification of both student and teacher literacy proficiency issues, and to support effective, immediate intervention; and
5. Expect principals to effectively support literacy instruction in the early grades, and include growth and proficiency in literacy as a key element in the evaluation of principals (p. 5).

Closing the achievement gap between low-income students and their more affluent peers is an ongoing concern for schools across the U.S. Several studies have identified common characteristics of teachers and school leaders who have successfully helped struggling readers become competent readers (Pressley, Wharton-McDonald, Raphael, Bogner, & Roehrig, 2002; Taylor, Pearson, Peterson, & Rodriguez, 2003). These include effective classroom management skills; balanced literacy instruction; emphasis on metacognition and higher order critical thinking skills; and placement of basic skills instruction within meaningful context for students.

Professional development programs designed to enhance teachers' knowledge of literacy acquisition theories as well as practical approaches to reading instruction have been found to be effective for improving literacy among students from low-income

families (Kennedy, 2010). In one study of 56 fourth-graders, professional development for classroom teachers was provided for two years (Kennedy, 2010). This particular intervention was designed “to enhance teachers’ content knowledge in each of the essential literacy skills (i.e., alphabetics, vocabulary, comprehension, fluency, writing)...equip teachers with a range of pedagogical content strategies and assessment tools... while building metacognitive awareness and honoring their agency and creativity” (Kennedy, 2010, p. 385). Compared to initial measures, students’ reading, writing, and spelling abilities were significantly improved after the intervention and most students were more motivated and engaged in literacy learning. Notably, those who continued to experience reading difficulties also had documented learning or behavioral challenges, unstable living situations, and attendance problems (Kennedy, 2010). These data provide evidence that literacy can be improved among high-poverty students, yet the obstacles related to poverty are substantial.

### **School Principals as Literacy Leaders**

Literacy is a fundamental aspect of education. A strong foundation of vocabulary and comprehension skills allows students to become self-motivated learners able to access information independently from teachers as they grow. Unfortunately, approximately six million sixth- through twelfth-grade students are at risk of not graduating from high school, in part due to illiteracy (National Association of Secondary School Principals, 2005). Even among those likely to graduate high school, far too many are ill-prepared for higher education or fulfilling careers (National Association of Secondary School Principals, 2005). The vocabulary development and reading comprehension skills taught in elementary grades are therefore of utmost importance for

students' future academic and career success. Neither teachers nor parents can accomplish this alone; teachers, parents, students, and school leaders must all collaborate to help students achieve high levels of literacy.

Principals must be visionary leaders who encourage and facilitate education reform that prioritizes reading achievement. School leadership is a key factor in supporting change within schools, but few schools recognize the true impact leadership has on gains in students' reading outcomes (Fletcher, Greenwood, Grimley, & Parkhill, 2011). Many principals understand that it takes collaboration from parents and teachers to substantially improve literacy among elementary students. Principals are not involved with teaching students on a day-to-day basis, and therefore it is difficult for them to understand the complexities of reading instruction. Nontraditional approaches for connecting home and school must be implemented to help struggling elementary students succeed in reading (Danridge, Edwards, & Pleasants, 2000). Increasingly, urban principals understand the importance of parent-teacher collaboration and actively engage these parties to build fruitful partnerships for the sake of the students (Danridge et al., 2000). The key for success is for principals to truly lead their schools rather than simply manage staff administratively. True leadership inspires teachers who, in turn, inspire and motivate their students. A principal's mere presence can greatly affect teacher efficacy and engagement. Principals must take on the challenge of being the literacy leaders for their schools because they are responsible for the success of their students (National Association of Secondary School Principals, 2005).

Both campuses used in this study are located in a large urban school district. Urban principals are keenly aware of the need for reading instruction and the changes

necessary to improve literacy among struggling readers, especially minority and low socioeconomic status students (Osterman, Crow, & Rosen, 1997). Urban principals are also aware of the unavoidable interdependence of school, home, and community, and how attitudes must change throughout each of these spheres regarding the importance of lifelong reading skill development (Osterman et al., 1997).

Principals should use the following 11 strategies for implementing successful school reform:

1. Use proven processes and strategies based on scientifically confirmed research;
2. Incorporate a complete plan with associated components;
3. Provide consistent and continual training for teachers and staff members;
4. Provide goals that are achievable, reasonable, understandable, measurable, and believable, and provide goal status updates;
5. Ensure that everyone in the school is supportive, because otherwise reform will not be fully implemented and effective;
6. Provide the teachers and staff members with the support needed to make the reformation successful;
7. Parents and communities should be involved in organizing, employing and assessing school improvement activities;
8. Principals and school staff members need to utilize external resources that have been involved with similar projects and have the expertise when it comes to reforming a school;
9. Make sure that the assessments of the goals for the strategies and students are evaluated on an annual basis;

10. Parties that are a part of the reform effort should know their involvement and be clear of their role in the reformation effort; and
11. Display proof of the academic accomplishment for the students and faculty (Shippen, Houchins, Calhoon, Furlow, & Sartor, 2006).

Principals play a very important role in determining students' reading success. Principals have the ability and authority to design and implement their vision for literacy reform, and can emphasize the fundamental importance of reading throughout the school environment. Principals set the tone of the school and everything else follows. A study of four elementary school principals—one with direct instruction background, one with guided reading background, one with Open Court background, and one with a balanced literacy and Open Court-embedded background—demonstrated the importance of principal influence on reading achievement, (Mackey, Pitcher, & Decman, 2006). Despite the differing literacy education backgrounds of the principals, three common themes emerged. First, the principal must have vision for the reading program and everyone within that school system should know and understand that vision. Second, the principal's background dictates how the reading programs are implemented. Third, the principal must be an influential instructional leader within the school or reform will fail (Mackey, Pitcher, & Decman, 2006).

School districts with high levels of student literacy achievement choose principals who have illustrated solid reform practices and hire teachers with solid teaching practices (Ferguson & Wilson, 2009). The practical activities that constitute literacy leadership for principals could include frequently visiting classrooms or establishing a framework for teachers to monitor student reading progress in a systematic way. However, visiting a

teacher's classroom annually or biannually is not sufficient to ensure students are receiving reading instruction that meets their individual learning needs (Spillane, 2005). It could also include hiring a literacy coordinator to assist teachers, and meeting multiple times a year with the literacy coordinator to seek feedback regarding ways to improve literacy within the classroom. As principals work with the teachers to promote literacy, principals can also monitor and evaluate both teachers and students accordingly (Spillane, 2005). Regardless of the daily activities, the principal has to make literacy a priority (Ferguson & Wilson, 2009).

One example of literacy leadership is the case study of Adams Elementary School (Spillane, Diamond, & Jita, 2003). At this school, the principal hired a literacy coordinator who created a student assessment for teachers to administer. The literacy coordinator, principal, and assistant principals all observed the teachers while they administered the assessments. After assessments were complete, the literacy coordinator, the assistant principal, and the principal met to discuss their observations. Based on these observations and discussions, the literacy coordinator gathered tailored resources to help teachers with specific deficiencies. The principal and literacy coordinator met with each teacher to discuss their findings from the observations and develop a plan of support for teachers to improve instruction and classroom management. This practice of intensive assessment and personalized feedback for teachers helped Adams Elementary School to excel (Spillane et al., 2003).

Whereas some school district staff are highly motivated in the teaching and learning aspect of education, others focus on the day-to-day administrative tasks. For schools to succeed in helping struggling students become confident and competent

readers, principals must be highly motivated literacy leaders who focus on the big picture of education (Fink & Resnick, 2001). In one urban New York City school, the principal and the administrative staff improved over an eleven year period due to the fact that “not only teachers, curriculum specialist and professional developers [were] concerned about teaching and learning, but also principals and senior administrators” (Fink & Resnick, 2001, p. 4). When all levels of the school system promote learning, test scores improve dramatically.

As a principal, being a literacy leader is a difficult task that is made more challenging by media negativity that emphasizes failures and ignores success stories (Henk, Moore, Marinak, & Tomasetti, 2000). Many principals have to defend themselves against accusations of program ineffectiveness or even detrimental effects on students. Furthermore, principals can become so overwhelmed with basic, necessary administrative tasks that they rarely have time to address reading instruction. No matter how well a literacy program is designed, it will fail if teachers are not regularly evaluated and given constructive feedback regarding their reading instruction abilities (Henk et al., 2000).

The relationship between teachers and administrators has to facilitate open, two-way communication to effectively transform reading instruction. A reading lesson observation framework is helpful for identifying areas of improvement for teachers and setting goals for reading program success (Henk et al., 2000). The rationale for using a standard framework is that “by ensuring short-term quality control of reading lessons, overall programmatic quality will naturally follow” (Henk et al., 2000, p. 4). This framework can help principals and administrators assess teachers’ current and ideal



activities, and guide teachers on practical ways to meet performance expectations regarding reading instruction.

NCLB (2001) formalized and reinforced high expectations for principals to be leaders of their schools—taking responsibility for budgetary matters, teacher conferences, schedules, and evaluations—and added new expectations for principals to be instructional leaders as well (Cobb, 2005). Clearly, this is a high standard for principals yet it is necessary for the sake of student literacy. Principals can no longer sit in their offices and expect change to naturally occur. Principals must maintain ongoing involvement with teachers, and both teachers and administrators should share responsibilities in order for principals to succeed as literacy leaders (Cobb, 2005).

### **Early Literacy Instruction and Adolescent Academic Success**

The acquisition of robust vocabulary and comprehension skills early in life is crucial for literacy success in adolescent years. Most students learn basic reading and writing skills by the time they reach the fourth grade (Ayers & Miller, 2009). Fourth grade also marks the beginning of students' use of reading as a learning tool (Biancarosa & Snow, 2004). Regrettably, many fourth-grade students do not have a solid literacy foundation and, therefore, struggle with the transition from basic reading mechanics to the more complex process of comprehension (Biancarosa & Snow, 2004). By fifth grade, if students are disinterested and do not engage in reading, parents and educators struggle to remedy poor literacy skills among these students as they enter high school (Manset-Williamson & Nelson, 2005).

Much attention and many resources have been dedicated to reforming elementary literacy instruction (Biancarosa & Snow, 2004). For example, Reading First provides

grants for students with reading deficiencies up to third grade, and offer extensive assistance for educators to help improve student reading skills. Reading First also provides structure for allotting extra time for students during recess or outside school hours for remedial instruction, and struggling readers receive approximately three to four more sessions than the average student (Kame'enui et al., 2006).

NCLB (2001) dedicated Title I funds to poverty-stricken schools to assist older students who struggled with reading, because the literacy gap among students mostly relates to income, ethnicity, race, and language (Jacobs, 2008). Specifically, these funds are earmarked to help students who are economically disadvantage or at risk of failing state requirements. However, approximately 8.7 million secondary students still are not able to understand material provided in their textbooks (Heller & Greenleaf, 2007). Obviously, this contributes to the astonishing high school dropout rate of nearly 7,000 students each day (Alliance for Excellent Education, 2008). Moreover, the literacy crisis among adolescents is worsening; the percentage of secondary students performing at grade level in reading decreased from 40% to 35% in 13 years (Grigg et al., 2003).

Adolescents have unique learning needs regarding literacy interventions, compared to elementary students. Self-motivation becomes increasingly vital for academic success, multicultural perspectives become more valuable, and social literacies differ greatly among adolescents (National Council of Teachers of English, 2006). As soon as an adolescent demonstrates any weakness in vocabulary or comprehension skills, an intervention should take place (Kame'enui et al., 2006). These interventions can include increasing instructional time dedicated to reading and placing adolescents in smaller groups in order to receive more focused attention. These interventions must be

paired with ongoing assessment to evaluate student progress, and provide timely feedback to reward adolescents and encourage them to continue learning the literacy skills they lack (Kame'enui et al., 2006).

Motivation is fundamental for reading success (Guthrie, Wigfield, & Von Secker, 2000). Adolescents often become engaged in reading due to the interaction and positive relationships they develop with their instructors (Kamil, Borman, Dole, Kral, Salinger, & Torgesen, 2008). Any successful intervention program must motivate and engage students via specially-trained teachers. In order to reach this goal, teachers must provide an atmosphere that focuses on learning and not simply text (Guthrie, Wigfield, & Von Secker, 2000).

Some principals and school district leaders fail to adequately train teachers on best practices for teaching reading and meeting the reading needs of students. Teachers who do not understand the reasoning behind the reading programs cannot be effective literacy instructors. One study found that in a sample of 40 teachers, only 53% had been trained in guided reading practices in college while most (83%) received training via staff development meetings ranging from three hours to three days (Ferguson & Wilson, 2009). These staff development meetings are not sufficient preparation for teachers to truly guide and motivate adolescents who lack skills and motivation to read. However, while most teachers understand the goals of a literacy program, many have great difficulty implementing a given program due to time constraints associated with many other required duties not directly related to teaching reading.

In addition to inadequate teacher training, lack of quality materials can also be an obstacle to educating adolescents (Ferguson & Wilson, 2009). Reading materials should

be diversified enough to be relatable to all students in the classroom, because comprehension depends on the ability to connect with the text on a personal level. Unrelatable texts can further disinterest students, which furthers disengagement and increases risk of drop out (National Council of English Teachers, 2006).

For the majority of students, adolescence is a tumultuous time personally as well as academically. Adolescents who are disadvantaged regarding literacy at home are less likely to read at grade level or practice reading outside of school (Parveen & Rajesh, 2013). Unfortunately, many do not fully realize the importance of vocabulary and comprehension skills until they reach higher levels of education or enter the workforce (Parveen & Rajesh, 2013). Some students are aware of the need for greater emphasis on literacy in schools, but others are focused more on personal issues than on improving reading comprehension and vocabulary skills (Ma'ayan, 2012). Thus, motivational, structured, and supportive leadership from instructors and administrators is crucial. This includes changing the attitudes of pre-service teachers regarding literacy instruction (Warren-Kring & Warren, 2013). If teachers take pride in the strategies they teach, then students will follow. And as students begin to understand and utilize the reading strategies taught, they also began to gain confidence and continue to pursue literacy excellence (Ma'ayan, 2012).

For adolescents more than elementary students, learning academic content and learning literacy skills are two distinct processes (Wendt, 2013). Reading comprehension and vocabulary are invaluable tools for gaining knowledge and understanding, and “the purpose of intensive interventions is to accelerate literacy development so that students are able to make substantial progress toward accomplishing reading tasks appropriate for

their current grade level” (Kamil et al., 2008, p. 31). Interpretation of text is crucial for comprehension, and thus academic success. Clear instruction regarding effective strategies to improve comprehension is an important component of any literacy intervention for adolescents as (Kamil et al, 2008).

Literacy has also taken on a digital aspect, such that “with the advances of the electronic age, computer literacies are now pushing to the forefront of education practice” (Wendt, 2013, p. 43). Today, teachers must be technologically proficient to reach adolescents and guide them in proper ways to navigate internet sources. If teachers only use printed texts, they will lose some of the attention from the adolescents. The focus needs to be more around what is relevant to the students’ prerequisites and skill progress instead of merely the content in a textbook (Heller & Greenleaf, 2007). Teachers are now using more online videos, e-books and audio features to engage students, with preliminary results demonstrating a minor improvement in reading skills (Zucker, Moody, & McKenna, 2009). Schools such as those in the Pearland Independent School District have adapted to technological advances by allowing students (with parental consent) to bring their own Wi-Fi capable devices through which teachers teach the students (Pearland Independent School District, 2013). These teachers understand that effective instruction involves innovative techniques to engage students, even though these practices may seem unorthodox.

