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ELEMENTARY SCHOOLS WITH HIGH-ACHIEVING IREAD-3 SCORES: WHAT THEY DO DIFFERENTLY

A Dissertation

Presented to

The College of Graduate and Professional Studies

Department of Educational Leadership

Indiana State University

Terre Haute, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

Charles L. “Terry” Terhune

December 2016

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Keywords: IREAD-3, literacy, comprehension, reading, standardized assessment

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ABSTRACT

The ability to read is the foundational skill which is taught in elementary schools across the state of Indiana. It is a complex process which allows children to derive meaning from printed text. Reading is the basis for learning and growth to continue during a child's educational life (Opitz & Rasinski, 1998). Over time throughout history, the ability to read is and has been the great equalizer for people (Ruddell, Ruddell, & Singer, 1994).

Reading has been taught and evaluated in many different ways (Groves, 2009). The state of Indiana has developed a standardized assessment to measure a child's reading ability and comprehension skills at the end of third grade. This summative assessment is known as the Indiana Reading Evaluation and Determination or IREAD-3 (IDOE IREAD-3, n.d.). The assessment is based on Indiana Academic Standards to measure the foundational reading skills a child has developed by the end of third grade. It is used to determine promotion to fourth grade or retention in third grade (Title 511 Indiana State Board of Education, 2011).

A mixed method study was conducted to determine if relationships existed between the predictor variables of vocabulary, fluency, comprehension, and teacher pedagogy and the criterion variable of passing percentage rates on the IREAD-3 assessment. In the quantitative survey, two null hypotheses were tested. The first null determined if the composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers predict a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of affluence. The second null determined if the composite scores for vocabulary,

fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers predict a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of poverty. A multiple linear regression was utilized to examine both hypotheses. The results of the regression analysis found that a linear combination of predictor variables did not explain a statistically significant amount of variance with IREAD-3 passing rate percentages for schools of affluence or schools of poverty. Therefore, the null hypotheses were retained.

The second part of the mixed method study focused on qualitative case study interviews with three building level principals and one teacher. During the interviews, five themes developed after the field notes and interview transcripts were coded and analyzed. The common themes which emerged were:

1. Teachers have time during the school day to meet together to collaborate, plan, and discuss literacy skill development of their children.
2. Schools promote and embrace parents and volunteers as essential components which are included in the learning process during the school day.
3. Teachers voluntarily spend time after school to tutor students on a school-wide basis.
4. Learning is intentionally broken down into small groups based on reading level or ability.
5. Schools have a support network in place and literacy professionals to assist classroom teachers in teaching children to learn to read based on the use of data.

Several implications for teachers, principals, and district administrators were discussed as a result of the findings and conclusions. Finally, recommendations for further research were proposed.

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DEDICATION

My dissertation is dedicated to my parents who both are not able to witness the finished product, but were vitally important to my entering the field of education and continuing to this point. To my mother for her response to me as a young high school boy saying I wanted to teach. "Teaching is a very noble profession," will always be with me. To my father for his constant support as I continued to take classes and the pride he showed for my growth as an educator.

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Finally, to my loving wife, Angela, for having patience with me and being the love of my life. Thank you for always being there, picking up the slack when I was in class, and being my biggest fan and supporter. You mean the world to me!

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CHAPTER 1

INTRODUCTION

As Dr. Seuss (1978) wrote in his book, *I Can Read With My Eyes Shut*, "The more that you read, the more things you will know. The more that you learn, the more places you'll go" (p. 27). This is a simple quote from a children's book, but one that is increasingly more true now than ever before. The ability to read is the foundational skill upon which all academic learning in school rests. It is also the center of the day for children in primary elementary grades.

The Importance of Reading

The Indiana Department of Education (IDOE) further detailed the importance of reading in the daily events for young, elementary school age children and in the curriculum of elementary schools:

> Reading is the core of the school day for young students. Visit any elementary classroom, and you will find children learning to read. They may be talking about the sounds letters make, listening to the teacher read a story, reading aloud together, working on a computer reading program, or talking and writing about what they have read. Students are engaged in these activities because reading and comprehension are the foundations for all academic learning. (IDOE IREAD-3, n.d., para. 2)

The ability to read opens many doors; the most significant is to be able to learn. As children progress in school, they move from learning to read in primary grades to reading to learn.

> By the beginning of fourth grade, however, they are reading to learn, using their skills to gain more information in subjects such as math and science, to solve problems, to think critically about what they are learning, and to act upon and share that knowledge in the world around them (The Annie E. Casey Foundation, 2010, p. 9).

Successfully utilizing the ability to read and comprehend text will keep a child on the path to graduation. Starting as early as first grade, poor or inferior academic performance is one of the most reliable and consistent predictors of whether a child will become a dropout, regardless of being measured through test scores, course failure, or grades (Alexander, Entwisle, & Kabbani, 2001). As an example of the power reading has on overall academic performance, Alexander et al. (2001) described the multiplying effects poor academic performance, beginning in first grade when combined with low socioeconomic status and poor parenting, will have in contributing to nearly 40% of their study group leaving school at some point. "When children become good readers in early grades, they are more likely to become better learners throughout their school years and beyond" (The Partnership for Reading, 2010, p. 2). Becoming a high school graduate, rather than dropping out, allows the chance for continued success in life.

"With the focus on high-stakes accountability, the last decade of educational reform has seen a rise in the promotion and use of data for instructional decision making" (Dantnow & Hubbard, 2015, para. 1). Although assessment data has the ability to impact daily instruction, it is how teachers choose to use the data which ultimately will make the difference, impacting learning, instructional practices, and ultimately standardized assessment scores (Dantnow & Hubbard, 2015).

Testing, in various forms, has been around for thousands of years, beginning in China as a way to select men for "civil service and military through a series [or progression] of exams"

(Mueller, 2001, para. 24). "Standardized testing, in fact, has functioned for over 100 years as the preferred technology to label, segregate, and treat children very differently, based on the unearned advantages of class and ethnicity" (Horn, 2014, para. 4). First developed to measure mental capacity, the federal government administered the Binet IQ test during the First World War to select military officer candidates and for collection of statistical date (Mueller, 2001).

> In the education context, early experiments with testing had lofty goals. The president of Harvard from 1933 to 1953, James Conant, envisioned the use of standardized tests as a method of locating raw talent from among those students whose educational aspirations, shaped by their families' wealth and background, did not reach to the elite universities. Tests were a leveling of the playing field, a way to find "worthy" students and bring them 'out East' to study. The idea of the IQ tests was not to reform education, especially higher education, so much as to reserve it for highly intelligent people, as indicated by IQ scores, lest their talents be wasted. (Mueller, 2001, para. 25)

As standardized testing continued to gain importance in the educational realm, more states sought to incorporate standardized assessment into accountability of learning for students.

In the state of Indiana, one test determines whether all third graders will be promoted to fourth grade: The Indiana Reading Evaluation and Determination (IREAD-3). "The purpose of the IREAD-3 assessment is to measure foundational reading standards through grade three" (IDOE IREAD-3, n.d., para. 1). Rooted in House Enrolled Act (HEA) 1367, or Public Law (PL) 109, it "requires the evaluation of reading skills for students who are in grade three beginning in the spring of 2012 to ensure that all students can read proficiently before moving on to grade four" (IDOE IREAD-3, n.d., para. 1).

The question of what methods and practices ensure a child will learn to read proficiently

in order to comprehend at a high level in order to demonstrate proficiency on the IREAD-3 assessment has not been adequately debated or even discussed. The impact of teacher decisions on a daily basis, type of pedagogy implemented, and leadership of the principal all contribute to the overall success a school demonstrates on the IREAD-3 (Fish, 2015). The combination of each of these factors have benefited some schools and negatively impacted others in the teaching of reading (Barth & Mitchell, 2006).

Statement of the Problem

As Mueller (2001) wrote in the Kansas Law Journal regarding assessment and accountability,

> The issue is not accountability, but who is held accountable for what, and how. There is a particular perversity in the fact that a single test result can completely derail a student's future but has slight, if any affect, on the administration or teachers. Moreover, while accountability is linked to achieving a certain outcome, there is no reason that this outcome must be measured in only one way. Indeed, it would be difficult to capture the depth and complexity of the classroom experience in a single assessment instrument. (para. 18)

In the preface to *Effective Schools in Reading: Implications for Educational Planners*, Postlethwaite and Ross (1992) asked the simple question, "Which factors distinguish more effective from less effective schools?" (p. v). These reading skills and capabilities are needed to be translated to successfully pass the IREAD-3 at the end of the third grade in order to be promoted to the fourth grade. This is the central question to teaching children to be successful readers with the ability to reach the level of comprehension needed to continue their academic journey successfully.

Reading is a complex, multidimensional activity which allows readers to ascertain meaning from printed materials by using their background knowledge and personal experiences (National Institute of Child Health and Human Development [NICHD], 2000; Opitz & Rasinski, 1998). Recent research has identified key components of teaching reading including specific skills to be taught and concepts that are significant. Studies have found motivational, research-based methods that arouse and engage a child's mind. The research-based information has also classified specific foundational attributes that need to be learned in order for a child to become a successful reader (Roskos, Christie, & Richgels, 2003). The goal in teaching reading is to have children reach a level of reading ability in which they can fully comprehend written material using the foundational reading skills of phonemic awareness, phonics, fluency, and vocabulary (Markman, 1981; Pressley & Afflerbach, 1995). The progression through which a child proceeds to become proficient at reading is made through a series of qualitatively different stages (Chall, 1996; A.J. Harris & Sipay, 1990; Juel, 1988; Kuhn & Stahl, 2000).

Compounding the problem of teaching literacy to all students is the ability to overcome the effects of poverty as socio-economic status is one of the strongest known indicators for academic performance differences at the start of the first grade (Alexander, Entwisle, Blyth, & Mcadoo, 1988). It has been shown that the disparity in wealth will cause children of poverty to enter school with fewer of the developmental reading skills needed to become successful readers. These children have a distinct deficit in critical foundational reading skill areas such as letter knowledge and phonological processing skills (Lonigan, Burgess, Anthony, & Barker, 1998).

The best method to teach reading in schools has been debated by educators for more than the last century (Rayner, Foorman, Perfetti, Pesetsky, & Seidenberg, 2002; Roskos et al., 2003). As Roskos et al. (2003) stated, "the need to broadly distribute this knowledge is great-but the

need to act on it consistently and carefully in instructional practice is even greater, especially if we are . . . to be successful readers and writers" (p. 59). The ability to successfully utilize the best research-based methods on a classroom level, implementing curriculum which is based on foundational reading skills with fidelity, and using data to inform, as well as guide instruction, are the key components to developing children who are proficient readers able to pass the IREAD-3 at high levels in a school.

Purpose of the Study

The intent of this two-phase, sequential mixed methods study was to examine the impact of teachers' pedagogy in the classroom that impacts a child's reading development toward comprehension in order to be successful on the Indiana Reading Evaluation and Determination assessment (IREAD-3). More specifically, this study sought to understand if instruction includes the foundational components of phonemic awareness, phonics, vocabulary, fluency, and comprehension taught in a specified sequence with deliberate objectives. Further considering the foundational components, this study hoped to reveal the impact on the overall passing rate of the school based on the IREAD-3. In the first phase, quantitative research did address the passing rate of 90% or higher for the initial three years of the IREAD-3 regarding teacher reading pedagogy in the primary grades of kindergarten through third grade. Data regarding elementary principal leadership related to the IREAD-3 was also collected. Information from this first phase was explored further in a second qualitative phase. In the second phase, qualitative interviews were used to probe significant survey results by exploring aspects of teaching reading pedagogy in the primary grades with principals at their respective school buildings. The reason for following up with qualitative research in the second phase was to better understand the relationship of teaching the foundational skills of reading, phonemic awareness, phonics,

vocabulary, fluency, comprehension, and reading at proficient levels in order to successfully pass the IREAD-3.

Significance of the Study for Educational Leaders

The study focused on helping educational leaders, administrators, building level principals, and classroom teachers learn more about reading instruction in the primary grades of kindergarten through third grade. The hope is to add to the research on primary reading instruction in relationship to passing the IREAD-3, showing what schools with a higher free and reduced rate do differently, if anything, to produce children capable of reading with a high level of comprehension who are successful on a third grade reading assessment such as the IREAD-3. This did allow for discussion of possible changes to classroom instruction and aid in curricular decisions regarding best practices for teaching reading. Further, this study sought to raise awareness of reading practices to increase reading comprehension by the end of third grade. The increased ability to comprehend written text will provide the child a better opportunity to demonstrate these skills on a summative, standardized reading assessment such as the IREAD-3. Although written with a focus on the IREAD-3 given in Indiana, results may be utilized by administrators, building-level principals, and classroom teachers in other states with a similar end of grade test for reading skills and abilities.

Research Questions

Quantitative-Phase One

1. What is the current state of K-3 literacy instruction in public elementary schools in the state of Indiana relative to the foundational components of phonemic awareness, phonics, vocabulary, fluency, and comprehension?

2. Do vocabulary, fluency, comprehension and classroom pedagogy composite scores for elementary primary literacy teachers explain a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of affluence?
3. Do vocabulary, fluency, comprehension and classroom pedagogy composite scores for elementary primary literacy teachers explain a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of poverty?

Qualitative-Phase Two

4. What are the current early-literacy foundational reading skills taught which contributed to high achieving scores on the IREAD-3 for the past three years in high poverty schools?
5. How does high reading achievement occur in high poverty schools?
6. What do building level principals in high poverty elementary schools with high-achieving IREAD-3 scores cite as contributors to an effective early-literacy reading program?

Research Question Null Hypothesis

Question 1 will be addressed through the use of descriptive statistics.

Question 2: $H_0$1. The composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not predict a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of affluence.

Question 3: $H_0$2. The composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not predict a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of poverty.

Delimitations

The study was limited to principals in the state of Indiana in buildings which are considered elementary schools. The term elementary school was any public institution

encompassing at least one grade between kindergarten through second grade and also third grade. The school could have included pre-school and/or go up to the fifth or sixth grade, but did not need to encompass grades beyond the third grade. The school must also fall into one of the two categories of affluence or poverty based on response to the free and reduced descriptive question on the survey. Schools that fall into the range of 36% to 44% were not used in the data in order to more fully delineate between affluence and poverty. Indiana public school elementary teachers were not included in the quantitative survey or the qualitative study. The qualitative case study was conducted with building-level principals in high poverty public elementary schools.

Limitations

The influences that weaken the accuracy of the research study findings are the limitations of the study (Creswell, 1994). The quantitative portion of the study was a survey which was distributed electronically to all Indiana elementary school principals to fill out and was distributed in the spring of 2016. The survey was sent to all elementary principals via email from a listserv of administrators provided by the IDOE. The email addresses on the listserv might not have been the current principal if the school system had not updated the information with the IDOE in a timely fashion. Emails regarding the survey might have ended up in a spam or junk mail file depending on the internet filter at each school district. Principals might have chosen to ignore or not completed the survey in a timely fashion.

Principals might have chosen to ignore the survey due to their own biases toward standardized testing in general and the IREAD-3 in particular. Schools with highly effective reading programs may choose not to participate due to the concept of not wanting to share instructional practices they do well. Likewise, schools that have performed poorly on the

IREAD-3 in the past might have chosen not to participate due to a perceived embarrassment because of their low literacy scores. The limitations on the survey include honesty with which a survey participant responds. The survey was anonymous but principals might have over inflated their teacher's abilities due to several factors including personal knowledge of the curriculum, teaching reading in primary grades, or a lack of understanding of the IREAD-3. Principals who have been building administrators in an elementary for less than three full years may have difficulty answering the questions and thus were not be included. Another limitation is one in which a building administrator has not taught in an elementary school previously but is in charge of an elementary school. This case happens in larger districts where, for example, a middle or high school assistant principal is moved to be the principal at an elementary.

All standardized assessments have some measurement error associated with them. For the IREAD-3, the measurement error will limit how accurately the assessment assesses a child's reading ability. This has the potential to influence both phases of the study.

For the qualitative case study, three schools were chosen based on being high poverty and successful on a consistent basis on the IREAD-3. Principals may turn the invitation down to be interviewed for many reasons which include a lack of perceived time available to speak with the interviewer, lack of knowledge of their reading program curriculum, and not having a full understanding of the research process.

Definition of Terms

The terms below will be defined and clarified for the purposes of providing the reader of research study consistency and an understanding of what is meant.

Comprehension is the "essence of reading" (Opitz & Rasinski, 1998, p. 12). Comprehension is the detailed and complex process readers undertake to derive meaning from

the text in which they are reading by using their learned skill set, through the use of phonemic awareness, phonics, fluency, and vocabulary, to fully understand the text they are attempting to read (Markman, 1981; Pressley & Afflerbach, 1995).

Fluency is simply the ability to read and understand the text. In this context, fluency is understood to be the processing and comprehending of the text being read (Rasinski, 2004, 2010). As Kuhn and Stahl (2000) asserted, fluency requires a reader to do two interdependent activities at one time. The reader must have the ability to simultaneously determine what the words represent while, at the same time, constructing meaning.

High-achieving scores on the IREAD-3 for the purpose of this study were school scores which are 90% or higher. The IDOE requires public elementary schools to have a 90% pass rate on the IREAD-3. Failure to do so will require a school's IDOE Outreach Coordinator to review the reading curriculum, 90 minute reading block schedules for each grade, and the school's reading interventions.

Indiana Reading Evaluation and Determination (IREAD-3) assessment has as its purpose the measurement of a child's foundational reading skills based on Indiana reading standards through grade three (IDOE IREAD-3, n.d.). The IREAD-3 is a summative assessment based on the Indiana Academic Standards and is used to determine if a child moves on to the fourth grade or is retained in third grade (Title 511 Indiana State Board of Education, 2011).

Pedagogy is the essential tools used by teachers to help children learn content in early literacy instruction. For example, specific skills and strategies to develop meaning, should be taught explicitly and directly in a manner to flexibly promote learner growth (Miller, 2013; Schickedanz, 2003). Explicit and direct does not equate to a formal, scripted presentation of material in a rigid, unyielding format (Schickedanz, 2003). This includes the way teachers talk

(Allington, 2004), using research-based curriculum and interventions (Roskoset al., 2003), best teaching practices, and using the basic components of literacy instruction which include phonemic awareness, phonics, vocabulary, fluency, and comprehension (NICHD, 2000).

Principal, for the purpose of this study, is the building level administrator in charge of setting the direction of the school by developing a shared vision of leadership, managing the day-to-day activities of the building, and is the leader responsible for all programs and schedules (Marzano Center, n.d.).

Public elementary school, for the purpose of this study, is a public institution encompassing kindergarten through at least third grade. The school may include pre-school and/or go up to the fifth or sixth grade, but does not need to encompass grades beyond the third grade.

Schools of affluence, for the purpose of this study, "consist of having a free and reduced lunch count of 35% or less" (Langevin, 2010, p. 6).

Schools of poverty, for the purpose of this study, "a school of poverty consists of having a free and reduced lunch count of 45% or more" (Langevin, 2010, p. 6).

Vocabulary is the bank of words that are known to a child and are used to communicate either orally or in written form with others (Learning Point Associates, 2004).

CHAPTER 2

REVIEW OF THE LITERATURE

Each day reading is used for a variety of purposes. In school, children learn to read then read to learn while adults read for hobby or as part of their vocation (Opitz & Rasinski, 1998). Enrichment and enjoyment are two of the most important facets adults and children enjoy reading (Opitz & Rasinski, 1998). As Opitz and Rasinski (1998) stated, "reading is a complex, multidimensional process which allows readers [to ascertain] meaning" (p. 1) from printed pages by using their background knowledge and personal experiences. Reading has several components that are required as part of a broad definition.

Reading Definition

In the book, *Good-Bye Round Robin*, Opitz and Rasinski (1998) described three components of reading. They stated reading is a form of language, a cognitive process, and a social activity (Opitz & Rasinski, 1998). As a form of language, reading uses three linguistic cues. The first form of language cue comes from the text's meaning and is known as a semantic cue. The grammatical structure of the written piece provides the syntactic cues. Finally, graphophonic cues arise from the sound-letter patterns found in the words being read. As a cognitive process, readers try to predict what the text is communicating, examine parts of words, and either confirm their predictions if the meaning of words is preserved or re-evaluate the section of text again. Finally, reading as a social activity is conveyed by time, place and type of

reading material being read. For example, what a child reads at school is different from what they read for fun at home (e.g., textbook versus a comic book). These are the contexts, where reading takes place and the type of material read, which comprise the two parts of the social activity of reading.

History of Reading in America

Reading is and has been the great equalizing skill for people throughout history. The essence of reading is the ability to comprehend what is on the printed page (Ruddell, Ruddell, & Singer, 1994). Long before the age of technology, reading was the primary form of both entertainment for the family and the sharing of information (Rasinski, 2010). The teaching of reading has "had more fads than Paris has had hemlines" (Groves, 2009, p. 1). Early American schools and the reading instruction provided differ greatly from those of present day due to the changes that have occurred over time.

Oral Reading

Due to the scarcity of early books and the fact that normally only one person per household could read, early American schools focused only on the oral reading components of reading instruction (Hyatt, 1943; Rasinski, 2010). Oral reading dominated school instruction from the earliest days of schools until the first decade of the 20th century.

> These schools were called "blab schools" because students were required to read orally, reread, and memorize their lessons. Often students read different texts and the cacophony of noises must have been quite disquieting. Other times students read chorally text that was written on the blackboard. (Rasinski, 2010, pp. 15-16)

The promotion of being eloquent while reading was the premise of instruction during this period. This was especially true in the middle of the nineteenth century. Also, at the same time,

textbooks were starting to gain more popularity in classrooms. The most popular examples of early readers include the books known as McGuffey Readers, as well as ones developed by M. A. Newell (as cited in Rasinski, 2010). The textbooks and regular books used in schools lead to more recitation and emphasis on speaking ability rather than reading ability.

There was what became known as the *story method* of instruction in reading. In the story method, children were judged by the way they read and their recall. The oral reading performance was assessed (Rasinski, 2010). For example, Rasinski (2010) described a classroom situation in which a teacher would read a text out loud, such as *The Tortoise and the Hare*, which would then be followed by the students repeating the text orally themselves. The teacher served to offer assistance and assess the reading done by the student. As society developed, people began to notice the differences in reading in school and the ways people read in everyday society.

Silent Reading

Change came during the early 20th century when people began to speak to the differences in reading styles taught in schools and those used they used on a daily basis. Horace Mann stated that the reading instruction of the day was more like "an action of the organs of speech rather than an exercise of the mind in thinking and feeling" (as cited in Mann & Mann, 1891, p. 531). This marked the shift to the silent reading approach (Mann & Mann, 1891). It was stated by Mann and Mann (1891) that 11/12ths of all children taking reading classes do not even understand the words or meaning of the words they are reading. A shift to the rapidly expanding printed material in society as a whole was followed by schools use of more written material. By the 1920s, silent reading had replaced oral reading in nearly all public schools in America

(Rasinski, 2010). The difference in oral reading and silent reading was the number of books used to teach reading.

> In contrast with this, in the modern school, which emphasizes silent reading, a great many books are read in each grade . . . It [silent reading] is the complex process of getting thought from printed page and involves an entirely new pedagogy. Silent-reading objectives will never be attained by oral-reading methods. (Buswell & Wheeler, 1923, pp. 39-40)

Rasinski (2010) even detailed the "Indianapolis Public Schools' *Course of Study in Reading* for 1902 [which states,] Reading . . . fundamentally is not oral expression . . . Children should be taught how to read silently with the greatest economy of time and with the least conscious effort" (p. 20).

Behavioral science also played a part in the influencing of reading education during this time period. High frequency words were used in texts that were not particularly interesting to young children. The words were easily decodable and would become sight words over time (Rasinski, 2010). In order to check a student's reading ability, teachers began to employ different strategies. One such strategy which has continued to the present is round robin reading. It originated in order to check silent reading. As a form of instruction, round robin reading is not supported by research-based methods. In his book, *The Fluent Reader*, Rasinski (2010) noted, round robin reading is "not good instruction practice as a game ensues between teacher and student. The teacher tries to surprise the next reader while students try to look ahead to see what they may be reading" (pp. 21-22). The silent reading movement led to more research in reading development.