Ensuring that students are provided with the necessary prerequisite literacy skills during their early years of schooling is critical for long term literacy success. Therefore, it is important for school leaders to have a clear understanding of the several approaches that they may take to ensure that a strong literacy foundation is built. While this study

only focused on two different approaches to teaching reading, this literature review provides a description of other approaches to teaching reading. Some of these approaches are similar to the guided reading and direct instruction approach.

### **Reading Instructional Approaches**

Given the significance of literacy for both individuals and society, effective reading instruction is crucial for all ages. All effective literacy instruction programs include four core elements of pre-reading: phonological awareness, letter identification, vocabulary development, and the ability to recall and retell stories (Scarborough, 1998). All four components must be taught in a comprehensive way for maximum effectiveness. Ideally, these skills are taught in pre-kindergarten and kindergarten classrooms, in alignment with Stage 1 of reading development discussed previously (Chall, 1983). During reading development Stages one and two, students “should be taught systematically, directly and explicitly in phonics decoding, fluent sight word vocabulary, and comprehension skills” (Schacter, 1999, p. 7).

A review of reading programs for pre-kindergarten through Grade 4 listed seven effective school-wide reading programs which include the elements described above: (a) Success for All, (b) Direct Instruction, (c) Exemplary Center for Reading Instruction, (d) Open Court, (e) Carbo-Reading Styles Program, (f) Concept Oriented Reading Instruction, and (g) Small Group Interventions (Schacter, 1999).

### **Success for All**

Success for All was specifically designed for English and Spanish speaking K-3 students who are at risk of reading failure. This program features individualized tutoring, small student-teacher ratios, and frequent assessment and grouping students by ability.

The Success for All comprehensive reading curriculum emphasized both phonics and meaning, through storytelling and cooperative learning to develop language skills (Schacter, 1999). Implementation of the full program is much more effective for improving literacy among low-income students, as demonstrated in a study of 49 Texas schools (Nunnery, 1997).

### **Exemplary Center for Reading Instruction**

The purpose of the Exemplary Center for Reading Instruction is to train teachers in effective ways to prevent reading failure. In this program, students are grouped by reading ability and allowed individual practice time equal to the amount of instruction time. During individual skill practice, teachers can provide one-on-one instruction to students, as well as individually assess student growth areas (Schacter, 1999). This approach combines a direct instruction approach with the grouping strategy used in guided reading, and is highly effective for disadvantaged students.

### **Open Court**

Open Court is another type of direct instruction reading program for Grades K-6, and strives to help all children become independent readers through systematic phonics instruction. The emphasis on phonics and phonological awareness cannot be overstated for this program, as it incorporates a high level of explicit phonics instruction throughout the program materials. Spelling and vocabulary development are also emphasized using shared books and writing workshops (Schacter, 1999). With Open Court instruction, students perform significantly better in reading, phonological processing, and spelling compared to whole language instruction.

**Carbo Reading Styles Program**

The Carbo Reading Styles Program is guided by the concept of unique learning styles for each student, specifically distinct “reading styles.” In this program, teachers are trained to identify and accommodate students’ strengths and weaknesses in reading (Schacter, 1999). This program also relies on a comprehensive approach, including parental and school leader cooperation in addition to intensive teacher training. The program is effective for Grades one through two, but effectiveness diminishes for older students (Schacter, 1999).

**Concept Oriented Reading Instruction**

Specifically created for Grades three through five, Concept Oriented Reading Instruction utilizes relevant and interesting texts, a variety of cognitive strategies, and social learning approaches to improve reading performance for students in high poverty schools (Schacter, 1999). In contrast to phonics-based approaches, Concept Oriented Reading Instruction has been shown to improve student’s narrative and expository text comprehension. Furthermore, this program promotes self-directed learning, evidenced by the increased amount and breadth of out-of-school reading engagement for students (Guthrie, McGough, Bennett, & Rice, 1996).

**Small Group Interventions**

Several small group interventions have been studied. Three effective programs are the Junior Great Books literature-based program for Grades two through six, Lindamood Phonemic Sequencing for all ages, and Project Read for students with learning disabilities (Schacter, 1999). All of these programs utilize grouping based on reading ability and provide teachers with the opportunity to give individualized meaningful



instruction to students. The successful strategies of small groups and individualized instruction are also utilized in the guided approach to reading instruction, discussed presently.

### **Direct Instruction**

Created by Engelmann (1964), Direct Instruction System for Teaching and Remediation (DISTAR) is an skills-oriented program for early elementary students that emphasizes face-to-face instruction by teachers who carefully articulate lessons by breaking down cognitive skills into small units and teaching each unit in a deliberate sequence (Carnine et al., 2009; Traub, 1999). After each small step, students are given opportunities to practice the lessons taught, which helps students internalize the concepts presented. Direct Instruction curricula and materials provide detailed scripts for teachers to follow for each reading lesson, as well as regular assessments. Direct Instruction begins with phonics and follows with comprehension instruction (Schacter, 1999).

Direct Instruction is divided into three components (Slocum, 2004). First, direct instruction must be organized with specific elements and can be taught in general terms across multiple disciplines (Engelmann & Carnine, 1982). Second, a specific set of lessons are introduced on a gradual scale allowing new skills to be grasped and maintained (Slocum, 2004). Third, the interaction between the students and the teachers should be positive and engaging. Ideally, direct instruction should be introduced in the early preschool and kindergarten years to be most effective (Stockard & Engelmann, 2007). Direct instruction encourages phonemic awareness and provides opportunities for oral reading, which allows students to develop fluency strategies to aid comprehension (Gersten & Carnine, 1986). These benefits allow for students to not only learn concepts

and strategies, but also take the learnings with them to higher levels of education with the hope of being successful.

Students who are taught by teachers specifically trained in direct instruction practices demonstrate significantly greater gains in vocabulary and comprehension compared with students who were not taught by trained teachers (Carnine et al., 2009). The trained teachers took small steps to help students develop strategies for comprehending text. Before the entire class began assessments, teachers ensured that all students reached grade level reading skills (Carnine et al., 2009).

Teachers using direct instruction methods will often divide a class into small groups of students to aid learning. In order for this to be successful, groups are matched regarding literacy ability. If a student is placed in a group in which he or she does not feel comfortable, self-confidence will diminish, motivation will wane, and the student may not succeed at the literacy tasks assigned. Importantly, direct instruction does not endorse the introduction of novel concepts until all previously presented material has been mastered. Mastering a concept or skill before moving on helps to build the confidence necessary in order to move on to a more difficult reading text.

Project Follow Through was the largest study ever undertaken to analyze the effects of direct instruction, spanning nearly thirty years from 1967 to 1996 and costing nearly one billion dollars (Becker & Gersten, 1982; Meyer, 1984; Stebbins, 1976). This experiment was designed to understand which method is most effective when it comes to educating students who are economically underprivileged. Project Follow Through involved over 70,000 kindergarten through third grade students who were randomly assigned to one of nine different instructional models. Each model was matched with a

control group to compare students' basic, cognitive, and affective skills. Out of the nine models tested, the direct instruction produced the best results with an increase of 20-30% in all three skill areas (Adams & Engelmann, 1996). Notably, improved basic, cognitive, and affective skills also resulted in an improved reading performance. Long-term benefits of Direct Instruction have also been found. Students exposed to Direct Instruction for 3-4 years in elementary school had a high school graduation rate of 63% compared to control group graduation rate of only 38% (Meyer, 1984). Students taught with Direct Instruction were more likely to apply to and be accepted into college than a control group, as well. (Meyer, 1984). Several researchers have rated Direct Instruction as among the strongest in reading outcomes (Comprehensive School Reform Quality Center, 2006; Slavin, Lake, Chambers, Cheung, & Davis, 2009).

Direct instruction is not without its critics. Many believe that the program is too rigid and does not allow for creativity (Adams & Engelmann, 1996). Direct instruction relies heavily on behaviorist theories of education, and its scripted lessons allow little room for teacher autonomy and flexibility (Elias, 2009). Others assert that direct instruction limits the promotion of critical thinking abilities (Shippen et al., 2005). Direct instruction has also been criticized for insufficient sensitivity to issues of poverty, race, and culture (Ryder, Burton, & Silberg, 2006). Teachers themselves have noted that most direct instruction content was targeted to middle class students and much of the available material lacked relatable content for urban students. For low socioeconomic status students, teachers have to heavily prepare and augment lessons to adjust or explain information to be understandable. Although direct instruction is effective for basic skill development, it is of limited value for long-term comprehension development (Ryder et

al., 2006). Some even suggest that direct instruction programs prepare students for exams, but not for the entire development needed for sustainability in order to reach higher levels without struggling (Heshusius, 1991).

In the present study, teachers at Pleasant Valley School used the Reading Mastery as their direct reading instruction program. Reading Mastery is one of the most widely used direct instruction programs. This program consists of a series of increasingly challenging reading prompts and short quizzes that incorporate techniques for phonics learning, vocabulary, comprehension, and interpretation (Ryder et al., 2006). Reading Mastery provides highly explicit, systematic lesson plans for teachers to implement in a variety of classroom situations, including at-risk populations. Reading Mastery curricula include materials for teaching phonemic awareness, phonics and word analysis, fluency, vocabulary, and comprehension. In addition, spelling instructional strategies are also emphasized to help students improve their decoding skills.

### **Guided Reading Instruction**

Guided reading is “an instructional context for supporting each reader’s development of effective strategies for processing novel texts at increasingly challenging levels of difficulty” (Fountas & Pinnell, 1996, p. 25). The main goals of this approach are to increase students’ understanding of challenging texts, and to encourage students to read independently with thorough comprehension. Guided reading has been found to improve word recognition, fluency, and comprehension for elementary grade students (National Institute of Child Health and Human Development, 2000).

Guided reading instruction prescribes a particular teaching sequence. First, the teacher selects a text that is academically appropriate for the entire group. The teacher

introduces the text to assist the readers, but does not give too much support to allow students to independently understand the text. The students read the text on their own and after all have read it, the teacher opens the reading up for discussion. The teacher guides the discussion, highlighting specific things to enhance students' comprehension. The teacher also assists students with words to help them become flexible and capable in comprehending (Fountas & Pinnell, 2012). Guided reading instruction techniques can be used to develop mental modeling, which hones reading comprehension abilities (Parveen & Rajesh, 2013).

Appropriately grouping students who have similar text experiences, learning needs, and textual processing abilities is crucial for the success of any guided reading instruction program (Iaquinta, 2006). Usually, these groups are small enough to allow students to receive ample instruction needed for their current reading level. The guided reading groups work together to achieve short term goals until the desired reading level has been reached. Group reading allows students to learn by listening to others read aloud and by communicating the messages they perceived in the text (Burkins & Croft, 2010). Small group settings allow teachers to assess reading processes and ensure that the assigned text is appropriate for students to comprehend.

Limitations of guided reading instruction include the significant time necessary for adequate preparation, and less planning time may reduce the effectiveness of the approach (Ferguson & Wilson, 2009). Scheduling is another challenging aspect of guided reading instruction. Teachers must effectively implement guided reading for struggling readers but also schedule effective reading for those students who do not need the support of the guided reading program. It is a very difficult task to ensure that all students

are getting what they need for their appropriate reading levels (Ferguson & Wilson, 2009). Furthermore, few quality reading materials exist to aid guided reading instruction (Ferguson & Wilson, 2009).

In the present study, Orange Hill School used the Scholastic Guided Reading Program. This program allows teachers to choose from an assortment of fiction and non-fiction texts to meet students' literacy needs. Furthermore, the materials provided in this program vary in length and text type (e.g., magazine articles, short stories, chapter books, etc.) to help introduce students to the diversity of real-world reading contexts. The texts are leveled to provide flexible instruction to teach both advanced and struggling readers. Most importantly, this program provides ample opportunities for teachers to give meaningful differentiated instruction to all students.

### **Summary**

Literacy is a key aspect of elementary education, and ultimately of academic success throughout a student's lifetime. Elementary grades are the best time for students to build a solid literacy foundation which is needed in order to successfully master more complex skills during the middle and high school years. The two primary skills that are required to become a proficient reader are vocabulary and reading comprehension. Both of these skills may be developed through several approaches to teaching reading. Some of these approaches were outlined in this literature review. These approaches have both similarities and differences when compared with the direct instruction and guided reading approaches. However, this study only examined the direct instruction and guided reading approaches for teaching reading because the two campuses selected each implemented

either direct instruction or guided reading with fidelity. The campuses were also close in proximity to one another within a large urban district and demographically similar.

There are both strengths and limitations with guided reading and direct instruction. In the guided reading setting, students are assessed for reading levels and are grouped accordingly. This approach allows small groups of students with similar reading abilities to work through a common text together along with a teacher who guides students with unfamiliar words or concepts. This targeted approach helps teachers monitor student progress and provide appropriate instruction to students based on their reading level. However, utilizing the guided reading method with fidelity comes with certain challenges. In a study completed by Ferguson and Wilson (2009), teachers reported that time was an obstacle when attempting to implement guided reading with fidelity. Teachers felt that their inability to implement guided reading in a consistent manner and in the method in which they were trained, would cause great demands on their already tight daily instructional schedule. The teachers believed that this would cause other subjects that they were required to teach to suffer. Ferguson and Wilson (2009) stated that an additional limitation was the lack of quality resources. An effective guided reading program must have a large variety of leveled reading materials available for teachers to access. Conflicting district-level priorities and reduced budgets create barriers for the acquisition of necessary reading materials (Ferguson & Wilson, 2009). Another limitation that guided reading presents is classroom management and organization. A major element to a guided reading classroom is the planning for and management of the students who are not involved in small group instruction (Fountas & Pinnell 1996). All students need to be involved in literacy-based activities that are

relevant and engaging. It is challenging for the teacher to keep the students on-task and working productively without immediate and direct assistance (Ferguson & Wilson, 2009).

Direct instruction involves teacher-directed, skills-oriented instructional practices (Carnine & Thomas B. Fordham Foundation, 2000). It emphasizes the use of small group instruction with scripted lessons that are carefully and strategically developed. Skills are prioritized and broken down into small units, sequenced deliberately, and taught explicitly (Traub & Thomas B. Fordham Foundation, 1999). However, according to Adams and Engelmann (1996), critics of the direct instruction declare that the program limits teacher creativity and is too inflexible. Additional limitations are that direct instruction emphasizes low levels of rote learning and fails to promote critical thinking skills (Shippen, Houchins, Steventon, & Sartor, 2005).

Ryder, Burton, and Silberg (2006) indicated the following concerns from their study on teacher's perceptions of direct instruction:

Some urban direct instruction teachers noted concerns regarding direct instruction's lack of sensitivity to issues of poverty, culture and race. Teachers also believed that direct instruction reading texts provided little exposure to real-life experiences that middle-class students experience daily. Some teachers further expressed their concerns about the absence of comprehension strategies in direct instruction needed to engage students with higher order critical thinking.



## **CHAPTER 3**

### **Methodology**

#### **Research Design**

This quantitative study utilized descriptive and inferential statistics to examine trends and differences that exist in vocabulary and reading comprehension scores of students instructed with guided reading and students instructed by direct instruction. Archived ISIP Advanced Reading vocabulary and reading comprehension achievement scale scores from fifth grade students in 2013-2014 were collected from 119 students in two different classes from one campus receiving guided reading instruction and 118 students in two different classes from another campus receiving direct instruction as a reading approach. Mean scores were examined to determine relationships that exist and t-tests were conducted to determine if significant differences exist in vocabulary and reading comprehension mean gain scores as measured by the ISIP Advanced Reading. Scores between students who received guided reading as their instructional approach to reading and those who received direct instruction as their instructional approach to reading were examined.