Whole Language Movement

During the 20th century, several different forms of reading instruction took place. The two most recent and prominent were the whole language movement and the phonics movement. The whole language movement programs were based on getting meaning from the reading and writing activities being employed (NICHD, 2000). Whole language is a model which represents both a philosophy of language development combined with instructional approaches found within that ideal (Bergeron, 1990). The adoption of whole language reading instruction promised many different appealing facets which teachers embraced in the late 1980s and early 1990s. Children would continue to be motivated because the method proposed to make reading fun, freedom for teachers to create their own curriculum, and children were to be treated as active participants in learning. The growth in whole language use of literacy instruction was partially in response to the perceived dullness in phonics instruction (Rayner et al., 2002). The whole language movement lost traction over time. Many teachers and schools began to shift back to phonics instruction.

Phonics Instruction Movement

Research has shown that "both phonics and fluency need to be taught, practiced and nurtured in the earliest stages of reading instruction" (Rasinski, Rupley, & Nichols, 2008, p. 257). Without the use of the reading basics taught by phonics, children will not learn to read as well or effectively. The National Reading Panel Report detailed the five basic components of reading instruction to be phonemic awareness, phonics, vocabulary, fluency, and comprehension (NICHD, 2000). In order to reach a level of fluency, children need to develop phonemic awareness, phonics, and vocabulary. By attaining these skills and attributes for reading strategies, a child will achieve some level of fluency (Willingham, 2007). Phonics instruction

and the five components of basic reading skills are taught in a progression of components of reading to reading itself. The smallest sound piece of the written word is phonemic awareness through comprehension of the written word.

The Five Components of Reading

The National Reading Panel Report summarized many decades of reading research and came to the conclusion that there are five critical areas to concentrate upon when teaching reading: Phonemic awareness, phonics, fluency, vocabulary, and comprehension (NICHD, 2000). "These five areas were incorporated into the No Child Left Behind Act and the Reading First initiative as essential components of effective reading instruction" (Learning Point Associates, 2004, p. 1). Beginning with phonemes and graphemes and extending through an understanding of the written word, phonics instruction is based upon teaching children the five components of reading.

Phonemic Awareness

Teaching reading begins with phonemic awareness. It is simply the instilling in children that words are made up of simple, individual sounds based on an alphabetic system of writing (Learning Point Associates, 2004; Roskos et al., 2003; Wagoner, Torgesen, & Rashotte, 1994). Working with the individual sounds in spoken words is the key to phonemic awareness instruction. Children must make the connection between an alphabet symbol and a corresponding sound (Roskos et al., 2003; WETA, n.d.). Phonemic awareness is comprised of the ability to learn the phonemes and manipulate them in order to make an individual letter sound (Ehri, 2004; Groves, 2009; NICHD, 2000). There are at least 41 phonemes in the English language that are comprised of single letter sounds or blends of letter combinations (National Reading Panel, 2006).

The smallest units of sound are phonemes, which are represented by letters (Ehri, 2004; Learning Point Associates, 2004; National Reading Panel, 2006). Phonemes are different from graphemes. A grapheme is a letter such as C or a combination of letters such as CH (Venezky, 1970, 1999). For example, the word *dog* is made up of three phonemes: /d/, /o/, and /g/. It is important to "think of phonemes not as 'the sounds that letters make' but as the sounds of speech that can be represented by letters" (Learning Point Associates, 2004, p. 4). Research has shown the importance of teaching children phonemic awareness skills and strategies.

A child's letter knowledge and corresponding phonemic awareness are the best indicators of future reading success in young children taught phonemic awareness strategies in kindergarten and first grade (Ehri, 2004; Learning Point Associates, 2004; NICHD, 2000; Share, Jorm, Maclean, & Matthews, 1984). Multiple studies have looked at predicting reading achievement in later years based on phonemic awareness knowledge. For example, researchers were able to identify children that would more readily learn to read and those who would have a more arduous time simply by how developed a child's phonemic awareness had become (Share et al., 1984). Research has shown the importance of learning phonemes and how to use them effectively in order to build the capacity to learn to read.

> Learning new words and expanding vocabulary are two parts of developing readers. Phonemic awareness helps young children use more advanced ways of learning new words. Learning a new word involves forming a connection between visual information about the word as it appears in print and its meaning, pronunciation, and other information that is stored in the child's oral vocabulary. (Learning Point Associates, 2004, pp. 6-7)

Phonemic awareness is only a small, but vital, part of reading development. It is a part of the bigger component of reading instruction to primary grade children known as phonics (Groves, 2009).

Phonics

The second element of five components of reading under the umbrella of phonics instruction is termed phonics. Groves (2009) explained that phonics may be understood to be comprised of three parts. The first part is that of phonemic awareness and knowing the individual sounds that may be made. For example, which word is bigger, such as *cat* or *leopard*, is a component of phonemic awareness. Second, Groves explained the correspondence between letters and sounds. This is the fact in which a child knows the agreement of or connection of letters to their oral sounds. Finally, phonics deals with structural analysis of reading. "Structural analysis looks at word parts, such as prefixes, suffixes, compound words, etc" (Groves, 2009, p. 3). Phonics is simply a way of teaching the letters and sounds relationship.

The rules that govern the acquisition of relationship of the letters in words to the spoken sounds that go with them is known as phonics instruction (Foorman, Francis, Fletcher, Mehta, & Schatschneider, 1998; T. L. Harris & Hodges, 1995; National Reading Panel, 2006). The primary focus of a good phonics program is to help beginning readers "understand how letters are linked to sounds (phonemes) to form letter-sound correspondences and spelling patterns [and then to help the beginning reader] apply this knowledge in their reading" (National Reading Panel, 2006, para. 14). Although the rules in the English language are not always predictable, they are consistent enough to allow phonics instruction to be useful in the teaching of reading (Foorman et al., 1998). Phonics has several methods that it may be taught. Over time, research

has shown that the best method is one known as systematic phonics (National Reading Panel, 2006).

The concept of a systematic phonics program is to be deliberate in the teaching of phonics using an explicit, sequential approach to presenting the elements (NICHD, 2000). The primary targets for phonics instruction are children learning to read in the primary grades and for assisting those struggling students (T. L. Harris & Hodges, 1995; Learning Point Associates, 2004). Phonics is also considered a memory aid to help children remember the rules and effectively use them for sound and letter correspondence (Learning Point Associates, 2004). In a study by Ehri, Nunes, Stahl, and Willows (2001) it was "found that [the use of] systematic phonics instruction led to better reading gains than other forms of group instruction including whole language [instruction]" (p. 393). The study concluded that "systematic phonics instruction proved effective and should be implemented as part of literacy programs to teach beginning reading as well as to prevent and remediate reading difficulties" (Ehri et al., 2001, p. 393). The use of systematic phonics showed other long-term benefits as well. An important benefit to utilizing systematic phonics was that it improved comprehension abilities and provided increased word recognition (NICHD, 2000). As children progress and become more efficient at decoding and sounding out words, teachers move on to the next component of teaching reading, which is increasing fluency.

Vocabulary

The concept of vocabulary is a bank of words that are known to a child and are used to communicate either orally or in written form with others (Learning Point Associates, 2004). Building vocabulary is an important element in literacy instruction especially in teaching reading. The significance of having extensive vocabulary knowledge dates back to research

conducted in 1924 by Guy Whipple. His study published the following year showed that a growth in reading must be accompanied by continuous enrichment and expanding the child's reading vocabulary (Whipple, 1925). There are many types of vocabulary that are described in the literature.

Originally, vocabulary was broken into either oral or print. Whipple (1925) stated that a reader who came to an unknown printed word could use his or her decoding skills to convert the word to speech. This would then help the reader determine meaning. Therefore, the larger the child's oral and printed vocabulary, the easier it is to understand written text (Whipple, 1925). Over time, researchers have elaborated and expanded on these two forms of vocabulary. Vocabulary is now broken into listening, speaking, reading and writing forms as described in Figure 1.

Listening: Words we understand when we talk with others	**Speaking:** Words we use when we talk to others
Reading: Words we know when we see them in print (sight words and words that can be decoded)	**Writing:** Words we use when we write

Figure 1. Vocabulary components. Adapted from "A Closer Look at the Five Effective Components of Reading Instruction: A Review of Scientifically Based Reading Research for Teachers," by Learning Point Associates, 2004, p. 22.

The importance of building a rich vocabulary is attributed to F. B. Davis and the research he did in the early 1940s. He showed the connection of comprehension to having the two skills of word knowledge (vocabulary) and reasoning in reading (Davis, 1942). This leads to the fact that having a rich vocabulary helps in word recognition. "Young readers use the pronunciations and meanings of words in their oral vocabulary to help them recognize words they see in print"

(Learning Point Associates, 2004, p. 22). Even Whipple (1925) agreed with this finding by stating that having a larger vocabulary will make it easier for a child to make sense of the text they are reading. Vocabulary instruction should take multiple forms in the classroom to be most effective.

The building of vocabulary should be done both formally in a direct approach and informally (Learning Point Associates, 2004; National Reading Panel, 2006). In order to expand a child's vocabulary, they must come in contact with new words repeatedly outside of their existing vocabulary (Learning Point Associates, 2004). For example, teachers should include repetition and multiple exposures of various words to their students. Various methods of instruction should include active engagement with new words, computer assisted instruction, rich descriptions of context usage of words, teacher read alouds, and any way that a student can come in contact repeatedly with new words (Learning Point Associates, 2004; NICHD, 2000). Dependence on one method will not yield good results in building a rich vocabulary (NICHD, 2000). Vocabulary development is another component of strengthening reading comprehension in the reading instruction program.

Gains in comprehension ability may be made by bolstering the vocabulary of a child (Learning Point Associates, 2004; NICHD, 2000). As the NICHD (2000) National Reading Panel reported, "Oral vocabulary is a key to learning to make the transition from oral to written forms, whereas reading vocabulary is crucial to the comprehension processes of a skilled reader" (p. 239). The components of reading described to this point, phonemic awareness, phonics, fluency, and vocabulary, all build to increase a student reading ability and improve the comprehension of the written text.

Fluency

Fluency became a pillar of reading instruction after the National Reading Panel determined that research showed it to be an important component in teaching reading (Allington, 2006). Fluency is simply the ability to read and understand the text. In this context, fluency is understood to be the processing and comprehending of the text being read. Most research defines surface-level text as the processing (i.e., reading) and the comprehending as understanding what is being read (Rasinski, 2004, 2010). As Kuhn and Stahl (2000) asserted, fluency requires a reader to do two interdependent activities at one time. The reader must have the ability to simultaneously determine what the words represent while, at the same time, constructing meaning (Kuhn & Stahl, 2000). Fluency is an extension of phonics and phonemic awareness.

Rasinski (2010) pointed out that a reader being fluent and automatic in reading has taken phonics to a new level. The concept of fluency can be broken down into two distinct areas of prosody and automaticity (Dowhower, 1991; NICHD, 2000). Each is an important component of fluency. Readers that demonstrate these two qualities are considered fluent readers (Allington, 2006). Each quality of prosody and automaticity is important in its own right.

Prosody, or the ability to read with rhythm, intonation, stress, and expression, has been the forgotten element in fluency (Allington, 2006; Dowhower, 1991; Rasinski, 1990, 2010; Zull, 2002). Reading comprehension is generally found to exist on the left side of the brain, while prosodic features of reading are understood in the right hemisphere. The right side of the brain helps determine meaning from the elements of prosody while the child reads (Zull, 2002). In his book, *The Fluent Reader*, Rasinski (2010) noted that fluent readers alter their voice through volume, speed, expression and even pausing when necessary. Reading with the visual clues

presented in the printed material such as commas and periods help break the reading into phrasing units which will derive meaning for the child reading (Rasinski, 2004). Working in concert with prosody, to make a reader fluent, is considered automaticity.

James Hoffman stated in the foreword to Rasinski's 2003 version of *The Fluent Reader*, "Faster is not always better" (p. 5). A child must read with enough speed to understand and derive meaning but slow enough to do so. Readers must have what is known as automaticity or the automatic recognition of words in the text (Kuhn & Stahl, 2000). The ability to read with both speed and accuracy is an important feature of fluency because reading in a word-by-word style is slower and does not permit the interpretation of the printed material (Rasinski, 2000, 2010). Chall, Jacobs, and Baldwin (1990) noted in their research, children who read in a word-by-word manner have not achieved fluency. Automaticity is reading with the proper speed and rate in order to understand what is being read and be an efficient, effective reader (Allington, 1983). Automaticity is one part of fluency. Having both automaticity and prosody leads to fluency through practice in reading.

One way for readers to become more fluent is to practice reading (National Reading Panel, 2006; NICHD, 2000). In the past, teachers taught and checked fluency by having students round-robin read, but research has shown this is not an effective instructional practice (Opitz & Rasinski, 1998). Fluency is an important piece in building a bridge to comprehension and the best way to do this is through reading practice (National Reading Panel, 2006; NICHD, 2000; Rasinski, 2010). "Readers have to have some degree of fluency to comprehend what they read" (Rasinski, 2010, p. 33). Along with fluency, another major component in building comprehension is having an ever-expanding vocabulary.

Comprehension

The goal of reading instruction is to bring children to a level of reading ability in which they have the skill set, through the use of phonemic awareness, phonics, fluency, and vocabulary, to fully comprehend the text they are attempting to read (Markman, 1981; Pressley & Afflerbach, 1995). Reading comprehension has come to be viewed as the heart of reading (Markman, 1981; National Reading Panel, 2006). Comprehension is a detailed and complex process readers undertake to derive meaning from the text in which they are reading.

The notion that comprehension is an essential component to reading was examined when researchers in the 1970s began to study it more in depth (Markman, 1981). Through the different studies conducted, the National Reading Panel (2006) found three consistent themes developed. The report notes comprehension is a complex cognitive process, an active process, and teacher preparation is linked to student achievement (National Reading Panel, 2006). Readers develop meaning from this series of intentional processes and the interactions between the reader and the material being read (Anderson & Pearson, 1984; Durkin, 1993). The construction of meaning, in a written text, by a reader allows them to be entertained or learn new concepts, or find out information (T. L. Harris & Hodges, 1995; Pressley & Afflerbach, 1995). The existing knowledge a reader brings with them while reading has a definite impact on the comprehension of the piece being read (Anderson & Pearson, 1984). Therefore, the greater the vocabulary, background experiences, knowledge of sight words, and fluency a reader possesses, the higher the comprehension of the material will be (Learning Point Associates, 2004). In order to be adept at comprehending material being read, a reader must use various strategies to be successful.

Children that are labeled as good in the area of comprehension have learned to use various skills and strategies to understand what they are reading (National Reading Panel, 2006). Multiple professional journals have articles written that describe the key comprehension strategies of self-questioning, summarization, inferring, predicting and imagining, questioning, information organization (e.g., graphs and story maps), and interpreting (Dole, Duffy, Roehler, & Pearson, 1991; Long, Winograd, & Bridge, 1989; National Reading Panel, 2006; Pressley, El-Dinary, Gaskins, Bergman, Almasi, & Brown, 1992). Comprehension is a skill that can be taught and learned. Teachers may learn or be taught how to properly instruct children to develop their comprehension skills (National Reading Panel, 2006). There are drawbacks and areas to take note of when teaching children good comprehension skills.

The National Reading Panel (2006) stated the lack of implementation strategies for comprehension in classrooms by teachers in realistic reading settings is the chief hurdle to clear. There are also other areas to address in order to improve a child's ability to understand what they have read. Strengthening and remediating the other four components of reading, phonemic awareness, phonics, fluency, and vocabulary, are key to building comprehension. As Rasinski (2010) noted, "The lack of fluency often results in poor comprehension" (p. 32).

The report put together by Learning Point Associates (2004) summarized the importance of comprehension:

> Comprehension involves constructing meaning that is reasonable and accurate by connecting what has been read to what the reader already knows and thinking about all of this information until it is understood. Comprehension is the final goal of reading instruction. (p. 30)

As the final goal of reading instruction, comprehension is the most complex of the five components of reading. It is also the culmination of the previous parts that results in the change from learning to read to using reading as a means to learn which is developed over time in a sequence.

Reading Instruction Development

Reading is a skill which is not easily learned. It is a process of development over time requiring proper sequences and stages to be met (Chall, 1996). There have been six distinct stages that Chall (1996) has identified between birth through age 18 and above. In order to become a successful reader, a person must have adequate development at a prior stage (Chall, 1996). Although reading development depends on both the classroom instruction being provided and the home environment, the stages are not independent of each other but rather overlap to form a continuous progression of learning (Chall, 1996). As detailed in Table 1, six stages of reading development were described by Chall. The stages begin with Stage 0, *Prereading*, which would begin at birth and progress through Stage 5, *Construction and Reconstruction- A World View*, by age 18. Chall broke these stages down using a child's chronological age into ranges with detailed descriptions of what the child in each separate stage would be able to accomplish. The stages do not have a definite beginning or ending point, but are on a continuum of learning to read from birth through the ability to read, comprehend, and selectively use material for a specific purpose.

Table 1

Chall's Stages of Reading Development

Stage	Name	Age	Description
Stage 0	Prereading	Birth to 6	Children learn about letters, words and books. Characteristics of words such as rhyming, blended, whole words.
Stage 1	Initial Reading/Decoding	Grades 1-2 or Ages 6-7	Cognitive development to associate letters with corresponding word parts.
Stage 2	Confirmation, Fluency, Ungluing From Print	Grades 2-3 or Ages 7-8	Increase in fluency from repetition of reading stories in Stage 1. Confirmation of what is already learned.
Stage 3	Reading for Learning the New	Ages 9-13	Reading to learn new knowledge and information. Due to limited background experience, material learned from reading is straight forward.
Stage 4	Multiple Viewpoints: High School	Ages 14-18	Learning to use more than one point of view, layers of facts, and new concepts added to knowledge base.
Stage 5	Construction and Reconstruction - A World View	18 and Above	Being able to discern what to read and not read in an article or book. Selectively use printed material for the purpose at hand.

Note. Adapted from "Stages of Reading Development" by Chall, 1996.

Becoming Literate

Becoming literate is a progression, which children take through a series of qualitatively different stages in order to become proficient readers of printed material (Chall, 1996; A. J.

Harris & Sipay, 1990; Juel, 1988; Kuhn & Stahl, 2000). For young children or anyone beginning, the skill of learning to read is a complex undertaking (NICHD, 2000). In order to read a child must process many different items. Reading is a coordination of numerous cognitive processes. To read both accurately and fluently, a child must be able to recognize words, construct their meanings in both sentence and word form, then read fast enough to retain the information (NICHD, 2000). Reading growth and instruction in children is an art form for skilled teachers who must be adept at working with both the motivation side and intellectual skill sets in students.

As children move through the series of stages in learning to read described by Chall (1996), teachers must not assume their students know certain skills or can do them in specific ways (as cited in Johnston, 2004). Lev Vygotsky, in his sociocultural approach to cognitive development, stated, "Children grow into the intellectual life around them" (as cited in Cole, 1978, p. 88). Furthermore, Vygotsky in his work went on to indicate that meaningfulness is the key to children being able to act in and interact in productive ways (as cited in Cole, 1978). It allows the child control over their learning, is a means to integrating connections made in thinking, acting and also feeling (Johnston, 2004). Becoming literate is both a function of what is learned at school from teachers and what is modeled outside of school at home and in the community. Even a child's attitude on learning may impact their ability to become readers or literate. Research has shown that if a child has a focus of receiving praise or trying to not look silly, they will have a much more difficult time learning to read and becoming literate than children that are engaged in learning activities (Niemi & Poskiparta, 2002).

Developing a sense of agency. Reading opens many doors to the world. As Dr. Seuss (1978) wrote in his book, *I Can Read With My Eyes Shut*, the more a child or person reads, the

more that he or she will learn, which will then open up the world to exploration. To expand on what Dr. Seuss wrote many years ago, reading and writing are both ways to continue to learn about the world around a child. Teachers use a child's reading and writing ability that has been taught to teach them to learn about others, the world, and higher order thinking (Johnston, 2004). An area of concern is in readers that have difficulty in decoding words and fluency rate because they will experience difficulties in reading comprehension, as well as overall achievement in reading (Duke, Pressley, & Hildon, 2004). In his book, *The Quality School Teacher*, Glasser (1993) wrote, "Ask elementary students if they want to learn to read, write, calculate, and speak well by the time they leave for middle school, and almost all will answer yes" (p. 50). Developing a sense of agency is what children should leave school with as they grow and develop as literate beings. The concept of agency was developed by Johnston (2004). Agency is a concept of how to act and be a participant in the learning process. "Children should leave school with a sense that if they act, and act strategically, they can accomplish their goals. I call this a sense of agency" (Johnston, 2004, p. 29). Developing a sense of agency in children will allow the instruction of literacy skills to be easier for the classroom teacher.

Agency as a concept in literacy development and learning in general is central to an individual child's sense of well-being and competence in order to make their performance in knowledge acquisition be at a peak level (Eder, 1994; Ivey, Johnston, & Cronin, 1999; Skinner & Wellborn, 1998). The desire that having a sense of agency evokes is so powerful that it will persist throughout a child's life. When a person does not feel there is any relationship between what they do and what happens to them, the person will eventually feel helpless and become depressed (Seligman, 1975; Skinner & Wellborn, 1998). One area that has helped children's sense of agency, or being able to act strategically to help themselves, is in the matter of

providing interventions. To promote a sense of agency, raise engagement, and cultivate motivation for future academic activities, a school needs to provide interventions to assist children that need support (Foote, 1999; Schunk & Cox, 1986; Skinner & Wellborn, 1998). One drawback to agency development in children is attitudes and language used by teachers in classrooms during instruction time and when speaking personally to a child.

Teacher language. Teacher talk is a powerful insight to "just how powerfully language shapes thinking about reading and writing, and about readers and writers being social beings" (Allington, 2004, p. ix). Reading ability may be hindered by the talk which teachers and adults engage the child in causing a disconnect. Donaldson (1978) described teacher egocentricity and the way it affects the learner. The better someone knows something, the greater the risk of behaving egocentrically due to this relationship in knowledge. The egocentric behavior on the part of the teacher will cause a gap to develop between learner and teacher resulting in an increasing level of difficulty in teaching the material at hand (Donaldson, 1978). The names and labels people use have a dramatic effect on children, too. Even the love or kindness that is shown can have an impact, either positively or negatively, on the learning of a child. Language is used unwittingly by adults to give children a way to "position them and provide them with the means to name and maim themselves" (Johnston, 2004, p. 79). For example, it has been documented by Allington (1980) how teacher interaction differs when dealing with child readers of various levels. The research conducted revealed three differences in which teachers interacted with successful a reader based on the reader's level of success previously.

Allington noted in the forward to Johnston's (2004) book, *Choice Words: How Our Language Affects Children's Learning*, in which he

> Documented three differences in the ways teachers interacted with more and less successful readers. They interrupted successful readers less often and waited longer for them to figure words out, and their comments to them focused on making sense rather than on the details of print, on sustaining their efforts rather than correcting them. All their comments to successful readers suggested that reading was about making sense. (p. ix)

Interactions are a vital part of teaching in general and specifically in teaching children to become good readers and enjoy reading. The method of teaching reading used in classrooms today is a significant component of producing successful readers.

Teaching Reading

Throughout at least the last century, educators have discussed and debated the best ways to teach reading to children in schools and have made substantial gains in concepts, components and content for early literacy instruction (Rayner et al., 2002; Roskos et al., 2003). Recent research has identified key components of teaching reading including specific skills to be taught and concepts that are significant. Studies have found motivational, research-based methods that arouse and engage a child's mind. The research-based information has also classified specific foundational attributes that need to be learned in order for a child to become a successful reader (Roskos et al., 2003).

Furthermore, Roskos et al. (2003) stated,

> The need to broadly distribute this knowledge is great-but the need to act on it consistently and carefully in instructional practice is even greater, especially if we are to steer children clear of the bramble-bushes and on to be successful readers and writers. (p. 59)

Many of these research-based concepts involve the benefits of teaching and incorporating literacy development into the daily routine for children at school.

Early literacy exposure. Exposing young children, even as young as preschool age, to the benefits of literacy instruction as a component of class, school, or play is beneficial to the long-term growth to developing their reading abilities (Miller, 2013; Schickedanz, 2003). Children's play areas should be literacy filled environments. A child will benefit from multiple exposures to various literary concepts, such as print, while playing which provides both experience with printed materials and practice navigating the narrative skills they will soon be developing (Christie & Roskos, 2003).