Specifically, this study was conducted in three phases. Phase 1 involved the analysis of vocabulary and reading comprehension Advanced ISIP data, mean scores and trend data were analyzed over a nine month period of time to answer the first four research questions:

1. What trends exist in vocabulary mean scores of students instructed with guided reading?

2. What trends exist in reading comprehension mean scores of students instructed with guided reading?
3. What trends exist in vocabulary mean scores of students instructed with direct instruction?
4. What trends exist in reading comprehension mean scores of students instructed with direct instruction?

In Phase 2, t-tests were conducted to compare beginning of year (BOY) and end of year (EOY) ISIP Advanced Reading scores. Two t-tests were conducted for each school and two t-tests were conducted for each class within each school to compare BOY and EOY vocabulary and reading comprehension scores.

Phase two answered the following research questions:

5. What differences exist in vocabulary BOY and EOY scores of students instructed using guided reading?
6. What differences exist in reading comprehension BOY and EOY scores of students instructed using guided reading?
7. What differences exist in vocabulary BOY and EOY scores of students instructed using direct instruction?
8. What differences exist in reading comprehension BOY and EOY scores of students instructed using direct instruction?

In Phase 3, one-way ANOVAs were conducted to determine significant differences in mean gain scores of vocabulary and reading comprehension among the four classes who were instructed by guided reading and who were instructed by direct instruction. Phase 3 analysis answered the following research questions:

9. What differences exist among vocabulary mean gain scores when comparing guided reading and direct instruction approach to teaching reading?
10. What differences exist among reading comprehension mean gain scores when comparing guided reading and direct instruction approach to teaching reading?

### **Setting**

This study is positioned within one large urban school district in southeast Texas. The study examined data from Orange Hill School (pseudonym) and Pleasant Valley School (pseudonym), which are two elementary schools geographically located in the north region of a large urban school district. The source of all demographic data was the Texas Education Agency (TEA) Division of Performance Reporting. This urban district had a total student population of 210,716 in the 2013-2014 school year, dispersed among 274 schools. For the 2013-2014 school year, the demographics of the school district were as follows: 62.0% Hispanic, 25.2% African American, 8.2% White, 3.5% Asian, 0.2% American Indian, 0.1% Pacific Islander, and 0.9% two or more races. An overwhelming majority of students (80.6%) were identified as economically disadvantaged, 19.4% were non-educationally disadvantaged, 29.6% were English language learners, 68.6% were at risk, and mobility was 18.7%. There were 27.0% students enrolled in bilingual/ESL education, 15.6% in career and technical education, 15.6% in gifted and talented education, and 5.1% in special education programs.

Orange Hill School and Pleasant Valley School were chosen for this study because they had comparable student demographics, they were geographically located in the same area of a large urban district, all four teachers on both campuses implemented reading programs with fidelity according to campus and district leadership, and teachers

who taught fifth grade students on both campuses were rated effective as measured by the Teacher Appraisal and Development System.

### **Orange Hill School**

**Student demographics.** A total of 783 students were enrolled at Orange Hill School in the 2013-2014 school year. As presented in Table 2, Orange Hill School demographics were as follows: 24.0% African American, 74.3% Hispanic, 0.6% White, and 1.0% of two or more races. Within the school, 90.7% of students were economically disadvantaged, 55.2% were English language learners, 85.4% were at-risk, and mobility was 13.0%. Regarding various educational program placement, 11.9% were enrolled in the gifted and talented program, 52.6% were enrolled in bilingual/ESL education, and 5.1% were enrolled in the special education program.

Table 2

*Orange Hill School Student Characteristics (2013-2014)*

Student Information	Count/Average	Percentage
Total number of students	783	100.0%
Hispanic	582	74.3%
African American	188	24.0%
White	5	0.6%
Two or more races	8	1.0%
American Indian	0	0.0%
Asian	0	0.0%
Pacific Islander	0	0.0%
Economically disadvantaged	710	90.7%
Non-educationally disadvantaged	73	9.3%
English language learners	432	55.2%
At-risk	669	85.4%
Mobility (2012-2013)	76	9.7%
Bilingual/ESL education	412	52.6%
Gifted and talented education	93	11.9%
Special education	40	5.1%
Career and technical education	0	0.0%

*Note:* The demographic information in this table is from the Texas Education Agency (TEA) Division of Performance Reporting.

**Staff demographics.** There was an average total of 52.9 staff members at Orange Hill School, 90.6% of which were minorities. As presented in Table 3, the teacher demographics were as follows: 53.8% African American, 35.9% Hispanic, and 10.3% White. Of the 44 professional staff members, 39 were teachers, 4 were professional support, and 1 was a campus administrator. Most teachers (79.5%) were female, and 20.5% were male. Regarding teachers' years of experience, 5.1% had less than one year, 15.4% had 1-5 years, 35.9% had 6-10 years, 28.2% had 11-20 years, and 15.4% had over 20 years of experience. There were an average of 8.9 educational aides also employed. The average number of students per teacher was 20.1. The average years of experience of teachers was 11.2 years, with an average of 8.7 years spent employed by EISD. Nearly all teachers (94.5%) were regular education teachers and 5.5% were special education teachers.

Table 3

*Orange Hill School Teacher Characteristics (2013-2014)*

Teacher Information	Count/Average	Percentage
African American	21	53.8%
Hispanic	14	35.9%
White	4	10.3%
Asian	0	0.0%
Two or more races	0	0.0%
American Indian	0	0.0%
Pacific Islander	0	0.0%
Females	31	79.5%
Males	8	20.5%
Number of years of experience		
<1 year	2	5.1%
1-5 years	6	15.4%
6-10 years	14	35.9%
11-20 years	11	28.2%
21+ years	6	15.4%
Average number of years experience	11.2	-
Average number of years employed by school district	8.7	-
Teachers by program		
Regular education	36.9	94.6%
Special education	2.1	5.4%
Bilingual/ESL education	0	0.0%
Gifted and talented education	0	0.0%
Career and technical education	0	0.0%

*Note:* The demographic information in this table is from the Texas Education Agency (TEA) Division of Performance Reporting.

### **Instructional Program**

Orange Hill School was chosen for this study because of their implementation of guided reading during the 2013-2014 school year. Guided reading is an instructional approach that involves a teacher working with a small group of students who demonstrate

similar reading behaviors and can all read similar levels of texts. The text offers challenges and opportunities for problem solving, but is easy enough for students to read with some fluency. Teachers choose selections that help students expand their strategies.

Before reading, a teacher will access background knowledge, build schema, set a purpose for reading, and preview the text with students. Typically a group will engage in a variety of pre-reading activities such as predicting, learning new vocabulary, and discussing various text features. If applicable, the group may also engage in completing a "picture walk." This activity involves scanning through the text to look at pictures and predicting how the story will go. The students will engage in a conversation about the story, raise questions, build expectations, and notice information in the text.

During reading, the students will read independently within the group. As students read, the teacher will monitor student decoding and comprehension. The teacher may ask students if something makes sense, encourage students to try something again, or prompt them to use a strategy. The teacher makes observational notes about the strategy use of individual readers and may also take a short running record of the child's reading. The students may read the whole text or a part of the text silently or softly for beginning readers.

After reading, the teacher will again check students' comprehension by talking about the story with the children. The teacher returns to the text for teaching opportunities such as finding evidence or discussing problem solving. The teacher also uses this time to assess the students' understanding of what they have read. The group will also discuss reading strategies they used during the reading. To extend the reading, students may participate in activities such as drama, writing, art, or more reading.



**Pleasant Valley School**

**Student demographics.** A total of 803 students were enrolled at Pleasant Valley School in the 2013-2014 school year. As presented in Table 4, Pleasant Valley School demographics were as follows: 33.4% African American, 65.5% Hispanic, 0.9% White, 0.1% American Indian, and 0.1% Asian. Within the school, 85.1% of students were economically disadvantaged, 14.9% were non-educationally disadvantaged, 53.3% were English language learners, and 82.6% were at-risk. Regarding various educational program placement, 2.4% were enrolled in the gifted and talented program, 41.6% were enrolled in bilingual/ESL education, and 4.6% were enrolled in the special education program.

Table 4

*Pleasant Valley School Student Characteristics (2013-2014)*

Student Information	Count/Average	Percentage
Total number of students	803	100.0%
Hispanic	526	65.5%
African American	268	33.4%
White	7	0.9%
Two or more races	0	0.0%
American Indian	1	0.1%
Asian	1	0.1%
Pacific Islander	0	0.0%
Economically disadvantaged	683	85.1%
Non-educationally disadvantaged	120	14.9%
English language learners	428	53.3%
At-risk	663	82.6%
Mobility (2012-2013)	0	0.0%
Bilingual/ESL education	334	41.6%
Gifted and talented education	19	2.4%
Special education	37	4.6%
Career and technical education	0	0.0%

*Note:* The demographic information in this table is from the Texas Education Agency (TEA) Division of Performance Reporting.

**Staff demographics.** There was an average total of 53.6 staff members at Pleasant Valley School, 75.8% of which were minorities. As presented in Table 5, the teacher demographics were as follows: 32.0% African American, 38.5% Hispanic, 22.1% White, 4.9% Asian, and 2.5% two or more races. Of the average 45.7 professional staff members, 40.7 were teachers, 3 were professional support, and 2 were campus administrators. Most teachers (80.3%) were female, and 19.7% were male. Regarding teachers' years of experience, 41.0% had less than one year, 34.4% had 1-5 years, 17.2% had 6-10 years, 4.9% had 11-20 years, and 2.5% had over 20 years of experience. There

were an average of 7.9 educational aides also employed. The average number of students per teacher was 19.7. The average years of experience of teachers was 3.7 years, with an average of 2.0 years spent employed by EISD. Nearly all teachers (92.9%) were regular education teachers and 7.1% were special education teachers.

Table 5

*Pleasant Valley School Teacher Characteristics (2013-2014)*

Teacher Information	Count/Average	Percentage
African American	13	31.9%
Hispanic	15.7	38.6%
White	9	22.1%
Asian	2	4.9%
Two or more races	1	2.5%
American Indian	0	0.0%
Pacific Islander	0	0.0%
Females	32.7	80.3%
Males	8	19.7%
Number of years of experience		
<1 year	16.7	41.0%
1-5 years	14	34.4%
6-10 years	7	17.2%
11-20 years	2	4.9%
21+ years	1	2.5%
Average number of years experience	3.7	-
Average number of years employed by school district	2	-
Teachers by program		
Regular education	37.8	92.9%
Special education	2.9	7.1%
Bilingual/ESL education	0	0.0%
Gifted and talented education	0	0.0%
Career and technical education	0	0.0%

*Note:* The demographic information in this table is from the Texas Education Agency (TEA) Division of Performance Reporting.

## **Instructional Program**

Pleasant Valley School was chosen for this study because their implementation of direct instruction as an approach to reading during the 2013-2014 school year. In direct instruction, teachers followed a pre-selected instructional program. The Reading Mastery program by McGraw-Hill Education was used by Pleasant Valley School teachers for the entire 2013-2014 school year. These direct instruction lessons are highly scripted and teachers must use very specific physical prompts while teaching. For 45 minutes each school day students with similar reading needs received direct instruction in small groups of four-to-six students.

Before each lesson, teachers in this study were required to clearly communicate the lesson objective and briefly explain the skill that students would target during the lesson, the importance of the skill, and how the skill connected to previous learning. For example, a teacher would say, “Today we will be learning the sound of short vowel ‘a.’ Short vowel ‘a’ says /a/. You hear the sound of short ‘a’ in the middle of the words ‘bad’ and ‘sat.’ It is important to know the short ‘a’ sound because it appears in many words and books that we have been reading in all subjects and will read today by the end of our lesson.”

The first part of the lesson was the “I Do,” during which teachers introduced a phonics lesson focused on the word families that have the same sound and spelling pattern that was introduced with the objective. Hand signals and/or prompting are mostly used at this time to help students practice making the sound of the letters or words. During this time, teachers were required to present examples of the targeted skill. The

teachers also presented strategies that students should use to approach words that may have the short “a” in them when they approach them in text.

The next part of the lesson was the “We Do,” during which teachers led students through an interactive practice. In this practice, the teacher prompted student involvement in activities and supports or corrects students as they answer questions. Continuing the example above, the teacher may give each student a card with an “a” on it, say a variety of words aloud, and tell students to hold up the card whenever they hear a word with /a/.

The last part of the lesson was the “You Do,” during which teachers gave each student a magnetic board and magnetic letters. Students were required to build words on their board and read the words for the group. As an extension, some students may have been required to use the words in a sentence and write them on a sentence strip. Students were also required to complete an exercise to demonstrate their knowledge of the lesson objective and practice reading a decodable text to demonstrate their knowledge of the sound that the letter or letters make. Throughout this 45-minute lesson, the teacher wrote notes identifying areas of focus for each student. At the beginning of the next small group lesson, the teacher would discuss these areas of focus individually with each student.

### **Participants**

ISIP Advanced Reading archived vocabulary and reading comprehension scores were collected from 119 fifth-grade students enrolled at Orange Hill School during the 2013-2014 school year and from 118 fifth-grade students who were enrolled at Pleasant Valley School during the 2013-2014 school year. Fifth grade students from both campuses were selected because the schools are demographically similar and located in the same area of this large urban school district.

Demographic data for Orange Hill School are presented in Table 6. Some demographic data was unavailable for 11 students. Therefore, they were not included in Table 6. The class was nearly evenly divided by gender: 68 males and 51 females. Eighty-four students were Hispanic, 34 were African American, and 1 identified as two or more races. Eighty-nine students were identified as at-risk. Fifty-five students had limited English proficiency, and 24 were enrolled in the gifted and talented program. Nearly all students (86%) were economically disadvantaged, meaning they qualified for free or reduced lunch or received another type of government assistance.

Demographic data for Pleasant Valley School are presented in Table 6. Some demographic data was unavailable for 4 students. Therefore, they were not included in Table 6. The class was evenly divided by gender: 58 males and 60 females. Seventy-seven students were Hispanic, 39 were African American, one was white, and one identified as two or more races. Ninety-seven students were identified as at-risk. Sixty-eight students had limited English proficiency, and 6 were enrolled in the gifted and talented program. Nearly all students (88%) were economically disadvantaged, meaning they qualified for free or reduced lunch or received another type of government assistance.

Table 6

*Demographic Characteristics of Participant Classes*

	Orange Hill Guided Reading Class 1		Orange Hill Guided Reading Class 2		Pleasant Valley Direct Instruction Reading Class 3		Pleasant Valley Direct Instruction Reading Class 4	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Total number of students	54	100%	54	100%	76	100%	38	100%
Ethnicity								
Hispanic	40	74%	37	69%	38	50%	38	100%
African American	14	26%	16	30%	36	47%	0	0%
Two or more races	0	0%	1	2%	1	1%	0	0%
Gender								
Females	27	50%	24	44%	40	53%	18	47%
Males	27	50%	30	56%	36	47%	20	53%
Program enrollment								
Free or reduced lunch	51	94%	50	93%	65	86%	36	95%
At-risk	54	100%	44	81%	56	74%	38	100%
ELL/LEP	34	63%	31	57%	33	43%	38	100%
Special education	2	4%	2	4%	0	0%	2	5%
Gifted/talented	11	20%	13	24%	5	7%	1	3%

*Note:* This table reports all students enrolled in these classes, although ISIP Advanced Reading score analysis excluded some student scores (see exclusion criteria in Chapter 3).

## **Instrument**

All data for this study were collected through ISIP Advanced Reading assessments taken during the 2013-2014 school year as part of the scheduled curricula of both schools and independent of this study. ISIP Advanced Reading is used for students in Grades four through eight to evaluate readers in four domains: word analysis, fluency, comprehension, and vocabulary.