Skills and strategies must be explicit and direct. Print has no sound; it is silent. The lack of real and definite sounds make printed material different from spoken language which has meanings and is present in the here and now (Schickedanz, 2003). The essential tools to learn content in early literacy instruction, such as specific skills and strategies to develop meaning, should be taught explicitly and directly in a manner to flexibly promote learner growth (Miller, 2013; Schickedanz, 2003). Explicit and direct does not equate to a formal, scripted presentation of material in a rigid, unyielding format (Schickedanz, 2003). "Strategies are the how-the specific processes learners flexibly use-to get smarter about big, important topics that are relevant to them and then help them become powerful and thoughtful human beings in school, their neighborhoods, and beyond" (Miller, 2013, p. 16). Although educators have debated the best method to teach reading skills, research has shown that the use of explicit and direct instruction, application of specific strategies, and development of a particular set of basic skills will result in the optimal learning environment for a child.

Poverty effects on reading development. "Educational performance, particularly in poverty area schools, has become a primary issue for state and national politicians, school districts and communities" (Tableman & Herron, 2004, para 1). Children of poverty, defined as those who come from lower socioeconomic status families, enter school with significant deficits in a broad range of pre-reading skills. The result is a child beginning his or her educational journey with greater risks of having reading difficulties and being more likely to be slow in language skill development (Whitehurst & Lonigan, 1998). The federal government has tried to address these weaknesses attributed to poverty with various programs such as Title I. As Moats and Foorman (2008) stated,

> Despite significant federal and state investments in compensatory education programs, persistent achievement gaps among students of various ethnic, socioeconomic, and linguistic backgrounds have been difficult to close. Many students who fall behind are assigned to remedial programs funded through Title I, but, on the whole, these entitlement programs have not been successful in narrowing the achievement gap. (p. 92)

Torgesen's (2004) research pointed out that children of poverty do not possess the vital phonological skills for strong reading comprehension development needed by third grade and beyond. He continues, by stating they do not have strong enough print-related knowledge in the area of vocabulary, also have less experience with complicated syntax, and come to school with far fewer background knowledge experiences to draw upon. Moats and Foorman (2008) asserted, "most serious reading problems appear to be preventable. Instruction, however, must begin early, aim to prevent the development of problems, keep close track of children's progress, and focus primarily on classroom instruction" (p. 92). Helping children of poverty who are at greater risk involves changing how schools provide instruction and interventions.

> The requirement for more intensive instruction for at-risk children must involve a reallocation of resources to make more teacher time available for preventive instruction and, in many cases, will probably require entirely new resources to adequately meet the instructional needs of all children who are at risk for reading failure. (Torgesen, 2004, para. 28)

Reading failure can be reduced by utilizing focused, supplementary interventions in combination with strong classroom instruction (Torgesen, 2004, para. 28). "Nevertheless, we have not yet succeeded in implementing research-based instruction on a widespread, consistent basis" (Moats & Foorman, 2008, p. 91) to fully support children of poverty.

Governmental Evaluations of Reading

As Glasser (1993) stated in *The Quality School Teacher*, a school, since it is part of a government organization or system, "does not succeed in helping the people it serves [to] increase the quality of their lives, [which in this case are children learning to read, then the school] will either fail or be unable to compete successfully with one that does" (p. 17). It is the school which plays a significant role in the quality of life development for children. The education attainment of a child has three benefits. The first is to improve the "stock of knowledge and the analytical skills used to guide behavior" (Behrman, Crawford, & Stacey, 1997, p. 2). Second, education allows preferences to be altered due to increased knowledge and ability to be discerning. Finally, either the constraints, which would have been present become eliminated or greater opportunities are presented to one with a better education (Behrman et al., 1997).

Accountability

During the 1980s, many states began to tighten educational accountability by implementing minimum competency tests (Lewis, 1989). In the first part of the 21st century, educational and service programs were dominated by accountability. The focus of politicians, policymakers, and journalists was on what was deemed to work best on outcomes (Meisels, 2006). The United States Congress, in 1997, commissioned a National Reading Panel headed by the Director of the NICHD and the Secretary of Education, to "assess status of research-based knowledge, including the effectiveness of various approaches to teaching children to read" (National Reading Panel, 2006, p. 1-1). In its charge,

> The National Reading Panel was directed to provide a report which included, an indication of the readiness for application in the classroom of the results of this research, and, if appropriate, a strategy for rapidly disseminating this information to facilitate effective reading instruction in the schools. If found warranted, the panel should also recommend a plan for additional research regarding early reading development and instruction. (National Reading Panel, 2006, p. 1-1)

The United States Department of Education even translated the concept of accountability into law in the early 2000's with the reauthorization of Title I (Meisels, 2006).

In 2002, President George W. Bush signed into law what has become known as his signature piece of legislation, the No Child Left Behind Act of 2001 ("NCLB: Chronology of Coverage", 2015, para. 1). The legislation featured three critical components of academic content standards, academic achievement standards, and assessments which all combined to form the foundation of the accountability system in the United States (National Center on Educational Outcomes [NCEO], 2003). The academic content standards are what children should learn and

the academic achievement standards are how well children should learn. An assessment will measure how well schools have been successful in translating to children the knowledge and the skills outlined in the content standards. "School accountability is based on measuring each school's success in educating all of its students" (NCEO, 2003, para. 7-9).

The measurement of achieving state standards using a child's progress is the foundation for holding schools accountable, types of interventions decided upon, and even school choice options available (Taylor, O'Day, Naftel, Strecher, & Le Floch, 2010). Accountability became the centerpiece of the NCLB legislation for the national educational policy. Test scores became the sole means for a school to demonstrate accountability with annual testing in reading, writing, and math, which was required for all children in Grades 3-8 (Meisels, 2006). Schools and even states are to be held accountable for improvements in testing with consequences when *adequate* test score results were not able to be achieved (Meisels, 2006; NCEO, 2003).

As Meisels (2006) stated about the consequences for American school children,

> In the face of this near-obsession with accountability, educators and policymakers have sought expedient solutions to the complex problems of determining who has learned what, how much they learned, and how well they learned it. Conventional norm-referenced tests enable us to rank and order individuals according to a single, easily understandable metric. But their closed-ended questions do not measure children's natural curiosity, ability to solve problems, or emergent creativity. They are unable to describe individual patterns of learning and teaching; they do not give voice to cultural and ethnic differences that may depart from the mainstream; and they have become vested by our educational system with disproportionate power over teachers' decisions regarding curriculum and the utilization of instructional time. (pp. 1-2)

The end result has been, not the *emergence* of assessments being used for accountability, but the fact high-stakes testing, especially summative standardized assessments, is *now common* in K-12 public and private schools all across the United States including the state of Indiana (Meisels, 2006).

Assessment

Unfortunately, the idea of high-stakes testing in the present condition, means fundamentally referring to the uses made with test scores, rather than using any particular sort of test or variety of test result data (Madaus, 1988; Mueller, 2001). Test scores are not viewed as a single datum point of information about a child's performance, or even one source of information about a child's learning, but, rather assessment scores continue to be utilized for various high-stakes purposes. For example, high-stakes testing is received by the general public as sufficient evidence to make decisions regarding retention, teachers' expertise in classroom instruction, promotions for students, and even the successfulness of a particular school (Madaus, 1988).

"High-stakes testing punishes students, and often teachers, for things they cannot control. It drives students and teachers away from learning" (FairTest, 2007, para. 20). Much of the problem comes from public misconceptions about high-stakes testing or one-time summative assessments being the single best way to measure educational growth of a child (Mueller, 2001). A student may perform poorly on one reading because of multiple factors, other than their reading level or comprehension ability. The student may simply be having a bad day, feeling poorly, or the reading selection does not interest him or her (Rasinski, 2010).

The overwhelming opinion in the testing community, according to Mueller (2001), is using no one single assessment should be the sole criterion upon making a high stakes decision

regarding an individual child's future. "Yet, pressures of testing and overstuffed curricula easily make us abandon meaningfulness and reduce our view of our work to mere individual cognitive skill building" (Johnston, 2004, p. 84). The fact "is well-known that important educational decisions should be based on multiple sources of information" (Heubert & Hauser, 1999, p. 4) and not a single assessment score.

Effective Reading Assessment

For reading instruction to produce a child with the ability to successfully reach the comprehension level of reading, research has shown using assessments to be a critical component to aide effective instruction (Postlethwaite & Ross, 1992; Rasinski, 2010). Furthermore, it is not the one-time standardized assessment, which provides the valuable information to guide daily instruction. "Teachers in the more effective school conduct assessment of their students' progress at regular intervals" (Postlethwaite & Ross, 1992, p. 53). Teachers need to know the strengths and weaknesses of their students in order to provide the best instruction possible; they must know the reading levels at which children are reading. In order to do this, teachers need to track student progress to determine whether their instruction is having a positive impact (Rasinski, 2010, p. 181).

IREAD-3 assessment. In the early 2000s, a growing number of state initiatives began to be aimed at addressing reading proficiency by the third grade. These initiatives had three basic components:

1. Early identification of reading difficulties;
2. Interventions that occur as close to the point of need as possible;
3. Retention (Rose & Schimke, 2012, p. 2).

As a state-level response to address reading proficiency by the third grade, the Indiana General Assembly, during the 2010 legislative session, passed the House Enrolled Act (HEA) 1367, which was also known as Public Law 109 (as cited in HEA 1367, 2010). The summary of the HEA 1367 (2010) stated, "*Reading Skills*: The bill requires the State Superintendent of Public Instruction in conjunction with the State Board of Education to develop a plan to improve reading skills of students. It provides that the plan must include reading skill standards for Grade 1 through Grade 3" (para. 3).

According to StateImpact Indiana (n.d.),

> The Indiana General Assembly unanimously passed the measure, which called on state education officials to craft robust reading standards for Indiana students. The measure called for creating a means for the state to make "determinant evaluations" of whether students are meeting the new standards. (para. 4)

HEA 1367 (2010) required the "evaluation of reading skills for students who are in third grade beginning in the spring of 2012. This legislation was created to ensure that all students could read proficiently at the end of grade three" (IDOE IREAD-3, n.d.). In response to House Enrolled Act 1367, "educators from across the state worked with the IDOE to develop a test blueprint and to review test questions which have now become the IREAD-3 Assessment" (IDOE IREAD-3, n.d., para. 4).

The IREAD-3 assessment has as its purpose the measurement of a child's foundational reading skills based on Indiana reading standards through grade three (IDOE IREAD-3, n.d., p. 4). The IREAD-3 is a summative assessment based on the Indiana Academic Standards and is used to determine if a child moves on to the fourth grade or is retained in third grade (Title 511 Indiana State Board of Education, 2011).

The assessment, "requires the evaluation of reading skills for students who are in grade three beginning in the Spring of 2012 to ensure that all students can read proficiently before moving on to grade four" (HEA 1367, 2010; IDOE IREAD-3, n.d., para. 4). HEA 1367 (2010) had as its primary purpose to ensure each and every child in the state of Indiana has the opportunity for a successful future through literacy. Furthermore, the results of the implementation of the IREAD-3 were to have a positive effect on the whole state of Indiana by reducing the necessity for remedial education at the middle and high school levels causing the dropout rates along with juvenile delinquency to be lowered. Finally, "HEA 1367 will help Indiana develop the highly skilled workforce needed for a strong economy" (IDOE IREAD-3, n.d., para. 5).

Alternatives to Formalized Governmental Evaluations of Reading

In a publication of the *Occasional Paper*, Meisels (2006) argued for the evaluation of programs through the utilization of data collection on the dynamic and structural characteristics of programs, which includes an in depth analysis of child-staff ratios, training for educational staff, determining practices which are developmentally appropriate, examination of positive interactions between educational staff and children, and parental involvement; Meisels also called for more research into significant demographic variables and the impact of different programs on children. Students who graduated in the year 2000 took an estimated 500 hours, or nearly 80 full days, of testing during their educational career and this number will only increase with the amount of standardized testing being proposed (Sacks, 1999). Some researchers have called for reformers, politicians, educators and parents to all work together to seek out alternative measures of accountability which insure an incentive to both teach and to learn (Mueller, 2001).

Early Identification and Parenting

A certain degree of accuracy (92% to 98% accuracy) when decoding words is required to be successful in learning to read (Gillet & Temple, 2000; Rasinski, 2010; Rasinski & Padak, 2005). Retention of a child should not be the first or the only step taken to improve the reading skills of struggling readers. "The earlier children are identified for services and receive specialized attention, the more likely they are to improve their knowledge and skills" (Rose & Schimke, 2012, p. 11).