Recent research of a large sample of first- through eighth-graders in Texas found that reading growth was greater among students who used ISIP compared with those who had not during the 2013-2014 school year (Patarapichayatham, 2014). The amount of ISIP use was positively correlated with reading gains, and at-risk students especially benefited from ISIP use (Patarapichayatham, 2014).

In the ISIP Advanced Reading program, short tests (“probes”) are administered monthly to identify abilities and deficits in the four domains of reading: word analysis, text fluency, vocabulary, and comprehension. Teachers can administer these computer-based assessments to entire classrooms or individually. Each assessment requires a maximum of 30 minutes. All results are immediately available to teachers and administrators, thus teachers are promptly alerted if a student is faltering in a certain area. ISIP Advanced Reading is set up in a game-like format with age-appropriate text that effectively engages students. Due to the game-like nature of the assessment tool, students are not aware that they are being evaluated. ISIP Advanced Reading assessments group students in three tiers: Tier one students perform at their correct grade level (scores above 40th percentile for their grade), Tier two students are moderately below their grade level, and Tier three students need intensive intervention (scores below 20th percentile for their



grade). In this study, only scores from the vocabulary and comprehension subtests were used because these are the most crucial foundational skills necessary for literacy.

**Reliability.** Reliability is the consistency of the test results over multiple assessments. Test-retest reliability was measured among students in grades four through eight in a Texas school district in 2010. High levels of internal consistency in both subtest ability scores as well as overall reading ability scores were found. Results for overall reading ability range from 0.927 to 0.970 ( $N = 416$ ) across seven sessions spanning from October to February. Furthermore, ISIP Advanced Reading scores remained stable over time (Mathes, 2014).

### **Validity**

Validity is the accuracy of the results as a reflection of a student's true reading abilities. For the vocabulary subtest, vocabulary standards were created based on standards common to at least two states. The vocabulary standards for fifth grade included synonyms, antonyms, roots, affixes, Latin and Greek roots, and homographs. The reading comprehension subtest included the following standards for fifth grade:

- Distinguish and understand the elements of plot, setting, characterization, and problem resolution;
- Determine the main idea through summarizing and identifying relevant details;
- Identify purpose of different types of text such as to inform, influence, express, or entertain;
- Determine how meaning in prose and poetry is affected by imagery, rhythm, flow, or figurative language, such as:
  - personification
  - metaphor

- simile
- hyperbole;
- Interpret the author's use of dialogue and description;
- Understand that theme refers to the implied or stated message about life and the world;
- Make judgments and inferences about plot, setting, characters, and theme (implied or stated); and
- Distinguish between fact and opinion in various texts.

Concurrent validity was previously established by computing Pearson Product Moment correlation coefficients between ISIP Advanced Reading and the following external measures of established assessments: Gray Oral Reading Test-4, Woodcock-Johnson-3, Wechsler Individual Achievement Test-II, and Peabody Picture Vocabulary Test-IV. Data was collected during 2010-2011 school year from two large Texas school districts. Concurrent validity with scores from these well-known tests was mostly large to very large (Mathes, 2014).

Importantly, ISIP Advanced Reading scores have been strongly correlated with STAAR reading scores (Patarapichayatham, Fahle, & Roden, 2014). A study of 20,493 Texas students from Garland Independent School District in the 2012-2013 school year sought to determine the predictive value of ISIP Early Reading and ISIP Advanced Reading scores for STAAR reading scores (Patarapichayatham et al., 2014). Relevant to the present study, the beginning-, middle-, and end-of-year ISIP Advanced Reading scores 3,877 fifth graders were gathered and compared to STAAR test scores. Pearson Product Moment correlation coefficients for Grade five are presented in Table 10. Middle-of-year and end-of-year overall scores significantly predicted STAAR test scores

(Patarapichayatham et al., 2014). Notably, only ISIP Advanced Reading spelling subtest scores were not significant in terms of STAAR predictability.

## **Procedures**

**Data collection.** All data for this study was collected from the EISD Research and Accountability Department. This department collected ISIP Advanced Reading scores from fifth-graders assessed during the 2013-2014 school year as part of the scheduled curricula and independent of this study. During this time, 119 students were enrolled in the fifth grade at Orange Hill School and 118 were enrolled in fifth grade at Pleasant Valley School. All student scores and demographic data were identified only by a masked identification number. No personal information was made available to the researcher.

**Screening.** Special education students and students classified as bilingual were excluded from this study, as they received additional instruction beyond the scope of guided reading instruction. Participants must have been enrolled in the same teachers class throughout the 2013-2014 school year and have at least one score recorded for Fall, Winter, and Spring to be included in the analysis. Participant scores were excluded if demographic data were not available for the student.

**Data treatment and analyses.** Data treatment and analyses was divided into three phases including: 1) examining trends in mean vocabulary and reading comprehension scores of students instructed using guided reading and students instructed using direct instruction over a nine month period of time; 2) conducting independent t-tests to examine if there are significant differences in BOY and EOY vocabulary and reading comprehension mean gain scores in each of the classes that utilizes the guided reading approach and each of the classes that utilizes the direct instruction approach; and 3) conducting an ANOVA test to compare differences that exist in the vocabulary and

reading comprehension mean gain scores among classes that received the guided reading approach and classes that received the direct instruction approach.

Prior to examining trends in mean scores and conducting t-tests and an ANOVA, a preliminary analysis was conducted by analyzing histograms and scatterplots in order to check for violation of the assumption of a normal distribution and homogeneity of variance. This was done using Levene's test for equality of variances as part of the t-test and the ANOVA.

**Phase 1.** Phase 1 involved the analysis of vocabulary and reading comprehension Advanced ISIP data, specifically mean scores and trend data were analyzed over a nine month period of time to answer the first four research questions:

1. What trends exist in vocabulary mean scores of students instructed with guided reading?
2. What trends exist in reading comprehension scores of students instructed with guided reading?
3. What trends exist in vocabulary mean scores of students instructed with direct instruction?
4. What trends exist in reading comprehension mean scores of students instructed with direct instruction?

**Phase 2.** In Phase 2, t-tests were conducted to compare beginning of year (BOY) and end of year (EOY) ISIP Advanced Reading scores. Two t-tests were conducted for each school and two t-tests were conducted for each class within each school to compare BOY and EOY vocabulary and reading comprehension scores.

Phase two answered the following research questions:

5. What differences exist in vocabulary BOY and EOY scores of students instructed using guided reading?
6. What differences exist in reading comprehension BOY and EOY scores of students instructed using guided reading?
7. What differences exist in vocabulary BOY and EOY scores of students instructed using direct instruction?
8. What differences exist in comprehension BOY and EOY scores of students instructed using direct instruction?

***Phase 3.*** In Phase 3, one-way ANOVAs were conducted to determine significant differences in mean gain scores of vocabulary and reading comprehension among the four classes that were instructed by guided reading and who were instructed by direct instruction. Phase 3 analysis answered the following research questions:

9. What differences exist among vocabulary mean gain scores when comparing guided reading and direct instruction approach to teaching reading?
10. What differences exist among comprehension mean gain scores when comparing guided reading and direct instruction approach to teaching reading?

### **Limitations of the Study**

Several limitations must be acknowledged. Not all students in the sample were taught by the same teacher. The researcher was unable to control for students' prior experience with technology and testing procedures during the administration of ISIP Advanced Reading assessment. The researcher attempted to control somewhat for teacher quality by assuring that all four teachers were deemed "Effective" based on the district's Teacher Appraisal and Development System (TADS) and that the instructional approach

was implemented with fidelity according to the principal, and district level Teacher Development Specialists (TDS).

Notably, the results of this study were not generalizable because differences in ISIP Advanced Reading scores could be due to a number of uncontrolled variables in this study, such as: different classes, differences in teacher experience, differences in baseline literacy, and differences in number of English language learners. In addition, only one school district was used to conduct this study.

## **CHAPTER 4**

### **Results**

#### **Introduction**

This study was designed to determine if trends and differences exist in vocabulary and reading comprehension as measured by the ISIP Advanced Reading scores among fifth-grade students who received guided reading as their instructional approach to reading and those who received direct instruction as their instructional approach to reading. Archived 2013-2014 ISIP Advanced Reading vocabulary and reading comprehension scores from 117 fifth-grade students in two different classes from one campus receiving guided reading instruction and 118 fifth-grade students in two different classes from another campus receiving direct reading instruction was used.

Findings from this study may be used to inform school and district leaders how guided reading and direct instruction affect achievement gains in vocabulary and reading comprehension among fifth-graders. These findings could help school leaders in their decisions regarding the appropriate reading programs to implement for students from similar school contexts.

#### **Results**

Class mean scores in vocabulary and reading comprehension for students who received direct instruction as their approach to reading and for students who received guided reading as their approach to reading were calculated monthly and plotted to examine trends in vocabulary and reading comprehension Advanced ISIP scores over a period of nine months from two classes from each of the two school campuses. Each class was taught by a different teacher hence each class was analyzed independently.

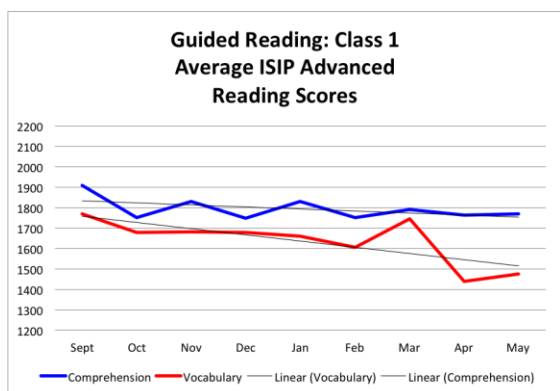
Data analysis was conducted in three phases. Vocabulary and reading comprehension Advanced ISIP scores were analyzed separately throughout all phases of the analysis.

### Phase 1

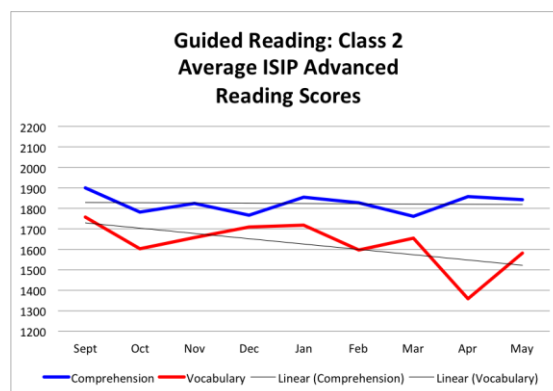
In Phase 1, vocabulary and reading comprehension Advanced ISIP data were analyzed to answer the first four research questions:

1. What trends exist in vocabulary mean scores of students instructed with guided reading?
2. What trends exist in reading comprehension scores of students instructed with guided reading?
3. What trends exist in vocabulary mean scores of students instructed with direct instruction?
4. What trends exist in reading comprehension mean scores of students instructed with direct instruction?

Figures 1 and 2 present the guided reading monthly scores in vocabulary and reading comprehension for Class 1 and Class 2, for the 2013-2014 academic school year.



*Figure 1.* Monthly Class Means for Guided Reading class 1 with Trendline.

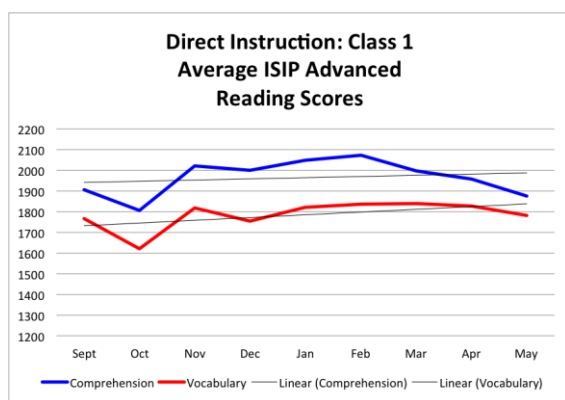


*Figure 2.* Monthly Class Means for Guided Reading class 2 with Trendline.

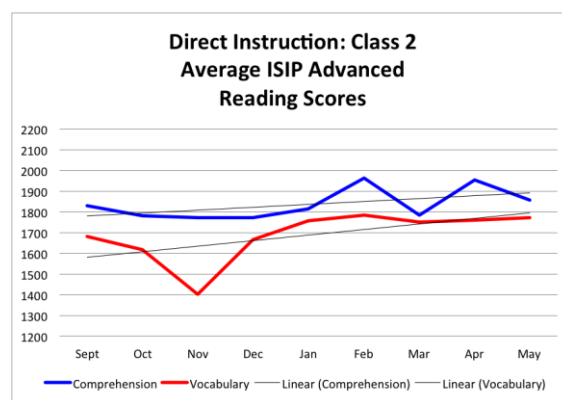


Trends in guided reading vocabulary scores for Class 1 and Class 2 declined between the BOY and EOY, as seen in Figure 1 and 2. Class 1 had a slight increase during the Month of March and the largest decline during the month of April.

Figures 3 and 4 present the direct instruction monthly scores in vocabulary and reading comprehension for Class 1 and Class 2, for the 2013-2014 academic school year.



*Figure 3.* Monthly Class Means for Direct Instruction class 1 with trendline plotted.



*Figure 4.* Monthly Class Means for Direct Instruction class 2 with trendline plotted.

The trend of vocabulary and reading comprehension scores in both Direct Instruction Class 1 and Class 2 shows improvement between BOY and EOY. Class 2 vocabulary scores show a huge decline during the month of November.

## **Phase 2**

In Phase 2, two-tailed paired t-tests were conducted to compare BOY and EOY ISIP Advanced Reading scores for each class. Vocabulary and comprehension scores were analyzed separately. The Phase 2 analysis was designed to answer the following research questions:

5. What differences exist in vocabulary BOY and EOY scores of students instructed using direct instruction?
6. What differences exist in comprehension BOY and EOY scores of students instructed using direct instruction?
7. What differences exist in vocabulary BOY and EOY scores of students instructed using guided reading?
8. What differences exist in reading comprehension BOY and EOY scores of students instructed using guided reading?

The descriptive statistics for the direct instruction Class 1 ISIP Advanced Reading vocabulary scores are presented in Table 7.

Table 7

*Direct Instruction Class 1 Vocabulary Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	73	73	0	0
Minimum	1493.9	1392.4	-101.5	-6.8
Median	1758.8	1839.0	80.2	4.6
Maximum	2137.7	2710.0	572.3	26.8
Mean	1758.1	1869.7	111.6	6.4
Std. Deviation	127.7	177.4	49.8	40.0

The results of the two-tailed paired t-test revealed that there were significant differences in vocabulary BOY and EOY scores of students receiving Direct Instruction in Class 1. Direct Instruction Class 1 had a statistically significant gains ( $t(72) = 8.28, p < .0001$ ), with EOY scores ( $M = 1869.7, SD = 177.44$ ) being higher than BOY scores ( $M = 1758.1, SD = 127.7$ ) as seen in Table 7, this difference resulted in a Cohen  $d = .97$ , which is interpreted as a large effect size.

The descriptive statistics for the direct instruction Class 2 ISIP Advanced Reading vocabulary scores are presented in Table 8.

Table 8

*Direct Instruction Class 2 Vocabulary Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	37	37	0	0
Minimum	1,175.5	1,527.9	352.3	30.0
Median	1,739.8	1,786.2	46.3	2.7
Maximum	1,957.1	1,964.7	7.5	0.4
Mean	1,711.2	1,781.3	70.1	4.1
Std. Deviation	139.9	96.7	-43.2	30.9

The results of the two-tailed paired t-test revealed that the Direct Instruction Class 2 also had statistically significant increases ( $t(36) = 3.57, p = .001$ ) from BOY scores ( $M = 1711.2, SD = 193.9$ ) to EOY scores ( $M = 1781.3, SD = 96.7$ ), as seen in Table 8, this difference resulted in a Cohen  $d = .59$ , which is interpreted as a medium effect size.