In their book, *Good-Bye Round Robin: Twenty-Five Effective Oral Reading Strategies*, Opitz and Rasinski (1998) stated, "one of the best ways to better understand how students approach reading is to observe and listen to them when they read" (p. 61). Parental involvement can support children as they become readers (The Partnership for Reading, 2010). Teachers and schools need to "think about the point at which parents need to be notified of their child's reading difficulties and what influence they should be granted over interventions, or retention. Indiana requires schools to provide parents with strategies to assist their children" (Rose & Schimke, 2012, p. 5). As Rose and Schimke (2012) stated, Indiana's HEA 1367 and the accompanying State Board of Education policy, IAC 6.1-5-2.6 both require parents to be notified of reading difficulties, remediation efforts, and failure to pass the IREAD-3.

"Learning to read takes practice, more practice than children get during the school day" (The Partnership for Reading, 2010, p. 6). As an assistance to parents, The Partnership for Reading (2010) developed recommendations for parental support of children's reading for each of the stages which a child may be going through. As illustrated in Table 2, the stages commence with just beginning to read, beginning to read, reading, and, finally concludes with reading each day.

Table 2

Put Reading First: A Parent's Guide by The Partnership for Reading

Stage	Recommendation for Parent Support
Just Beginning to Read	1. Practice sounds of language such as rhyming and songs.
	2. Take words apart and put back together to learn sounds at the beginning, middle, and end.
	3. Practice the alphabet.
Beginning to Read	1. Point out letter-sound relationships in the surrounding world.
	2. Listen to your child read and let them know you are proud of them.
Child is Reading	1. Reread familiar books for practice.
	2. Build accuracy by pointing out missed words.
	3. Build comprehension by asking questions, talk about a story, and encourage to read on their own.
Make Reading Part of Every Day	1. Talk over meals about words, books, and reading.
	2. Read together every day.
	3. Be an advocate by staying informed of your child's reading progress and talk with their teacher.
	4. Model reading and writing.
	5. Visit the library often.

Note. Adapted from "Put Reading First: A Parent's Guide," produced by The Partnership for Reading, 2010.

The supports for parents include recommendations such as practicing sounds in rhyming songs, listening to a child read, asking questions to build comprehension, and modeling reading. To assist parents, The Partnership for Reading developed the above recommendations based on the research done by the National Reading Panel in the Reports of the Subgroups.

Summary

In summary, the action of reading has been defined as being comprised of three basic components. Reading is a form of language, a cognitive process, and a social activity. Throughout history, the ability to read has been the great equalizing skill for people.

A review of the literature reveals a change in the approach to teaching reading in the United States over the last 150 years. Reading instruction has moved from an oral reading approach to a silent reading method during the early 20th century. These methods lead teachers to implement an instructional process known as whole language, which were based on deriving meaning from reading and writing. Over time and with the use of research, reading instruction has moved back and forth. Phonics instruction has been researched and found to be the best method of teaching reading to very young children.

Phonics instruction is focused on building a novice reader's skills toward comprehension. In order to do this, phonics instruction has been broken down into five essential components which children learn as a continuous progression during the early primary years of school. The basic components of phonics instruction include phonemic awareness, phonics, vocabulary, fluency, and comprehension. Each contributes the necessary skills which are needed to properly decode written word and comprehend the text being read.

Reading development has been described as being on a continuum moving through various stages at different ages. Two important factors which reading development is dependent

upon are classroom instruction and the home environment. The ability to become literate is the progression which children move through the series of different stages to become proficient readers capable of comprehending what has been read in printed material. Teaching must adapt to the different levels children are in, especially in primary grades.

Agency and a sense of urgency needs to be developed within children as they learn to read. The skill of agency has been defined as how to act and be a participant in the learning process. Children have a natural curiosity and desire to learn. Combining this desire to learn with proper teacher language and pedagogy builds the capacity to learn to read. Teaching reading requires early literacy exposure and teaching the five components of reading as skills which are explicit and taught in a direct manner.

As reading has become the foundation of learning, governments have also recognized its importance. In order to emphasize the ideal of all students learning to read by the end of third grade, several states have begun to utilize standardized assessments for evaluation. Since 2012, the state of Indiana, through state statute, has administered the IREAD-3, to all third grade students. This assessment is used to determine reading ability and promotion to fourth grade. Assessment is a form of school accountability which has become more prevalent since the National Reading Panel was established in 1997 and then President George W. Bush signed into law the No Child Left Behind Act of 2001.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The review of literature evidenced the importance of the method of teaching reading, as well as the basic foundational components which must be utilized for a child to develop into a competent reader with the ability to comprehend written text (Opitz & Rasinski, 1998). Specifically, the incorporation of teaching phonemic awareness, phonics, vocabulary, fluency, and comprehension in a specified sequence during the primary grades serve as the basis for reading instruction in the primary grades of kindergarten through third grade. The additional component of the principal's impact on the teaching pedagogy was also discussed. The success a school exhibits on the IREAD-3 by consistently attaining a school-wide pass rate of 90% or higher may be attributed to the predictors of teaching pedagogy, curriculum which includes the foundational skills of vocabulary, fluency, and comprehension, and the principal's impact. A description of the research design and overall methodology proceeds that will explore the relationship of these key variables.

Chapter Organization

The chapter begins with a detailed description of the rationale for the use of the research design which will be followed by explanations of the survey instrument to be utilized and the follow-up questions to be examined during the on-site case studies with building administrators. Survey design will be outlined with an explanation of different sections within the survey

instrument and the purposes of each. Issues of trustworthiness related to both the quantitative survey instrument and the qualitative case studies to substantiate the validity and reliability of each. The steps taken to ensure the survey was reliable will also be outlined. Data sources will be analyzed for use and selection. Rationale for the demographics of the schools used within the study will be explained, sample size needed for the survey instrument, and ways which participant rights will be protected during the case study interviews. This chapter will also detail the procedures for handling information following data collection in the survey and case studies, a description of how the data will analyzed, and steps to ensure accuracy will be given. The limitations and delimitations of the study will be outlined. Finally, a summary of the chapter will be presented.

Theoretical Orientation

The theoretical perspective from which this research was guided is social constructivism. Creswell (2009) defined social constructivism as the assumption in which individuals seek to understand the world in which they live and work. To do so, individuals will develop subjective meanings for the experiences they undergo and direct meanings toward certain objects or things.

Constructivist researchers try to understand what is happening in the world around them by looking at the totality of the present situation (Remeyi, Money, & Swartz, 2005). As the principal researcher in this study, I began with a professional curiosity of why some schools score better than others on the IREAD-3 arising from work in my previous position as an elementary principal. In order to conduct further exploration and pursue in depth results from the quantitative survey, I planned to visit two to five schools to interview the principal and make observations of the literacy instruction. Interviews were to be conducted until saturation of data was achieved.

By using semi-structured questions, principals were able to share their views on the literacy in their buildings. This follows Remeyi et al's. (2005) approach of using small samples investigated in depth as a social constructivist method of researching. By doing so, it would help to further enrich the survey data with real-life examples and bring to light other reasons for successful literacy instruction the survey did not touch upon. The information gathered might benefit principals and teachers in the teaching of literacy to primary grade children.

Purpose of the Study

The intent of this two-phase, sequential mixed methods study was to examine the impact of teacher's pedagogy in the classroom which will impact a child's reading development toward comprehension in order to be successful on the IREAD-3. More specifically, this study sought to understand if instruction includes the foundational components of phonemic awareness, phonics, vocabulary, fluency, and comprehension taught in a specified sequence with deliberate objectives. Further considering the foundational components, this study hoped to reveal the impact on the overall passing rate of the school based on the IREAD-3. In the first phase, quantitative research addressed the passing rate of 90% or higher for the initial three years of the IREAD-3 regarding teacher reading pedagogy in the primary grades of kindergarten through third grade. Data regarding elementary principal leadership related to the IREAD-3 was also collected. Information from this first phase was explored further in a second qualitative phase. In the second phase, qualitative interviews were used to probe significant survey results by exploring aspects of teaching reading pedagogy in the primary grades with principals at their respective school buildings. The reason for following up with qualitative research in the second phase was to better understand the relationship of teaching the foundational skills of reading,

phonemic awareness, phonics, vocabulary, fluency, comprehension, and reading at proficient levels in order to successfully pass the IREAD-3.

Research Design Rationale

The study was conducted using a sequential mixed methods approach. Less well known than either quantitative or qualitative, a mixed methods strategy seeks to integrate or connect qualitative findings and quantitative data (Creswell, 2009). According to Johnson and Onwuegbuzie (2004),

> Mixed methods research is formally defined here as the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study. Mixed methods research also is an attempt to legitimate the use of multiple approaches in answering research questions, rather than restricting or constraining researchers' choices (i.e., it rejects dogmatism). It is an expansive and creative form of research, not a limiting form of research. It is inclusive, pluralistic, and complementary, and it suggests that researchers take an eclectic approach to method selection and the thinking about and conduct of research. (pp. 17-18)

The collection of data through a diverse manner will provide a better, more broadly elaborated understanding of the research problem (Creswell, 2009).

A sequential mixed methods study incorporates procedures "in which the researcher seeks to elaborate on or expand on the findings of one method with another method" (Creswell, 2009, p.14). The use of one method can help to identify the important questions needed to ask using the second method (Tashakkori & Teddlie, 1998). In this study the quantitative findings will help lead the researcher to ask related, relevant questions in the qualitative portion with selected participants.

A prediction equation that includes more than one explanatory or predictor variable is a multiple regression equation (Gay & Airasian, 2000; Yates, Moore, & Starnes, 2003). In the case of this study the predictor variables will be the use of vocabulary, fluency, comprehension and teacher pedagogy which will be used to predict the passing rate on the IREAD-3 assessment. The passing rate on the IREAD-3 will be the criterion variable for the regression. A composite score for each of the four predictors will be computed by averaging the responses as will a three-year composite average on the IREAD-3 will be used for the criterion.

Research Questions

The first phase of the study was the quantitative survey which sought to answer the following questions:

1. What is the current state of K-3 literacy instruction in public elementary schools in the state of Indiana relative to the foundational components of phonemic awareness, phonics, vocabulary, fluency, and comprehension?
2. Do vocabulary, fluency, comprehension and classroom pedagogy composite scores for elementary primary literacy teachers explain a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of affluence?
3. Do vocabulary, fluency, comprehension and classroom pedagogy composite scores for elementary primary literacy teachers explain a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of poverty?

During the second part of the research study, qualitative methods were employed to expand on the results of the quantitative survey. Questions that were explored while completing the qualitative second phase were:

4. What are the current early-literacy foundational reading skills taught which contributed to high achieving scores on the IREAD-3 for the past three years in high poverty schools?
5. How does high reading achievement occur in high poverty schools?
6. What do building level principals in high poverty elementary schools with high-achieving IREAD-3 scores cite as contributors to an effective early-literacy reading program?

Research Question Null Hypothesis

Question 1 will be addressed through the use of descriptive statistics.

Question 2: $H_0$1. The composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not predict a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of affluence.

Question 3: $H_0$2. The composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not predict a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of poverty.

Quantitative Survey Design and Research Question Analysis

In the first part of the sequential mixed methods, a quantitative survey (Appendix A) using a Likert scale was implemented. A Likert scale uses a fixed choice response format which is designed to measure opinions or attitudes (Bowling, 1997; Burns & Grove, 1997). Principals self-reported on four areas related to the teaching of reading in the primary grades including curricular inclusion of vocabulary, fluency, and comprehension, and the teacher pedagogy used to implement these. These four areas were predictors in the quantitative portion used in a multiple regression prediction equation. The predictors were used to predict the three-year composite average for schools on the IREAD-3.

Participants' responses were recorded on a Likert-type scale from 0% - 100% to develop the four average composite scores for each of the areas in pedagogy, vocabulary, fluency, and comprehension. The scale went from 0% being "Not at All Implemented by Any Teacher" to 100% being "Fully Implemented by All Teachers" in the primary grades.

The descriptive statistics divided the respondents into two groups, schools of affluence and schools of poverty. As stated in Chapter 1, "an affluent school consists of having a free and reduced lunch count of 35% or less," while "a school of poverty consists of having a free and reduced lunch count of 45% or more" (Langevin, 2010, p. 6). Descriptive statistics will be presented in Chapter 4 in order to provide more clarity on the instructional choices of staff in both school settings.