The descriptive statistics for the direct instruction Class 1 ISIP Advanced Reading comprehension scores are presented in Table 9.

Table 9

*Direct Instruction Class 1 Comprehension Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	73	73	0	0
Minimum	1,435.1	1,675.0	239.9	16.7
Median	1,913.3	1,991.5	78.2	4.1
Maximum	2,517.0	3,023.1	506.1	20.1
Mean	1,958.4	2048.4	89.9	4.6
Std. Deviation	240.4	270.8	30.4	12.6

The results of the two-tailed paired t-tests revealed that there were significant gains in comprehension scores from BOY ( $M = 1958.5$ ,  $SD = 240.4$ ) to EOY ( $M = 2048.4$ ,  $SD = 270.8$ ) scores of students receiving direct instruction in Class 1 ( $t(72) = 4.20$ ,  $p < .0001$ ) as seen in Table 9, this difference resulted in a Cohen  $d = 0.49$ , which is interpreted as a medium effect size.

The descriptive statistics for the direct instruction Class 2 ISIP Advanced Reading comprehension scores are presented in Table 10.

Table 10

*Direct Instruction Class 2 Comprehension Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	37	37	0	0
Minimum	1,553.5	1,476.4	-77.1	-5.0
Median	1,838.6	1,897.4	58.9	3.2
Maximum	2,155.7	2,373.0	217.3	10.1
Mean	1,836.4	1,909.2	72.8	4.0
Std. Deviation	144.4	167.0	22.6	15.7

The results of the two-tailed paired t-test revealed that there were statistically significant increases for the direct instruction Class 2 ( $t(36) = 2.44, p = .019$ ) from BOY scores ( $M = 1836.4, SD = 144.4$ ) to EOY scores ( $M = 1909.2, SD = 167.0$ ), as seen in Table 10, this difference resulted in a Cohen  $d = .40$ , which is interpreted as a medium effect size.

The descriptive statistics for the Guided Reading Class 1 ISIP Advanced Reading vocabulary scores are presented in Table 11.

Table 11

*Guided Reading Class 1 Vocabulary Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	50	50	0	0
Minimum	1,548.8	1,342.7	-206.1	-13.0
Median	1,750.0	1791.1	41.1	2.3
Maximum	2,175.3	2,334.8	159.6	7.3
Mean	1,769.2	1,798.1	28.9	1.6
Std. Deviation	132.3	173.2	40.85	30.9

The results of the two-tailed paired t-test revealed that there was not significant differences between vocabulary BOY and EOY scores of students receiving Guided Reading in Class 1 ( $t(49) = 1.64, p = .107$ ) with BOY scores ( $M = 1769.2, SD = 132.3$ ) and EOY scores of ( $M = 1798.1, SD = 173.2$ ), as seen in Table 11.

The descriptive statistics for the Guided Reading Class 2 ISIP Advanced Reading vocabulary scores are presented in Table 12.

Table 12

*Guided Reading Class 2 Vocabulary Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	51	51	0	0
Minimum	1,279.9	1,471.1	191.2	14.9
Median	1,760.3	1,787.8	27.5	1.6
Maximum	1,977.4	2,108.4	130.9	6.6
Mean	1,748.1	1,801.0	52.9	3.0
Std. Deviation	128.2	169.2	41.1	32.0

The results of the two-tailed paired t-test revealed that the Guided Reading Class 2 was significantly different ( $t(50) = 3.32, p = .002$ ), with EOY scores ( $M = 1801.0, SD = 169.2$ ) being higher than BOY scores ( $M = 1748.1, SD = 128.2$ ), as seen in Table 12, this difference resulted in a Cohen  $d = 0.47$ , which is interpreted as a medium effect size.



The descriptive statistics for the Guided Reading Class 1 ISIP Advanced Reading comprehension scores are presented in Table 13.

Table 13

*Guided Reading Class 1 Reading Comprehension Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	50	50	0	0
Minimum	1,450.9	1,551.5	100.6	6.9
Median	1,882.1	1,845.9	-36.2	-1.9
Maximum	2,498.7	2,893.9	395.3	15.8
Mean	1,909.2	1,872.5	-36.7	-1.5
Std. Deviation	204.7	242.6	38.0	18.6

The results of the two-tailed paired t-test revealed that there were not statistically significant differences ( $t(49) = 1.19, p = .24$ ) between BOY ( $M = 1909.2, SD = 204.7$ ) and EOY ( $M = 1872.5, SD = 242.6$ ) comprehension scores for the guided reading Class 1. In fact, there was a slight, but not statistically significant decrease from BOY to EOY, as seen in Table 13.

The descriptive statistics for the Guided Reading Class 2 ISIP Advanced Reading comprehension scores are presented in Table 14.

Table 14

*Guided Reading Class 2 Reading Comprehension Descriptive Statistics*

	BOY Score	EOY Score	EOY Minus BOY =	Relative % Change
Number of values	51	51	0	0
Minimum	1,466.6	1,575.5	109.9	7.4
Median	1,890.8	1,873.3	-17.4	-0.9
Maximum	2,426.6	2,588.8	162.2	6.7
Mean	1,893.7	1,905.8	12.0	0.6
Std. Deviation	202.5	194.5	-7.9	-3.9

The results of the two-tailed paired t-test revealed that there was a slight increase, but not statistically significant difference in mean scores ( $t(50) = 0.49, p = .62$ ), from BOY scores ( $M = 1893.7, SD = 202.5$ ) and EOY scores ( $M = 1905.8, SD = 194.5$ ) for the guided reading Class 2, there, as seen in Table 14.

### Phase 3

One-way ANOVAs were conducted for Phase 3, to determine if significant differences in mean gain scores of vocabulary and reading comprehension among the four classes, two of which were instructed using guided reading and two of which were instructed using direct instruction. Phase 3 analysis was designed to answer the following research questions:

9. What differences exist among vocabulary mean gain scores when comparing guided reading and direct instruction approach to teaching reading?

10. What differences exist among comprehension mean gain scores when comparing guided reading and direct instruction approach to teaching reading?

The one-way ANOVA results comparing mean difference vocabulary scores for all four classes indicated a significant difference was observed among the mean difference vocabulary scores ( $F(3, 207) = 5.41, p = .0013$ ). Post hoc two-way comparisons revealed two significant two-way comparisons. The first significant two-way comparison indicated that the Direct Instruction Class 1 ( $M = 111.6, SD = 115.1$ ) was significantly higher than Guided Reading Class 1 ( $M = 28.9, SD = 124.4; p = .001$ ) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = -0.69$ , which is interpreted as a medium effect size. The only other statistically significant two-way comparison was between the Direct Instruction Class 1 ( $M = 111.6, SD = 115.1$ ) and the Guided Reading Class 2 ( $M = 52.95, SD = 113.9; p = .042$ ) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = 0.51$ , which is interpreted as a medium effect size.

The one-way ANOVA results comparing mean difference comprehension scores for all four classes indicated a statistically significant difference was observed among the mean difference comprehension scores ( $F(3, 207) = 5.16, p = .0019$ ). Post hoc two-way comparisons revealed two significant two-way comparisons. The first significant two-way comparison indicates that the Direct Instruction Class 1 ( $M = 89.95, SD = 182.8$ ) performed better than the Guided Reading Class 1 ( $M = -36.7, SD = 218.0; p = .002$ ) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = -0.629$ , which is interpreted as a medium effect size. The only other statistically significant two-way comparison was between the Direct Instruction Reading Class 2 ( $M = 72.8, SD = 181.7$ ) performed better than the Guided Reading Class 1 ( $M = -36.7, SD = 218.0; p =$

.05) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = -0.545$ , which is interpreted as a medium effect size.

Table 15

*Mean Gain Scores*

	Comprehension	Vocabulary
Guided Reading Class 1	-36.7	28.89
Guided Reading Class 2	12.02	52.95
Direct Instruction Class 1	89.95	111.6
Direct Instruction Class 2	72.82	70.06

### Summary

The findings of this study revealed important differences in student performance gains, from BOY to EOY, for those taught using the guided reading approach and those taught using the direct instruction approach for both vocabulary and reading comprehension. Both classes that received direct instruction had statistically significant, and medium size gains from BOY and EOY in both vocabulary and reading comprehension (with large sized gains in Class 1 Vocabulary). Whereas only Class 2 taught using the guided reading approach had statistically significant learning gains in there vocabulary scores, but not there reading comprehension scores.

When comparing scores from the beginning of the year to the end of the year, these results revealed that students taught with direct instruction exhibited significantly greater gains in both vocabulary and reading comprehension scores than those taught with guided reading approaches. In addition, comparing mean gains scores across instructional methods and classes, it is evident that direct instruction class 1 had the

largest gains in the vocabulary scores during the 2013-2014 academic school year. While both direct instruction classes 1 and 2 had moderate sized gains in comprehension.

## **CHAPTER 5**

### **Conclusion**

#### **Introduction**

Literacy success is vital for academic and overall success in adulthood. In the U.S., only one-third of middle schoolers can read in a deep, comprehensive sense (Reardon, Valentine, & Shores, 2012). Literacy skills develop rapidly during elementary school years and readers who struggle in third grade are more likely to remain poor readers in adolescence and adulthood. Low literacy contributes to poor health and poverty, as adults who cannot read fluently have difficulty following doctors' instructions or navigating typical bureaucratic paperwork, such as tax and state benefit paperwork. Illiteracy has real costs for society, as well as individuals. Each year, low adult literacy costs \$225 billion, calculated by the loss of revenue due to non-participation in the workforce and crime, as over 65% of inmates are functionally illiterate (National Institute of Child Health and Human Development, 2000a).

Providing effective reading instruction to children at early ages may be vital to ensuring that all children have the opportunity to become successful, productive adults who are fluent, competent, and confident readers. The importance of an instructional leader's understanding of what defines effective reading instruction in the primary grades cannot be understated (Rightmyer, McIntyre, & Petrosko, 2006). School leaders, therefore, must understand which reading instruction programs are more likely to improve literacy skills, especially vocabulary and comprehension abilities.

The school district in which this study occurred has taken what administrators call "bold, dramatic steps" to improve literacy at nearly 90 percent of its elementary schools. The plan targets resources to classrooms and teachers and calls for help from the broader

community in its aim to ensure every student receives effective vocabulary and reading comprehension instruction. In 2013-2014 district-level exams showed only 37 percent of second-graders were proficient readers; by fourth grade, only 22 percent were proficient; and a national assessment, given randomly to fourth and eighth graders, measured a 39-point achievement gap in reading between white and African American fourth-graders - the gap was 35 points between the groups in eighth grade. Hispanic readers fared only marginally better than blacks (Foster, 2014). This profound crisis, called for the district to make dramatic changes in the way reading instruction was delivered. Too many programs were in use across the district and administrative monitoring of them was deemed by district leaders to be inconsistent. Many professionals in the district were unaware of the most effective approach for teaching vocabulary and reading comprehension. The district's goal was to identify the best approach for teaching vocabulary and reading comprehension and implementing those approaches on all campuses throughout the district.

The purpose of this study was to examine trends and differences that exist in vocabulary and reading comprehension scores of students instructed with guided reading compared to students instructed with direct instruction. Specifically, this study examined archived ISIP vocabulary and reading comprehension scores of fifth grade students from two different schools utilizing two different reading approaches (guided reading and direct instruction) during the 2013-2014 school year.

The scores were examined to look at trends and determine if there were significant differences in vocabulary and reading comprehension BOY and EOY scores of students who received guided reading and students who received direct instruction as their reading approach. Additionally, gains in achievement in both vocabulary and

reading comprehension were compared between students receiving guided reading as their instructional approach and students receiving direct instruction as their instructional approach to determine if significant differences exist.

### **Discussion**

In Phase one, vocabulary and reading comprehension mean scores were analyzed to determine if trends exist among students instructed with guided reading and among students instructed with direct instruction over a nine-month period. In Phase two, t-tests were conducted to compare BOY and EOY ISIP Advanced Reading scores. In each of the direct instruction and guided reading classes, two t-tests were conducted for each class within each school to compare BOY and EOY vocabulary and reading comprehension scores. In Phase 3, one-way analyses of variance were conducted to determine if significant differences exist in mean gain scores of vocabulary and comprehension scores among the four classes who were instructed by guided reading and who were instructed by direct instruction.

Findings from Phase 1 revealed that there were declining trend lines in vocabulary scores for Guided Reading Class 1 and Guided Reading Class 2 between the BOY and EOY. Guided Reading Class 1 had a slight increase during the Month of March and the largest decline during the month of April. Guided Reading Class 2 had a large decline in April. Trends in guided reading comprehension scores indicate a slight decline over a period of nine months for both Guided Reading Class 1 and Guided Reading Class 2.

Findings also revealed that the trend of vocabulary and comprehension scores in Direct Instruction Class 1 and Direct Instruction Class 2 showed improvement between BOY and EOY. Direct Instruction Class 2 vocabulary scores show a huge decline during



the month of November. The EOY means for the comprehension scores of Direct Instruction Class 1 are lower than BOY scores.

Vocabulary and reading comprehension trend lines for all classes indicate that there is a need to monitor students' progress to ensure that their vocabulary and reading comprehension mean scores are increasing from month to month. Although mean scores increased and decreased in some classes at different times during the nine month period, scores remained stagnant or there was little progress made from BOY to EOY.

Implementing a monthly system to evaluate student data would allow teachers and principals to make instructional adjustments, provide more intense interventions, and/or provide teachers with more precise professional development to ensure that needs are being met for students with stagnant or declining data. It is very important to determine what caused the large increase in mean scores during the nine months and ensure that that type of progress is sustained every month.

Findings from Phase 2 revealed that there are significant differences in vocabulary BOY and EOY scores of students receiving direct instruction in each of the direct instruction classes. Direct Instruction Class 1 reported increased scores from average BOY scores of  $1758.1 \pm 127.7$  to average EOY scores of  $1869.7 \pm 177.5$  ( $t(72) = 8.28, p < .0001$ ). Direct Instruction Class 2 reported increased scores from average BOY scores of  $1711.2 \pm 193.9$  to average EOY scores of  $1781.3 \pm 96.7$  ( $t(36) = 3.57, p = .001$ ). This decline may have been the result of the teacher turning their focus to teaching comprehension which is the largest area of focus on the state standardized assessment which is taken during the month of April. This may also be the case for Class 2 where the largest decline was observed in mean scores during the month of April. Further research may be needed to explore this specific trend. Trends in guided reading comprehension

scores indicate a slight decline over a period of nine months for both Class 1 and Class 2, as shown in Figure 1 and 2. Further research is also recommended to determine the decline with moderately stagnant comprehension scores for both class 1 and 2. Reading comprehension scores in both classes slightly decline over the nine month period.

Additionally, findings from Phase 2 revealed that there are significant differences in reading comprehension BOY and EOY scores of students receiving direct instruction in each of the direct instruction classes. Direct Instruction Class 1 reported increased scores from average BOY scores of  $1958.5 \pm 240.4$  to average EOY scores of  $2048.4 \pm 270.8$  ( $t(72) = 4.20, p < .0001$ ). Direct Instruction Class 2 reported increased scores from average BOY scores of  $1836.4 \pm 144.4$  to average EOY scores of  $1909.2 \pm 167.0$  ( $t(36) = 2.44, p = .019$ ). This decline may have resulted from the one week of instruction that students lose during a vacation that occurs in November. The EOY means for the comprehension scores of Class 1 are lower than BOY scores. This may be caused due to teachers turning their focus to standardized testing which occurs during the end of the school year as well as other EOY activities. However, this cannot be substantiated by findings in this study, but are inferences based on the researcher's inside knowledge of processes.