The survey allowed me to gather data on the building administrator's perception of curricular usage and classroom teacher pedagogy. The survey created was comprised of four areas which were each then given an average composite score based on respondent answers using a Likert scale. The four areas of the predictor variable were used to predict the criterion variable. Overall, there are 37 questions on the survey instrument. The survey was broken into three component areas. The first section of five questions of the survey was used to determine which category a school would be placed into, either affluence or poverty, and the Indiana School Number or Code will be asked. The Indiana School Number or Code was used to calculate the three-year average of IREAD-3 scores for the years 2012 through 2014. Other descriptive statistics were determined about the school in this section, which included demographic information on grade level configuration and principal tenure. The descriptive information section also included the number of years the principal had been at the school, grade levels served in the building, school size, and the free and reduced lunch program percentage

rate. The next section of 25 questions were randomly assigned from the four component areas of pedagogy, vocabulary, fluency, and comprehension. This section included all teachers in the primary grades including the regular classroom teacher, Title I, special education, and all specials teachers such as art, music, and PE. The final section consisting of seven questions focused on the regular classroom teacher only. Questions were randomly assigned from the four component areas as in section two.

Each of the four component areas of pedagogy, vocabulary, fluency, and comprehension had seven to nine questions. Upon survey instrument completion and approval, the questions were entered into Qualtrics by arranging them in a way to avoid an anchoring effect in the responses of participants. This effect is a cognitive bias which would influence the respondents to rely too much on a single component of the survey such as focusing only on comprehension.

Survey Reliability

Cronbach's alpha will be used to test the reliability of the survey.

> Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test. Internal consistency should be determined before a test can be employed for research or examination purposes to ensure validity. In addition, reliability estimates show the amount of measurement error in a test. (Tavakol & Dennick, 2011, p. 53).

A Cronbach alpha of 0.7 or higher will be required for each average composite score on the survey. Each composite score will have a Cronbach alpha test run after the data is collected from the survey. Any average composite obtaining a lower score will be re-evaluated to determine if

the elimination of one single question will reach the required level of 0.7 or higher for Cronbach's alpha. If this process fails to yield the 0.7 level or higher, an expository factor analysis will be utilized to determine whether any combination of questions in the category will produce a reliable combination. If the analysis is significant, the questions which make us the factor load with the highest eigenvalue will be used to form the new composite score. The combination of questions forming the new composite score will then be double-checked with another Cronbach alpha test still seeking a result of 0.7 or higher level.

"Put simply, this interpretation of reliability is the correlation of test with itself" (Tavakol & Dennick, 2011, p. 53). The Cronbach alpha will measure and show the survey questions are inter-related to each other. "If the items in a test are correlated to each other, the value of alpha is increased" (Tavakol & Dennick, 2011, p. 53).

Survey Validity

"Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, the research instrument allow[s] you to hit 'the bull's eye' of your research object" (Joppe, 2000, p. 1). The content validity of the survey was addressed by using the literature review to construct and develop the four areas of pedagogy, vocabulary, fluency, and comprehension participants were questioned on. Furthermore, the 2015/2016 residency cohort of the Indiana State University Educational Leadership Doctoral Program reviewed the instrument to provide feedback. The cohort is comprised of 18 students, 10 male and eight female, working on their PhD, in educational leadership. Face validity tests will be conducted with elementary principals in the district where the researcher currently works. Seven elementary principals, consisting of two male and five female administrators with experience ranging from 2 years to over 20 years as building leaders

in the Metropolitan School District of Martinsville, reviewed the survey then provided input and feedback about the directions, content, and organization. The group did not participate in the statewide sampling of the actual survey.

Quantitative Data Sources, Methods, and Procedures

The quantitative survey was sent to all elementary school principals in the state of Indiana with the exception of those in the Metropolitan School District of Martinsville. There are over 1000 elementary schools in the state of Indiana. Each survey will begin with a consent to participate which respondents will be required to agree to prior to answering the survey (Appendix C). A survey response of 10% was deemed acceptable to run the statistics needed for the study. Qualtrics was used to administer the survey via a link in an email from the researcher. An email list provided by the IDOE will serve as the contacts for participation in the quantitative survey (Appendix B). Any public elementary school principal will be eligible to respond to the survey. To ensure greater participation, an email reminder will be sent out one week prior to the end date of the survey period (Appendix D). Prior to administering the survey, the Institutional Review Board (IRB) of Indiana State University will review and approve the use of the survey with elementary principals.

Once data is received from Qualtrics, it was analyzed using IBM SPSS. The data from the seven questions on each of the predictor variables of pedagogy, vocabulary, fluency, and comprehension will be combined to form a composite score for each. The scores will then be tested using a regression. It is expected to find a statistically significant difference between schools of affluence and poverty on the four predictor variables.

Qualitative Design

Creswell (2009) describes characteristics of a case study as, "a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals" (p. 13). Following the quantitative survey, three elementary schools which were determined to be outliers were contacted to participate in an on-site case study. The schools were considered outliers if their free and reduced lunch rate fell into the poverty range of greater than 45% and their IREAD-3 three-year average composite score was greater than 95%. The case study was used to further probe and follow up on research findings from the qualitative phase. A detailed description of the teaching activities which take place in highly successful schools on the IREAD-3 was explored to answer the research questions stated above.

In seeking the participants for this portion of the study, the researcher did use data from the IDOE website to formulate a list of schools which had documented three years of IREAD-3 school passing rate composite average of 95% or higher for the years 2012 through 2014. The free and reduced lunch rate of schools was used to search for schools with a rate listed by the IDOE over 45%. Schools that met these two criteria were then put on a numbered list. A random number generator was used to generate five numbers corresponding to schools on the list. The numbers were used in order and I began contacting their principals to participate in the study (Appendix F). Once two schools agreed, the researcher stopped contacting schools. The random number generator Random.org was used to generate numbers. A third school was added later for the purpose of reaching saturation of data. Two questions were asked of the building principal:

1. Have you been the building administrator for less than a full school year at your present building?

2. Has there been any redistricting or reconfiguration in the school during the previous three years?

If the answer to either of these questions was yes, then the school was eliminated from participation. It was important the principal had been in place during the previous year in order to fully answer and describe the teaching practices and curriculum employed. In the event no school qualified, an assistant principal, with at least two years of administrative experience, could have been used as a participant in the case study.

Interviews were conducted until saturation of data was achieved. I began with two schools and continued to interview principals, as randomly assigned previously, until saturation of data was reached. In order to reach saturation, a third school was added. To address saturation, Mason (2010) explained,

> Ultimately, qualitative samples are drawn to reflect the purpose and aims of the study. A study schedule is then designed, the study is carried out and analyzed by researchers with varying levels of skill and experience. The skill of the interviewer clearly has an effect on the quality of data collected (Morse, 2008) and this will have a subsequent effect in achieving saturation (Guest, Bunce, & Johnson., 2006)—the sample size becomes irrelevant as the quality of data is the measurement of its value. This is as a result of an interaction between the interviewer and the participant. (Discussion section, para. 9)

The two to five schools which were chosen for the qualitative study were all geographically located within the state of Indiana. This restriction was instituted due to the fact that the IREAD-3 is only required by the IDOE to be given by schools in the state of Indiana. Only IDOE accredited schools with third grade classes administer this standardized assessment in the state of Indiana.

In order to obtain a deep understanding and to fully determine the contributors to schools with high IREAD-3 passing composite rates, multiple data collection methods were used. Denzin and Lincoln (2005) stated, "Qualitative research is inherently multi-method in focus. However, the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon in question" (p. 5). A digital audio recording of the interview with the building administrator was utilized for accuracy purposes. The data collected was in the format of a semi-structured interview, researcher observations from the principal interview, and used data found on the IDOE website. The interview responses were detailed in a transcript for the researcher to review.

I spent up to a full day at each school making informal observations of the principal during the interview, conducting a semi-structured interview with the principal (Appendix E), and reviewing curriculum. Prior to the interview, I explained the participant rights to the principal and had them sign the IRB approved consent form (Appendix G). The collection of information and data lead to the next phase of analyzing all information. "Data analysis involves collecting open-ended data, based on asking general questions and developing an analysis from the information supplied by the participants" (Creswell, 2009, p. 184).

Role of Researcher

In my present position, I am responsible for the curriculum decisions which will guide the MSD of Martinsville into the future. One of my primary tasks is to work with the seven elementary schools in the district to align their curriculum, unify the methods for teaching and recording children's progress in literacy development, and making sure all schools are remediating children with research based programs. Prior to my arrival in the summer of 2015, each school acted as an independent school with the ability to "pilot" programming as they

wished. My goal is to improve our literacy instruction to a degree so every student will be reading on grade level by the time they enter fourth grade.

I believe it is important to be reading on grade level by the fourth grade because this is the critical juncture of learning. This is the time when learning to read changes to reading to learn. Perhaps, in the long run, I hope that if every child is able to read on grade level, there will be fewer discipline issues, less classroom disruptions, and ultimately, no children dropping out of school.

Early literacy instruction first came to my awareness as an elementary principal. During my five years, the IREAD-3 was introduced by the state of Indiana in the 2011-2012 school year to evaluate reading levels of children. What I encountered during the first year of the IREAD-3 was a crisis and complete terror the test inflicted upon both my third grade teachers and their children. The children knew the stress the teachers were going through and it impacted their classwork, demeanor at times, and produced testing anxiety with children crying whenever a reading test was practiced or discussed.

My personal awareness of the factors of teaching reading, early literacy skills, and the importance of reading were shaped during the 2011-2012 school year. When the test results came back, we were devastated when two of our children did not pass. Fortunately, through great effort by a wonderful teaching staff, each child was fully remediated and passed on the summer retest session.

Over the last three years I was an elementary principal, the pressure teachers and children felt over the IREAD-3 did not really change. Children knew they could be retained if they failed the test. Teachers from kindergarten through third grade all felt a responsibility for the children passing the test. I am proud to say that in my final three years as an elementary principal, which

coincided with the initial three years of the IREAD-3, every child taking the test in our building received either a passing score on the test or the summer retest after receiving remediation.

What bothers me is the test result of one little boy. While I was superintendent of the same school corporation, we experienced our first and only child not passing the IREAD-3 test or retest. He is a little boy that had been identified in kindergarten as a struggling learner and he received many types of interventions and assistance in our Title I program. Yet he still failed the test. We never found the key to help him. I wonder what will happen to him, where he will work, and if he will ever learn to read on grade level.

This is my motivation for doing research on early literacy and the IREAD-3. I do not want another child in the school system where I work to miss out on the opportunity to know the joy of reading. I want to empower children in my district to use the IREAD-3 as a way to show off their reading ability!

Therefore, I selected the mixed methods approach to get the most detailed information possible in order to help more children learn to read effectively. In particular, the qualitative method will, as Erickson (1990) stated, "illuminate the invisibility of everyday life" (p. 83). My goal is to make the everyday teaching of reading, which is familiar to many, become more examined and better understood.

By outlining a brief background of my personal history with the IREAD-3 and the experiences I have had with children and teachers related to literacy development and passing the IREAD-3, I have given an account of the potential biases I possess. These personal experiences have led me to choose the mixed method approach and incorporate a qualitative component to deepen and enrich the information available (Creswell, 2009). I am writing for my colleagues in the field who are daily practitioners in the art of teaching children to read.

Case Study Procedures

Following the two school visits and one phone interview for the case studies, as the principal researcher, I then disaggregated the data. First, I transcribed and typed the all three interviews. I then reviewed the transcribed interviews looking for common themes, repeated phrases, and details relevant to the teaching of literacy in primary grades. Next all notes, informal observations, and reflections were categorized by topic for coding purposes. "There is no way that an observer can observe and record everything that goes on during an observation session, especially in a natural setting such as a classroom" (Gay & Airasian, 2000, p. 295).