Guided Reading Class 2 reported significant differences in vocabulary scores over the course of the school year, with average BOY scores of  $1748.1 \pm 128.2$  and average EOY scores of  $1801.0 \pm 169.3$  ( $t(50) = 3.32, p = .002$ ). Guided Reading Class 1 reported average BOY scores of  $1769.3 \pm 132.3$  and average EOY scores of  $1798.1 \pm 173.2$  ( $t(49) = 1.64, p = .107$ ).

Neither guided reading class reported significant differences in reading comprehension scores. In fact, Guided Reading Class 1 reported a slight but not statistically significant decrease in mean scores, from average BOY scores of  $1909.2 \pm 204.7$  to average EOY scores  $1872.5 \pm 242.6$  ( $t(49) = 1.19, p = .24$ ). Guided Reading Class 2 reported average BOY scores of  $1893.8 \pm 202.5$  and average EOY scores  $1905.8 \pm 194.5$  ( $t(50) = 0.49, p = .62$ ).

These data suggest that vocabulary and reading comprehension scores of students who receive direct instruction are more likely to increase from BOY to EOY. In addition, there was an increase from BOY to EOY in vocabulary and reading comprehension scores for students who received guided reading in Class 2. Therefore, it would not be accurate to indicate that an increase may only be obtained if students receive direct instruction. The researcher is uncertain of variables that may have contributed to the differences in each classroom.

Findings from Phase 3 revealed a significant difference in mean vocabulary scores for all four classes ( $F(3, 207) = 5.41, p = .0013$ ) and a difference in reading comprehension scores for all four classes ( $F(3, 207) = 5.16, p = .0019$ ).

The first significant two-way comparison indicated that the Direct Instruction Class 1 ( $M = 111.6, SD = 115.1$ ) was significantly higher than Guided Reading Class 1 ( $M = 28.9, SD = 124.4; p = .001$ ) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = -0.69$ , which is interpreted as a medium size difference. The only other statistically significant two-way comparison was between the Direct Instruction Class 1 ( $M = 111.6, SD = 115.1$ ) and the Guided Reading Class 2 ( $M = 52.95,$

SD = 113.9;  $p = .042$ ) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = 0.51$ , which is interpreted as a medium size difference.

The one-way ANOVA results comparing mean difference comprehension scores for all four classes indicated a statistically significant difference was observed among the mean difference comprehension scores ( $F(3, 207) = 5.16, p = .0019$ ). Post hoc two-way comparisons revealed two significant two-way comparisons. The first significant two-way comparison indicates that the Direct Instruction Class 1 ( $M = 89.95, SD = 182.8$ ) performed better than the Guided Reading Class 1 ( $M = -36.7, SD = 218.0; p = .002$ ) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = -0.629$ , which is interpreted as a medium size difference. The only other statistically significant two-way comparison was between the Direct Instruction Reading Class 2 ( $M = 72.8, SD = 181.7$ ) performed better than the Guided Reading Class 1 ( $M = -36.7, SD = 218.0; p = .05$ ) using Bonferroni's multiple comparisons tests, this difference results in a Cohen  $d = -0.545$ , which is interpreted as a medium size difference.

The findings in phase 3 indicate that students who received direct instruction had significantly higher mean gain scores in vocabulary and reading comprehension than students who received guided reading. Direct Instruction Class 1 had the highest mean gain scores in both vocabulary and reading comprehension. Mean gain comprehension scores were the lowest in both guided reading classes with mean gain scores in the negative for Guided Reading Class 1. Guided Reading Class 1 also had the lowest mean gain vocabulary scores. With such large discrepancies among classes within the same campus and classes on both campuses; teacher experience, student prior knowledge,

implementation support, and whether or not reading instruction was implemented with fidelity must be considered.

### **Implications for School Leaders**

President George W. Bush signed The No Child Left Behind Act (NCLB, 2001) as a reauthorization of the Elementary and Secondary Education Act on January 8, 2002. The President supported this reauthorization in an attempt to ensure that all students receive a quality reading education and reach proficiency in the core subject areas. Although reading standards became more stringent, instructional approaches were slow to adapt to the changes mandated by NCLB (2001). For example, many schools continue to rely on textbooks as the primary printed source of curriculum delivery even though the average secondary student reads below the level of many content-area texts (Allington, 2005).

Literacy is a fundamental aspect of education. A strong foundation of vocabulary and reading comprehension skills allows students to become self-motivated learners who are able to access information independently from teachers as they grow. Unfortunately, approximately six million sixth- through twelfth-grade students are at risk of not graduating from high school, in part due to illiteracy (National Association of Secondary School Principals, 2005). Even among those likely to graduate high school, far too many are ill-prepared for higher education or fulfilling careers (National Association of Secondary School Principals, 2005). The vocabulary development and reading comprehension skills taught in elementary grades are, therefore, of utmost importance for students' future academic and career success. Neither teachers nor parents can accomplish this alone; teachers, parents, students, and school leaders must all collaborate to help students achieve high levels of literacy.

Principals play a very important role in determining students' reading success. Principals have the ability and authority to design and implement their vision for literacy reform, and can emphasize the fundamental importance of reading throughout the school environment. Principals set the tone of the school and everything else follows.

Principals must be visionary leaders who encourage and facilitate education reform that prioritizes reading achievement. The research findings from this study provide school and district leaders with valuable data and information that they can use to determine the best approach for delivering reading instruction for the students they serve. More specifically, by analyzing vocabulary and reading comprehension of fifth grade students who were instructed with guided reading and who were instructed with direct instruction, school and district leaders in EISD where this study was conducted may now be able to use the findings from study to help determine if these two approaches to teaching reading will meet the needs of students they serve. However, school leaders may need to review more studies due to the number of variables.

School leadership is a key factor in supporting change within schools, but few schools recognize the true impact leadership has on gains in students' reading outcomes (Fletcher, Greenwood, Grimley, & Parkhill, 2011). Many principals understand that it takes collaboration from parents and teachers to substantially improve literacy among elementary students. Principals are not involved with teaching students on a day-to-day basis, and therefore it is difficult for them to understand the complexities of reading instruction. Therefore, not only will the results of this study have a significant contribution to school leaders in that both guided reading and direct instruction were explicitly described throughout the study, but students who received direct instruction made significantly more gains in vocabulary and reading comprehension as measured by

ISIP Advanced Reading. Identifying the most effective approach for teaching vocabulary and reading comprehension can be a daunting task for school and district leaders. However, the research findings from this study can be used to influence the future reading instructional program selection for EISD.

Findings from this research may suggest that one approach to teaching reading may result in significantly higher mean gain scores from BOY to EOY. However, the researcher was unable to control for variables that may have contributed to the findings. Therefore, more research may be needed.

While this study only examined the impact of Guided Reading and Direct Instruction on vocabulary and comprehension development of fifth grade students, there are many alternate ways to measure the effectiveness of an approach to teaching reading. For example, this study did not examine student motivation towards reading. Some districts consider student motivation to be a factor in determining the effectiveness of an approach to teaching reading. It is important for students to be motivated to read so that they will become lifelong readers.

Therefore, future studies need to be conducted on the Impact of Guided Reading and Direct Instruction on fifth grade students' attitudes. This study also failed to measure teachers' attitudes about the effectiveness of both approaches to teaching reading. Teachers observe instruction taking place in their classroom daily and can provide meaningful insight on what takes place during reading instruction. Since teachers are directly involved in the process and responsible for implementing Guided Reading and Direct Instruction, they would be helpful in determining the effectiveness of the approach in their own classroom. They would also be able to determine if the approach was more effective than other programs previously implemented in the district.

## **Implications for Further Research**

Given that the findings support that students who were taught by teachers who used direct instruction reported significant improvement in both vocabulary and reading as measured by ISIP Advanced Reading scores, the most important implication is to share the data with school and district leaders. However, the study failed to provide specific research that may support decisions that school and district level leaders make regarding reading instructional programs. Based on the findings of this study the following recommendations are made for further research:

1. The results of this study reflect the outcomes of fifth grade students from one elementary school who were instructed with guided reading and from one elementary school who were instructed with direct instruction. It is recommended that further research be conducted to determine if differences exist in vocabulary and reading comprehension scores between groups of fifth grade students who were instructed with guided reading and who were instructed with direct instruction.
2. School leadership is a key factor in supporting change within schools, but few schools recognize the true impact leadership has on gains in students' reading outcomes (Fletcher, Greenwood, Grimley, & Parkhill, 2011). A relational study should be conducted to determine if the role of principals can impact vocabulary and reading comprehension of fifth grade students taught using guided reading and direct instruction.
3. Archived ISIP Reading Advanced data collected from one school year were used for this study. A longitudinal study to determine the effectiveness of



guided reading and direct instruction on vocabulary and reading comprehension of fifth grade students from year-to-year is recommended.

4. This quantitative study utilized descriptive and inferential statistics to examine trends and differences that exist in mean scores of fifth grade students from four classes who were instructed by two different teachers with guided reading and students from four classes who were instructed by two different teachers with direct instruction. A study to determine teachers' perceptions of the impact of guided reading and direct instruction on vocabulary and reading comprehension for fifth grade students is recommended.
5. This study was conducted on two different campuses within one large urban school district. It is recommended that this study be replicated on the same campus in order to better control for school culture.
6. This study could also be replicated using a larger sample size.

## **Conclusion**

Much attention and many resources have been dedicated to reforming elementary literacy instruction (Biancarosa & Snow, 2004). For example, Reading First provides grants for students with reading deficiencies up to third grade, and offers extensive assistance for educators to help improve student reading skills. Reading First also provides structure for allotting extra time for students during recess or outside school hours for remedial instruction, and struggling readers receive approximately three to four more sessions than the average student (Kame'enui et al., 2006).

Many different reading instruction programs have been introduced to improve early literacy, but the effectiveness of such programs remains unclear. The primary focus of this study was to determine the impact of guided reading and direct instruction on

vocabulary and reading comprehension of fifth grade students. However, the underlying goal was to add to the body of knowledge and help school leaders make more informed decisions about whether or not these two approaches to teaching reading will best support the needs of the students they serve. The study outlined the history of school reform and reading assessments; reading development, with emphasis on vocabulary and comprehension development; environmental factors that encourage literacy, such as family support and principals who are literacy leaders; the importance of early literacy instruction for adolescent academic success; and the supporting evidence for both guided and direct reading instruction.

The outline of this study supports the belief that vocabulary and reading comprehension must be a recognized priority in our schools. To ensure that successful reading programs focused on vocabulary and reading comprehension are being implemented, instructional leaders must maintain an unwavering focus on reading (Dowell et al., 2012). When a focus on teaching reading is developed, reading becomes the most important skill to be mastered on a campus. Although a literacy-focused culture may be created through the implementation of many reading approaches, the literacy leader of the campus is responsible for shaping this culture. Murphy (2004) defined a literacy-centered culture as “Effective schools that consciously pull the often diverse organizational components of a school into a system, a system that orbits around the literacy priority.” (p. 88). The literacy leader’s impact on student achievement in vocabulary and comprehension is unparalleled. This impact comes with tremendous responsibility. The literacy leader must make certain that quality reading programs come to life (Murphy, 2004).

## References

- Adams, G. L., & Engelmann, S. (1996). *Research on direct instruction: 25 Years beyond DISTAR*. Seattle, WA: Educational Achievement Systems.
- Alliance for Excellent Education. (2008). *The high cost of high school dropouts: What the nation pays for inadequate high schools*. Washington, DC: Author.
- Allington, R. (2002). You can't learn much from books you can't read. *Educational Leadership*, 60(3), 16-19.
- Allington, R. (2005). Ideology is still trumping evidence. *Phi Delta Kappan*, 86(6), 462-468.
- Allington, R. L., & Johnston, P. H. (2002). *Reading to learn: Lessons from exemplary fourth-grade classrooms*. New York, NY: Guilford Press.
- Anderson, R. C., Wilson, P. T., & Fielding, L. G. (1988). Growth in reading and how children spend their time outside of school. *Reading Research Quarterly*, 23(3), 285-303.
- Aronson, E., Blaney, N., Stephin, C., Sikes, J., & Snapp, M. (1978). *The jigsaw classroom*. Beverly Hills, CA: Sage.
- Ayers, J., & Miller, M. (2009). *Informing adolescent literacy policy and practice: Lessons learned from the Striving Readers Program*. Washington, DC: Alliance for Excellent Education.
- Baker, L. (2003). The role of parents in motivating struggling readers. *Reading & Writing Quarterly: Overcoming Learning Difficulties*, 19(1), 87-106.
- Balfanz, R., Herzog, L., & Mac Iver, D. J. (2007). Preventing student disengagement and keeping students on the graduation path in urban middle-grades schools: Early

identification and effective interventions. *Educational Psychologist*, 42(4), 223-235.

Balfanz, R., McPartland, J., & Shaw, A. (2002, April). *Re-conceptualizing extra help for high school students in a high standards era*. Retrieved from <http://www.csos.jhu.edu/pubs/edweek/Reconceptualizing.pdf>

Barnett, W. S., & Yarosz, D. J. (2004). *Who goes to preschool and why does it matter?* New Brunswick, NJ: National Institute for Early Education Research.

Barton, J., & Sawyer, D. M. (2003). Our students are ready for this: Comprehension instruction in the elementary school. *The Reading Teacher*, 57(4), 334-347.

Beck, I. L., McKeown, M. G., & Kucan, L. (2013). *Bringing words to life: Robust vocabulary instruction*. New York, NY: Guilford Press.

Becker, W. C., & Gersten, R. (1982). A follow-up of Follow Through: The later effects of the direct instruction model on children in fifth and sixth grades. *American Educational Research Journal*, 19(1), 75-92.

Bereiter, C., Engelmann, S., & Academic Preschool, C. (1966). *Effectiveness of direct verbal instruction on IQ performance and achievement in reading and arithmetic*. Englewood Cliffs, NJ: Prentice-Hall.

Biancarosa, C., & Snow, C. E. (2006). *Reading next: A vision for action and research in middle and high school literacy* (pp. 12 –20). A report to Carnegie Corporation of New York (2nd ed.). Washington, DC: Alliance for Excellent Education.

Binder, C. (1993). Behavioral fluency: A new paradigm. *Educational Technology*, 33(10), 8-14.

- Blum, A., Goldstein, H., & Guérin-Pace, F. (2001). International Adult Literacy Survey (IALS): An analysis of international comparisons of adult literacy. *Assessment in Education: Principles, Policy & Practice*, 8(2), 225-246.
- Booth, D. W., & Rowsell, J. (2007). *The literacy principal*. Markham, ON: Pembroke Publishers.
- Burkins, J.M., & Croft, M.M. (2010). *Preventing misguided reading: New strategies for guided reading teachers*. Newark, DE: International Reading Association.
- Carnine, D., Silbert, J., Kame'enui, E., & Tarver, S. (2009). *Direct instruction reading* (5th ed.). New York, NY: Merrill Education/Prentice Hall.
- Carnine, D., & Thomas B. Fordham Foundation, W. (2000). *Why education experts resist effective practices (And what it would take to make education more like medicine)*. Report of the Thomas B. Fordham Foundation. Washington, DC: Thomas B. Fordham Foundation.
- Carver, R. P. (1994). Percentage of unknown vocabulary words in text as a function of the relative difficulty of the text: Implications for instruction. *Journal of Literacy Research*, 26(4), 413-437.
- Chall, J. S. (1983). *Stages of reading development*. New York, NY: McGraw-Hill.
- Chall, J. S., & Jacobs, V. A. (2003). Poor children's fourth-grade slump. *American Educator*, 27(1), 14-17.
- Codding, J. (2001). An up ramp for struggling readers. *Principal Leadership (High School Ed.)*, 2(2), 22-25.
- Cobb, C. (2005). Literacy teams: Sharing leadership to improve student learning. *The Reading Teacher*, 58(5), 472-474.

- Comprehensive School Reform Quality Center (2006). *CSRQ center report on elementary comprehensive school reform models*. Washington, DC: American Institutes for Research.
- Cunningham, A.E., & Stanovich, K.E. (1998). What reading does for the mind. *American Educator*, 22(1), 8-15.
- Danridge, J., Edwards, P., & Pleasants, H. (2000). Making kids winners: New perspectives about literacy from urban elementary school principals. *The Reading Teacher*, 53(8), 654-662.
- Dansereau, D. F. (1988). Cooperative learning strategies. In C. E. Weinstein, E. T. Goetz, & P. A. Alexander (Eds.) *Learning and study strategies: Issues in assessment, instruction, and evaluation* (pp. 103-120). San Diego, CA: Academic Press.
- Deshler, D. D. (2005). Adolescents with learning disabilities: Unique challenges and reasons for hope. *Learning Disability Quarterly*, 28(2), 122-124.
- Dowell, S., Bickmore, D., & Hoewing, B. (2012). A framework for defining literacy leadership. *Journal of Reading Education*, 37(2), 7-15.
- Education Commission of the States. (2011). Pre-K–12 literacy: State of the nation. *The Progress of Education Reform*, 12(6), 1-7.
- Ehren, B. (2009). Looking through an adolescent literacy. *American Speech-Language-Hearing Association*, 40, 192-195.
- Elias, E. (2009). *The lived experiences of six first-grade teachers using Reading Mastery Plus curriculum in high poverty schools* (Doctoral dissertation). Retrieved from Proquest Dissertations & Theses. (UMI 3366036)

- Elish-Piper, L. (2013). Linking home and school to address the Common Core State Standards in writing, speaking, listening, and language. *Illinois Reading Council Journal*, 41(3), 56-59.
- Elish-Piper, L., Almburg, A. T., Di Domenico, P., Gardner, M., Henry, M. P., Hinrichs, S. R., King, E., Lesinski, R., Schneider, T., Sokolinski, S. (2013). Getting the school year off to a great start: Strategies for building positive relationships and communication with families pre-K-12. *Illinois Reading Council Journal*, 41(4), 51-57.
- Endriss, N., & Nygren, T. (1998, October 9). *How proficient readers read*. Retrieved from <http://www.dominican.edu/academics/education/about/faculty/madaliennepeters/proficiency>
- Ferguson, J., & Wilson, J. (2009). Guided reading: It's for primary teachers. *College Reading Association Yearbook*, 30(1), 293-306.
- Fink, E., & Resnick, L. B. (2001). Developing principals as instructional leaders. *Phi Delta Kappan*, 83(8), 578-606.
- Fletcher, J., Greenwood, J., Grimley, M., & Parkhill, F. (2011). Raising literacy achievement in reading: How principals of 10-to 12-year-old students are making this happen. *International Journal of Leadership in Education: Theory and Practice*, 14(1), 61-83.
- Foster, R. (2014, April 18). Houston ISD unveils Literacy by 3 plan. *Examiner*. Retrieved from [http://www.yourhoustonnews.com/west\\_university/news/houston-isd-unveils-literacy-by-plan/article\\_3cbbf539-37e9-5e5c-9354-4c65a24920dd.html](http://www.yourhoustonnews.com/west_university/news/houston-isd-unveils-literacy-by-plan/article_3cbbf539-37e9-5e5c-9354-4c65a24920dd.html)
- Fountas, I. C. (2006). *Teaching for comprehending and fluency: Thinking, talking, and writing about reading, K-8*. Portsmouth, NH: Heinemann Education.

- Fountas, I. C., & Pinnell, G. S. (1996). *Guided reading: Good first teaching for all children*. New York, NY: Scholastic.
- Fountas, I. C., & Pinnell, G. S. (2012). Guided reading: The romance and the reality. *The Reading Teacher*, 66(4), 268-284.
- Gersten, R., & Carnine, D. (1986). Direct instruction in reading comprehension. *Educational Leadership*, 43(7), 70-78.
- Grigg, W., Daane, M., Jin, Y., & Campbell, J. (2003). *The nation's report card: Reading, 2002*. Retrieved from <http://eric.ed.gov/?id=ED471794>
- Guthrie, J. T., McGough, K., Bennett, L., & M. E. Rice (1996) Concept-Oriented Reading Instruction: An Integrated curriculum to develop motivations and strategies for reading. In L. Baker, P. Afflerbach, & D. Reinking, (Eds). *Developing engaged readers in school and home communities*, (pp. 165-190) Mahwah, NJ: Erlbaum.
- Guthrie, J., Wigfield, A., & Von Secker, C. (2000). Effects of integrated instruction on motivation and strategy use in reading. *Journal of Educational Psychology*, 92(2), 331-41.
- Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore, MD: Paul H Brookes Publishing.
- Hart, B., & Risley, T. R. (2003). The early catastrophe: The 30 million word gap by age 3. *American Educator*, 27(1), 4-9.
- Heller, R. & Greenleaf, C. (2007). *Literacy instruction in the content areas: Getting to the core of middle and high school improvement*. Washington, DC: Alliance for Excellent Education.



- Henk, B., Moore, J., Marinak, B., & Tomasetti, B. (2000). A reading lesson observation framework for elementary teachers, principals, and literacy supervisors. *The Reading Teacher*, 53(5), 358-369.
- Hernandez, D. (2011). *Double jeopardy: How third-grade reading skills and poverty influence high school graduation*. Baltimore, MD: The Annie E. Casey Foundation.
- Heroman, C. & Jones, C. (2004). *Literacy: The creative curriculum approach*. Washington, DC: Teaching Strategies.
- Heshusius, L. (1991). Curriculum-based assessment and direct instruction: Critical reflections on fundamental assumptions. *Exceptional Children*, 57(4), 315-328.
- Hock, M. F., & Deshler, D. D. (2003). Adolescent literacy: Ensuring that no child is left behind. *Principal Leadership*, 13(4), 55-61.
- Iaquinta, A. (2006). Guided reading: A research-based response to the challenges of early reading instruction. *Early Childhood Education Journal*, 33(6), 413-418.
- Izumi, L. T., Coburn, G., & Cox, M. (2002). They Have Overcome: High-poverty, High-performing Schools in California. Retrieved from <http://www.heartland.org>
- Jacobs, V. A. (2008). Adolescent literacy: Putting the crisis in context. *Harvard Educational Review*, 78(1), 7-39.
- Joshi, M. (2005). Vocabulary: A critical component of comprehension. *Reading & Writing Quarterly: Overcoming Learning Difficulties*, 21(3), 209-219.
- Kame'enui, E. J., Fuchs, L., Francis, D. J., Good, R., O'Connor, R. E., Simmons, D. C., ... & Torgesen, J. K. (2006). The adequacy of tools for assessing reading competence: A framework and review. *Educational Researcher*, 35(4), 3-11.

- Kamil, M., Borman, G., Dole, J., Kral, C., Salinger, T., & Torgesen, J. (2008). *Improving adolescent literacy: Effective classroom and intervention practices: A practice guide*. Washington, DC: National Center of Education.
- Kennedy, E. (2010). Improving literacy achievement in a high-poverty school: Empowering classroom teachers through professional development. *Reading Research Quarterly*, 45(4), 384-387.
- Kim, A., Vaughn, S., Wanzek, J., & Wei, S. (2004). Graphic organizers and their effects on the reading comprehension of students with LD: A synthesis of research. *Journal of Learning Disabilities*, 37(2), 105-118.
- Kubiszyn, T., & Borich, G. (Eds.). (2005). *Educational testing and measurement: Classroom application and practice* (8th ed.). Hoboken, NJ: John Wiley & Sons.
- Kutner, M. A., Greenberg, E., & Baer, J. (2005). *National Assessment of Adult Literacy (NAAL): A first look at the literacy of America's adults in the 21st century*. Washington DC: National Center for Education Statistics, US Department of Education, Institute of Education Sciences.
- Linebarger, D. L., & Walker, D. (2004). Infant's and toddlers' television viewing and language outcomes. *American Behavioral Scientist*, 46(10), 1-22.
- Lubliner, S. (2004). Help for struggling upper-grade elementary readers. *The Reading Teacher*, 57(5), p. 430-438.
- Ma'ayan, H.D. (2012). *Reading girls: The lives and literacies of adolescents*. New York, NY: Teachers College Press.
- Mackey, B., Pitcher, S., & Decman, J. (2006). The influence of four elementary principals upon their schools' reading programs and students' reading scores. *Education*, 127(1), 39-55.

- MacLellan, E. (1997). Reading to learn. *Studies in Higher Education*, 22(3), 277-288.
- Manset-Williamson, G., & Nelson, J. M. (2005). Balanced, strategic reading instruction for upper-elementary and middle school students with reading disabilities: A comparative study of two approaches. *Learning Disability Quarterly*, 28(1), 59-74.
- Mathes, P. (2014). *Istation's Indicators of Progress (ISIP) Advanced Reading technical manual*. Retrieved from [https://www.istation.com/Content/downloads/studies/ar\\_technical\\_report.pdf](https://www.istation.com/Content/downloads/studies/ar_technical_report.pdf)
- McKool, S. S. (2007). Factors that influence the decision to read: An investigation of fifth grade students' out-of-school reading habits. *Reading Improvement*, 44(3), 111-131.
- Meltzer, J., & Jackson, D. (2010). *Guidelines for developing effective district literacy action plan* (Version 1.1). Malden, MA: Massachusetts Department of Elementary and Secondary Education and Public Consulting Group.
- Meyer, L. A. (1984). Long-term academic effects of the Direct Instruction Project Follow Through. *The Elementary School Journal*, 84(4), 380-394.
- Moats, L. C. (March, 2001). When older kids can't read. *Educational Leadership*. Retrieved from <https://www.winsorlearning.com/site/resources/articles/when-older-kids-cant-read/>
- Mokhtari, K., & Niederhauser, D. S. (2013). Vocabulary and syntactic knowledge factors in 5th grade students' reading comprehension. *International Electronic Journal of Elementary Education*, 5(2), 157-170.
- Murphy, J. (2004). Leadership for literacy: A framework for policy and practice. *School Effectiveness & School Improvement*, 15(1), 65-96.

- National Assessment Governing Board. (2010). *Reading framework for the 2011 National Assessment of Educational Progress*. Washington, DC: American Institutes for Research.
- National Association of Secondary School Principals. (2005). *Creating a culture of literacy: A guide for middle and high school principals*. Reston, VA: Author.
- National Center for Education Statistics. (2004). *Listening to children read aloud: Oral fluency*. Washington, DC: Author.
- National Center for Education Statistics. (2011). *The Nation's Report Card: Findings in brief*. Washington, DC: Author.
- National Council of Teachers of English. (2006). *Adolescent literacy: A policy research brief*. Urbana, IL: Author.
- National Institute of Child Health and Human Development. (2000a). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- No Child Left Behind Act of 2001 (NCLB), 20 U.S.C. § 6301 *et seq.*
- Nunnery, J. (March, 1996). *Effects of full and partial implementations of Success for All on student reading achievement in English and Spanish*. Paper presented at the meeting of Annual Meeting of the American Educational Research Association, Chicago, IL.
- Osterman, K. E., Crow, G. M., & Rosen, J. L. (1997). New urban principals: Role conceptions at the entry level. *Urban Education*, 32(1), 373-393.

- Parveen, J., & Rajesh, V. V. (2013). Mental modelling in guided reading and paired reading: A comparative study. *Language in India*, 13(3), 75-86.
- Patarapichayatham, C. *Istation reading growth study Grades 1-8*. Dallas, TX: Istation.
- Patarapichayatham, C., Fahle, W., & Roden, T. R. (2014). *ISIP Reading versus STAAR Reading: The predictability study*. Dallas, TX: Istation.
- Pearland Independent School District. (2013). *Wireless, mobile learning, and BYOD*. Retrieved from <http://www.pearlandisd.org/departments.cfm?subpage=42576>
- Pearson, P. D., & Hamm, D. N. (2005). The assessment of reading comprehension: A review of practices—past, present, and future. In S. G. Paris & S. A. Stahl (Eds). *Children's reading comprehension and assessment* (pp. 13-70). Mahwah, NJ: Lawrence Erlbaum Associates.
- Pearson, P. D., Hiebert, E. H., & Kamil, M. L. (2007). Vocabulary assessment: What we know and what we need to learn. *Reading Research Quarterly*, 42(2), 282-296.
- Pitcher, S. M., Martinez, G., Dicembre, E. A., Fewster, D., & McCormick, M. K. (2010). The literacy needs of adolescents in their own words. *Journal of Adolescent & Adult Literacy*, 53(8), 636-645.
- Pressley, M., Wharton-McDonald, R., Raphael, L.M., Bogner, K., & Roehrig, A. (2002). Exemplary first-grade teaching. In B.M. Taylor & P.D. Pearson (Eds.), *Teaching reading: Effective schools, accomplished teachers* (pp. 73–88). Mahwah, NJ: Erlbaum.
- Reardon, S. F., Valentino, R. A., & Shores, K. A. (2012). Patterns of literacy among U.S. students. *The Future of Children*, 22(2), 17-37.

- Reglin, G., Cameron, H., & Losike-Sedimo, N. (2012). Effects of a parent support reading intervention on seventh-grade at-risk students' reading comprehension scores. *Reading Improvement, 49*(1), 17-27.
- Richardson, J., Morgan, R., & Fleener, C. (2011). *Reading to learn in the content areas*. Belmont, CA: Cengage Learning.
- Richmond, M., Robinson, C., & Sachs-Israel, M. (2008). *The global literacy challenge: A profile of youth and adult literacy at the mid-point of the United Nations Literacy Decade 2003-2012*. Paris, France: UNESCO.
- Rightmyer, E. C., McIntyre, E., & Petrosko, J. M. (2006). Instruction, development, and achievement of struggling primary grade readers. *Reading Research and Instruction, 45*(3), 209-241. doi:10.1080/19388070609558449
- Rivalland, J. (July, 1999). *Learning to be literate: So whose responsibility is it?* Paper presented at the Biennial National Conference of the Australian Early Childhood Association, Darwin, Australia.
- Ross, S. M., & DiVesta, F. J. (1976). Oral summary as a review strategy enhancing recall of textual material. *Journal of Educational Psychology, 68*(1), 689-695.
- Rubert, H. (1993). *The impact of a parent involvement program designed to support a first grade reading intervention program* (Doctoral dissertation). Retrieved from the Education Resources Information Center. (ED356450).
- Ryder, R. J., Burton, J. L., & Silberg, A. (2006). Longitudinal study of direct instruction effects from first through third grades. *Journal of Educational Research, 99*(3), 179-191.
- Sandholtz, J. H., Ringstaff, C., & Dwyer, D. C. (1997). *Teaching with technology: Creating student-centered classrooms*. New York, NY: Teachers College Press.

- Scarborough, H.S. (1998). Early identification of children at risk for reading disabilities: Phonological awareness and some other promising predictors. In B.K. Shapiro, P.J. Accardo, & A.J. Capute (Eds.), *Specific reading disability: A view of the spectrum* (pp.77-121). Timonium, MD: York Press.
- Schacter, J. (1999). *Reading programs that work: A review of programs for pre-kindergarten to 4th grade*. Santa Monica, CA: Milken Family Foundation.
- Shippen, M. E., Houchins, D. E., Steventon, C., & Sartor, D. (2005). A comparison of two direct instruction reading programs for urban middle school students. *Remedial and Special Education, 26*(3), 175-182.
- Slavin, R. E., Lake, C., Chambers, B., Cheung, A., & Davis, S. (2009). Effective reading programs for the elementary grades: A best-evidence synthesis. *Review of Educational Research, 79*(4), 1391-1466.
- Slocum, T. A. (2004). Direct instruction: The big ideas. In D.J. Moran, & R.W. Malott (Eds.), *Evidence-based educational methods: Educational psychology series* (pp. 81-94). San Diego, CA: Elsevier Academic Press.
- Stockard, J., & Engelmann, K. (2010). The development of early academic success: The impact of Direct Instruction's Reading Mastery. *Journal of Behavior Assessment and Intervention in Children, 1*(1), 2-23.
- Stebbins, L. (Ed.). (1976). *Education as experimentation: A planned variation model* (Vol. IIIA). Cambridge, MA: Abt Associates.
- Stull, A., & Mayer, R. (2007). Learning by doing versus learning by viewing: Three experimental comparisons of learner-generated versus author-provided graphic organizers. *Journal of Educational Psychology, 99*(4), 808-820.

- Taylor, B. M., Frye, B. J., & Maruyama, G. M. (1990). Time spent reading and reading growth. *American Educational Research Journal*, 27(2), 351-362.
- Taylor, B.M., Pearson, D.P., Peterson, D.S., & Rodriguez, M.C. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literacy learning. *The Elementary School Journal*, 104(1), 3-28.
- Texas Education Agency. (2014). *Overview of commissioner's list of reading instruments*. Retrieved from [http://tea.texas.gov/uploadedFiles/Curriculum/English\\_-\\_Language\\_Arts/attachments/Commissioner%27s%20List%20of%20Reading%20Instruments%202014-2015.pdf](http://tea.texas.gov/uploadedFiles/Curriculum/English_-_Language_Arts/attachments/Commissioner%27s%20List%20of%20Reading%20Instruments%202014-2015.pdf)
- Traub, J., & Thomas B. Fordham Foundation, W. (1999). *Better by design? A consumer's guide to schoolwide reform*. Washington, DC: Thomas B. Fordham Foundation.
- Vernon-Feagans, L., Hammer, C. S., Miccio, A., & Manlove, E. (2003). Early language and literacy skills in low-income African American and Hispanic children. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (Vol. 1). New York, NY: Guilford Press.
- Vorstius, C., Radach, R., Mayer, M. B., & Lonigan, C. J. (2013). Monitoring local comprehension monitoring in sentence reading. *School Psychology Review*, 42(2), 191-206.
- Wagner, R. K., Muse, A. E., & Tannenbaum, K. R. (2007). Promising avenues for better understanding implications of vocabulary development for reading comprehension. In R. K. Wagner, A. E. Muse, & K. R. Tannenbaum (Eds.), *Vocabulary acquisition: Implications for reading comprehension*, (pp. 276-291). New York, NY: Guilford Press.



- Walker, D., Greenwood, C., Hart, B., & Carta, J. (1994). Prediction of school outcomes based on early language production and socioeconomic factors. *Child Development, 65*(2), 606-621.
- Warren-Kring, B.Z., & Warren, G. A. (2013). Changing the attitudes of pre-service teachers toward content literacy strategies. *Reading Improvement, 50*(2), 75-82.
- Wendt, J. L. (2013). Combating the crisis in adolescent literacy: Exploring literacy in the secondary classroom. *American Secondary Education, 41*(2), 38-48.
- Wilhelm, J. (2013). *Understanding reading comprehension*. Retrieved from <http://www.scholastic.com/teachers/article/understanding-reading-comprehension>
- Zucker, T. A., Moody, A. K., & McKenna, M. C. (2009). The effects of electronic books on pre-kindergarten-to-grade 5 students' literacy and language outcomes: A research synthesis. *Journal of Educational Computing Research, 40*(1), 47-87.

## **Appendix A**

### **ISIP Advanced Reading Test-Retest Reliability**

## Appendix A

## ISIP Advanced Reading Test-Retest Reliability

	ISIP AR OVR1	ISIP AR CMP1	ISIP AR SPL1	ISIP AR VOC1	ISIP AR TF1	ISIP AR OVR2	ISIP AR CMP2	ISIP AR SPL2	ISIP AR VOC2	ISIP AR TF2
ISIP AR OVR1	1.000 <sup>d</sup>	0.910 <sup>n</sup>	0.879 <sup>f</sup>	0.865 <sup>e</sup>	0.785 <sup>a</sup>	0.910 <sup>u</sup>	0.830 <sup>dd</sup>	0.841 <sup>y</sup>	0.808 <sup>v</sup>	0.775 <sup>gg</sup>
ISIP AR CMP1		1.000 <sup>n</sup>	0.678 <sup>o</sup>	0.730 <sup>p</sup>	0.730 <sup>r</sup>	0.836 <sup>ii</sup>	0.877 <sup>mm</sup>	0.681 <sup>kk</sup>	0.721 <sup>jj</sup>	0.733 <sup>aa</sup>
ISIP AR SPL1			1.000 <sup>f</sup>	0.663 <sup>g</sup>	0.695 <sup>s</sup>	0.828 <sup>aa</sup>	0.652 <sup>ff</sup>	0.921 <sup>cc</sup>	0.646 <sup>bb</sup>	0.692 <sup>ll</sup>
ISIP AR VOC1				1.000 <sup>e</sup>	0.682 <sup>t</sup>	0.800 <sup>w</sup>	0.700 <sup>ee</sup>	0.664 <sup>z</sup>	0.885 <sup>x</sup>	0.656 <sup>hh</sup>
ISIP AR TF1					1.000 <sup>a</sup>	0.761 <sup>nn</sup>	0.695 <sup>rr</sup>	0.704 <sup>pp</sup>	0.649 <sup>oo</sup>	0.823 <sup>ss</sup>
ISIP AR OVR2						1.000 <sup>a</sup>	0.9.00 <sup>h</sup>	0.881 <sup>c</sup>	0.852 <sup>b</sup>	0.782 <sup>k</sup>
ISIP AR CMP2							1.000 <sup>h</sup>	0.666 <sup>j</sup>	0.708 <sup>i</sup>	0.735 <sup>k</sup>
ISIP AR SPL2								1.000 <sup>c</sup>	0.656 <sup>c</sup>	0.705 <sup>m</sup>
ISIP AR VOC2									1.000 <sup>b</sup>	0.648 <sup>j</sup>
ISIP AR TF2										1.000 <sup>k</sup>
<sup>a</sup> N = 10292 <sup>b</sup> N = 10291 <sup>c</sup> N = 10227 <sup>d</sup> N = 10119 <sup>e</sup> N = 10114 <sup>f</sup> N = 10049 <sup>g</sup> N = 10044 <sup>h</sup> N = 9737 <sup>i</sup> N = 9736 <sup>j</sup> N = 9734 <sup>k</sup> N = 9472 <sup>l</sup> N = 9471 <sup>m</sup> N = 9469 <sup>n</sup> N = 9447 <sup>o</sup> N = 9443 <sup>p</sup> N = 9442 <sup>q</sup> N = 9119 <sup>r</sup> N = 9118 <sup>s</sup> N = 9115 <sup>t</sup> N = 9114 <sup>u</sup> N = 8995 <sup>v</sup> N = 8994 <sup>w</sup> N = 8990 <sup>x</sup> N = 8989 <sup>y</sup> N = 8954 <sup>z</sup> N = 8949 <sup>aa</sup> N = 8936 <sup>ab</sup> N = 8935 <sup>ac</sup> N = 8895 <sup>ad</sup> N = 8643 <sup>ae</sup> N = 8638 <sup>af</sup> N = 8593 <sup>ag</sup> N = 8448 <sup>ah</sup> N = 8443 <sup>ai</sup> N = 8440 <sup>aj</sup> N = 8439 <sup>ak</sup> N = 8404 <sup>al</sup> N = 8400 <sup>am</sup> N = 8195 <sup>an</sup> N = 8175 <sup>ao</sup> N = 8174 <sup>ap</sup> N = 8143 <sup>aq</sup> N = 8037 <sup>ar</sup> N = 7956 <sup>as</sup> N = 7814										

Note: Table adapted with permission from Mathes (2014).

## **Appendix B**

### **Pearson Product Moment Correlations for ISIP Advanced Reading and External Measures for Grade 5**

## Appendix B

### Pearson Product Moment Correlations for ISIP Advanced Reading and External Measures for Grade 5

	GORT4 FL	GORT4 CMP	PPVT4	WIAT CMP	WIAT WR	WIAT SPL	WIAT PSD	WJIII SPL	WJIII PV	WJIII RVS	ISIP AR OVR2	ISIP AR CMP2	ISIP AR SPL2	ISIP AR VOC2	ISIP AR TF2
GORT4 FL	1.000 <sup>a</sup>	0.365 <sup>a</sup>	0.332 <sup>a</sup>	0.484 <sup>a</sup>	0.669 <sup>a</sup>	0.557 <sup>a</sup>	0.566 <sup>a</sup>	0.628 <sup>a</sup>	0.314 <sup>a</sup>	0.406 <sup>a</sup>	0.615 <sup>a</sup>	0.519 <sup>a</sup>	0.607 <sup>a</sup>	0.429 <sup>a</sup>	0.631 <sup>b</sup>
GORT4 CMP		1.000 <sup>a</sup>	0.556 <sup>a</sup>	0.444 <sup>a</sup>	0.284 <sup>a</sup>	0.157 <sup>a</sup>	0.112 <sup>a</sup>	0.187 <sup>a</sup>	0.465 <sup>a</sup>	0.328 <sup>a</sup>	0.377 <sup>a</sup>	0.412 <sup>a</sup>	0.168 <sup>a</sup>	0.432 <sup>a</sup>	0.386 <sup>b</sup>
PPVT4			1.000 <sup>a</sup>	0.530 <sup>a</sup>	0.370 <sup>a</sup>	0.280 <sup>a</sup>	0.179 <sup>a</sup>	0.312 <sup>a</sup>	0.618 <sup>a</sup>	0.518 <sup>a</sup>	0.562 <sup>a</sup>	0.502 <sup>a</sup>	0.315 <sup>a</sup>	0.693 <sup>a</sup>	0.365 <sup>b</sup>
WIAT CMP				1.000 <sup>a</sup>	0.477 <sup>a</sup>	0.417 <sup>a</sup>	0.274 <sup>a</sup>	0.488 <sup>a</sup>	0.503 <sup>a</sup>	0.425 <sup>a</sup>	0.581 <sup>a</sup>	0.538 <sup>a</sup>	0.449 <sup>a</sup>	0.587 <sup>a</sup>	0.460 <sup>b</sup>
WIAT WR					1.000 <sup>a</sup>	0.749 <sup>a</sup>	0.709 <sup>a</sup>	0.739 <sup>a</sup>	0.344 <sup>a</sup>	0.443 <sup>a</sup>	0.714 <sup>a</sup>	0.544 <sup>a</sup>	0.753 <sup>a</sup>	0.516 <sup>a</sup>	0.516 <sup>b</sup>
WIAT SPL						1.000 <sup>a</sup>	0.638 <sup>a</sup>	0.892 <sup>a</sup>	0.290 <sup>a</sup>	0.402 <sup>a</sup>	0.669 <sup>a</sup>	0.397 <sup>a</sup>	0.835 <sup>a</sup>	0.460 <sup>a</sup>	0.553 <sup>b</sup>
WIAT PSD							1.000 <sup>a</sup>	0.637 <sup>a</sup>	0.133 <sup>a</sup>	0.288 <sup>a</sup>	0.531 <sup>a</sup>	0.377 <sup>a</sup>	0.636 <sup>a</sup>	0.305 <sup>a</sup>	0.399 <sup>b</sup>
WJIII SPL								1.000 <sup>a</sup>	0.294 <sup>a</sup>	0.449 <sup>a</sup>	0.757 <sup>a</sup>	0.494 <sup>a</sup>	0.867 <sup>a</sup>	0.459 <sup>a</sup>	0.594 <sup>b</sup>
WJIII PV									1.000 <sup>a</sup>	0.363 <sup>a</sup>	0.496 <sup>a</sup>	0.433 <sup>a</sup>	0.323 <sup>a</sup>	0.577 <sup>a</sup>	0.302 <sup>b</sup>
WJIII RVS										1.000 <sup>a</sup>	0.481 <sup>a</sup>	0.373 <sup>a</sup>	0.416 <sup>a</sup>	0.518 <sup>a</sup>	0.363 <sup>b</sup>
ISIP AR OVR2											1.000 <sup>a</sup>	0.858 <sup>a</sup>	0.808 <sup>a</sup>	0.779 <sup>a</sup>	0.604 <sup>b</sup>
ISIP AR CMP2												1.000 <sup>a</sup>	0.472 <sup>a</sup>	0.580 <sup>a</sup>	0.533 <sup>b</sup>
ISIP AR SPL2													1.000 <sup>a</sup>	0.512 <sup>a</sup>	0.561 <sup>b</sup>
ISIP AR VOC2														1.000 <sup>a</sup>	0.417 <sup>b</sup>
ISIP AR TF2															1.000 <sup>b</sup>

<sup>a</sup>N = 123 <sup>b</sup>N = 120

Note: Table adapted with permission from Mathes (2014).

## **Appendix C**

### **Pearson Product Moment Correlations Between ISIP Advanced Reading and STAAR for Grade 5**

## Appendix C

Pearson Product Moment Correlations between ISIP Advanced Reading and STAAR for  
Grade 5

	MOY_CMP	MOY_VOC	MOY_SPL	MOY_TF	EOY_Overall	EOY_CMP	EOY_VOC	EOY_SPL	EOY_TF	STAAR_RC1	STAAR_RC2	STAAR_RC3	STAAR_R	STAAR_SC
MOY_Overall	.858**	.847**	.811**	.738**	.867**	.742**	.767**	.742**	.712**	.615**	.639**	.624**	.710**	.715**
MOY_CMP		.573**	.650**	.692**	.756**	.800**	.558**	.636**	.681**	.584**	.632**	.631**	.701**	.713**
MOY_VOC			.531**	.660**	.769**	.545**	.870**	.543**	.623**	.466**	.472**	.457**	.525**	.527**
MOY_SPL				.551**	.720**	.622**	.503**	.821**	.544**	.573**	.572**	.552**	.638**	.663**
MOY_TF					.698**	.651**	.631**	.543**	.790**	.487**	.547**	.552**	.604**	.612**
EOY_Overall						.855**	.834**	.822**	.718**	.597**	.614**	.606**	.686**	.696**
EOY_CMP							.546**	.650**	.693**	.566**	.610**	.617**	.681**	.700**
EOY_VOC								.540**	.606**	.447**	.450**	.438**	.503**	.505**
EOY_SPL									.554**	.550**	.540**	.536**	.612**	.649**
EOY_TF										.495**	.542**	.545**	.601**	.613**
STAAR_RC1											.652**	.646**	.828**	.794**
STAAR_RC2												.690**	.902**	.872**
STAAR_RC3													.903**	.872**
STAAR_R														.960**

Note: MOY = middle-of-year, EOY =end-of-year, CMP = comprehension, VOC = vocabulary, SPL = spelling,, TF = text fluency. \*\*,  $p < 0.01$ .