A linear or hierarchical approach was utilized to analyze data in the qualitative research phase. In Figure 2 below, a description of how the data for the interviews was converted from a verbal recording to data and finally to become a theme is outlined. The model used was based on work presented by Creswell (2009) on qualitative research found in the following model:

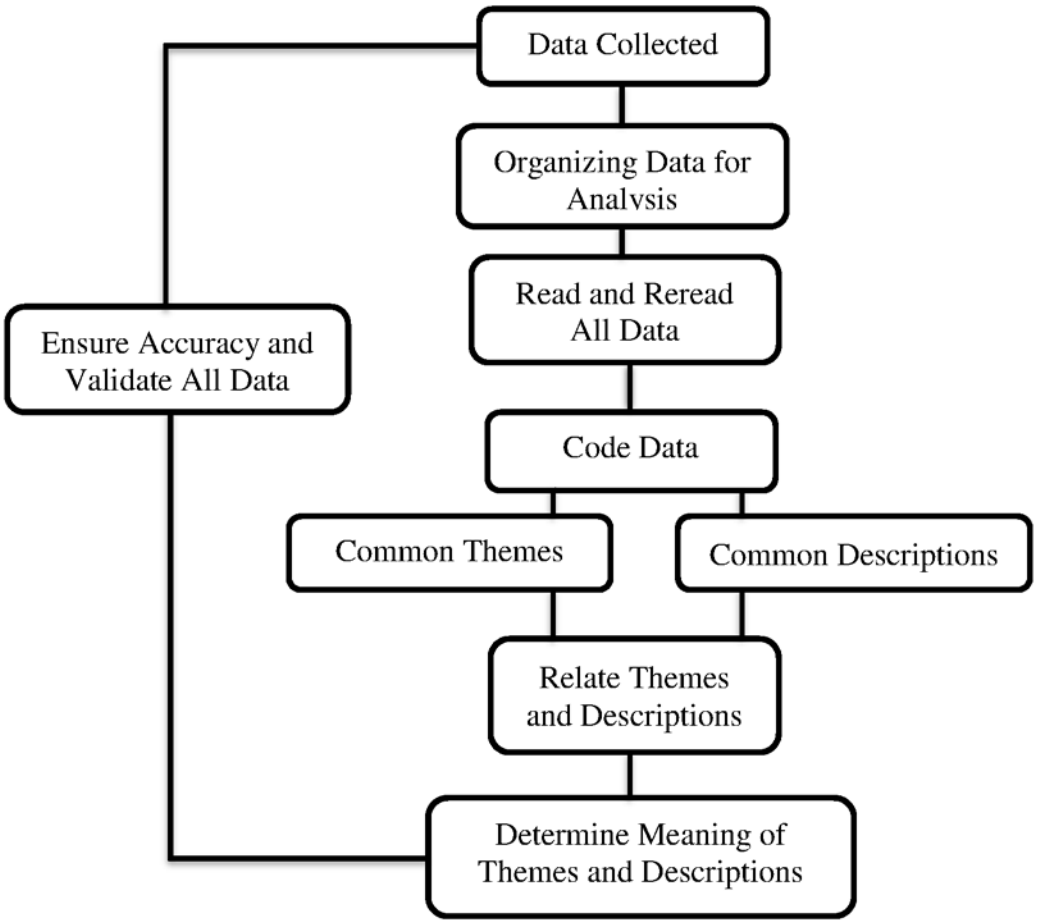

Figure 2. Qualitative case study flowchart. Data analysis flowchart for the qualitative case study moving from data collected at the top down through the process of interpretation. Adapted from "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches," by J. Creswell, 2009, p. 185.

The final piece of the case study involved the interpretation or determination of the meaning of the themes and descriptions in a narrative form. As Gay and Airasian (2000) stated,

> The focus is on the meanings participants hold in their natural setting. This focus is important because each setting and its participants are viewed as being unique, making the researcher's task to describe the reality of the participants in their own, unique context. (pp. 204-205)

As Dey (1993) described, writing the qualitative section as a metaphor will be similar to storytelling with three main features: a setting where the data are collected, characters who are informants, and the plot in the form of social actions where the characters are engaged. The final write-up of the case study was a narrative created to communicate my experiences and the meanings attached to them (Creswell, 2009).

Confirmation of the Credibility in a Qualitative Study

Reliability in a research study "is the degree to which an assessment tool will produce consistent and stable results" (Phelan & Wren, 2006, para. 1). Joppe (2000) defined reliability as "the extent to which research results are consistent over time and are an accurate representation of the total population under study . . . and if those study results can be reproduced under a similar methodology, then the research is considered to be reliable" (p. 1). In a qualitative "case study, to ensure reliability, the examination of trustworthiness is [a] crucial [component]" (Seale, 1999, p. 140).

The idea of validity in a qualitative study is not a single concept, but "rather a contingent construct, inescapably grounded in the processes and intentions of particular research methodologies and projects" (Winter, 2000, para. 1). With respect to this research study, validity of the qualitative case study will be established if the account accurately represents those features of the interview for which it is intended to explain or describe (Winter, 2000).

Patton (2002) posed three questions for qualitative researchers to consider to confirm the credibility of a study, which encompasses both reliability and validity:

1. What techniques and methods were utilized to ensure the validity, integrity, and accuracy of the findings?
2. What biases does the researcher bring into the study through previous experiences?

3. What are the underlying assumptions of the study?

To ensure that these questions are answered, triangulation, member checking, and reflexivity were strategies that I employed as the researcher.

Triangulation is defined as "the use of multiple methods, data collection strategies, and/or data sources, in order to get a more complete picture and to cross-check information" (Gay & Airasian, 2000, p. 630). This study has used the following protocols to increase both reliability and validity including using a semi-structured interview format, coding of responses and observations, consistent procedures for conducting the interviews and dissecting observations, and use of public records where needed for IREAD-3 scores. By combining methods, the study was strengthened (Patton, 2002).

The concept of member checking may "be described as a research phase during which the provisional report (case) is taken back to the site and subjected to the scrutiny of the persons who provided information" (Lincoln & Guba, 1985, p. 236). The narrative from the case study was developed, written, and then sent to the participants to review and comment. This process occurred prior to the final dissertation defense. "During this process, the 'persons who provided information' are able to determine if the researcher has accurately reported their stories" (Koelsch, 2013, p. 170). Participants in the case study were able to check for accuracy in the account of the case study interview narrative and respond as appropriate.

"Reflexivity is defined as the researcher's own self-reflection and self-awareness of their potential predispositions and biases which may possibly influence the research study and the [resulting] conclusions" (Denzin & Lincoln, 2005, p.5). "Qualitative research should be conducted through critical, self-reflexive enquiry. This means the researcher should be

constantly asking questions about her or his role in the research process" (Warwick, n.d., para. 17).

As Norris (1997) stated, "a consideration of self as a researcher and self in relation to the topic of research is a precondition for coping with bias" (p. 174). My background as an elementary principal, interest in reading instruction, personal beliefs, and previous experiences working with primary teachers in the teaching of literacy were all areas for biases to be developed. "Research whether quantitative or qualitative, experimental or naturalistic, is a human activity subject to the same kinds of failings as other human activities. Researchers are fallible. They make mistakes and get things wrong" (Norris, 1997, p. 173). The dissertation committee also helped to serve as a sounding board to help identify potential bias in the study. Recognition of these areas and awareness for biases to arise did help me to limit the overall impact on the research study.

Data Storage and Confidentiality

Three schools were chosen based on their IREAD-3 scores over the initial three years the standardized assessment were given combined with a free and reduced lunch rate of higher than 45%. Interviews were conducted with a semi-structured format with initial questions outlined (Appendix D) and then a conversation about literacy instruction at the school. All responses were recorded, along with notes taken that I took during the interviews, during the school visit. Participants were notified of the confidentiality of their participation and responses within the study in the initial contact as well as throughout the study. I did, in part, ensure confidentiality by removing all identifiers through the use of pseudonyms.

The recorded responses will be transcribed and typed out to review for common themes and descriptions. A copy of the transcript of each interview is in Appendix H. The three schools

interviewed will be coded as “Elkin Elementary School,” “Ike Elementary School,” and “Wellpoint Elementary School” for the sake of the research study. Any additional schools will follow along the same line using the next letter in the alphabet. The building level principals will be given the pseudonyms of “Mr. Stout,” “Mrs. Watts,” and “Mrs. Landry” to correspond with each school. As the researcher, only I know of their true identities and all ways to identify the schools were kept confidential.

The superintendent of each school was contacted to request permission to interview the principal within their school corporation. Each building level principal was afforded the opportunity to review the material and results of the study prior to the defense by the candidate. All interview material and tapes will be kept for the required amount of time as prescribed by the Institutional Review Board (IRB) at Indiana State University. After the appropriate time has passed, the material will be destroyed.

Risks and Benefits

All subjects who chose to participate in the study were informed of the potential risks and each signed the Informed Consent Form (Appendix G) provided by the IRB. All participants were also informed there would be no direct benefit to them for contributing to this research study. The risks associated with the study were minimal. A participant may not have been receptive to sharing what areas their school struggles with in teaching reading in the primary grades as this was a potential weakness on the principal’s part as an educational leader.

Summary

The premise of this chapter was to outline the research methodology and procedures which were used to complete the research study. A complete review of both the quantitative and qualitative methods utilized was explained. A description of the survey instrument and the

statistics to be employed with the quantitative survey results were detailed. The process for conducting the qualitative case study interviews and developing themes for the resulting narrative was detailed. Issues of reliability and validity were addressed for the quantitative method, while confirmation of the credibility was addressed for the qualitative method. The main purpose of this study was to explore the connection of teaching foundational reading skills to children in primary grades to determine success on the IREAD-3 standardized assessment.

CHAPTER 4

DATA ANALYSIS

This sequential mixed method study examined the literacy instruction in the primary grades, as perceived by the building administrator, that lead to high-achieving IREAD-3 scores in the third grade, especially in schools of poverty. The data analysis chapter is divided into two sections. In the first section, the findings for the quantitative survey are reported. The final portion of the chapter deals with the case study interviews which were conducted. An analysis of the transcripts of the interviews will be detailed.

For the first component in the research portion of the study a quantitative survey was administered to all Indiana public school principals. The predictor variables in the quantitative portion included the composite scores for teacher pedagogy, vocabulary, fluency, and comprehension. An analysis was prepared to determine the principal's perception of the influence teacher pedagogy and the literacy instruction, in the specific areas of vocabulary, fluency, and comprehension, had on the reading development of children's comprehension and reading abilities in order to be successful on the IREAD-3.

Quantitative Findings

The survey instrument (Appendix A) was used to determine principal perceptions consisted of three parts and comprised of 37 questions which were created using a review of the literature. Section I contained three participant-limiting questions to ensure that the respondent

fell within the parameters of the sample set by this study into one of two categories of either affluence or poverty based upon the school's free and reduced lunch program rate. The second limiting factor was the length of service the principal had in administration. Finally, the last limiting factor respondents were asked was if their school contained third grade and at least one or more lower grades. The remaining two sections of the quantitative survey focused on teacher pedagogy and the use of literacy instruction in vocabulary, fluency, and comprehension skills. Face validity was established by using feedback of seven elementary principals from the Metropolitan School District of Martinsville. They piloted the survey and gave me feedback that improved the survey itself while serving as face validity measures. Members of the 2015-2016 Indiana State University Doctor of Philosophy Residency Cohort reviewed the survey, provided feedback, and gave input in order to make adjustments and corrections on the survey. This process established content validity. After the survey was administered, Cronbach's alpha was utilized to determine the reliability.

Quantitative data were collected using an electronic survey instrument to record participant responses to questions. The Indiana Department of Education provided an email list of all elementary school principals' email addresses after a records request was submitted. Using public elementary schools that contained third grade and at least one lower grade level in the kindergarten to second grade range, 1,050 emails were sent out. A total of 119 principals responded correctly, meeting the criteria to qualify for a return rate of 11.33%.

Survey Reliability

The survey reliability was measured using Cronbach's alpha, which measured the internal consistency of the survey; it is expressed as a number between 0 and 1 (Tavakol & Dennick, 2011). For purposes of the study, an alpha of .70 or higher was required. The internal

consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test (Tavakol & Dennick, 2011). The survey section which dealt with the literacy area of vocabulary was comprised of eight questions and had an alpha score of $\alpha = .819$. The survey section for fluency was comprised of eight questions. The reliability statistic for fluency had an $\alpha = .793$. The survey section for comprehension had eight questions. The reliability statistic for this area had an alpha of $\alpha = .793$. The fourth section of the survey, teacher pedagogy, had eight questions. The test for reliability determined these eight questions did not meet the alpha of .70 or higher. Initial results for the eight questions had an alpha of $\alpha = .64$. Therefore, each question was individually compared to determine if dropping one question would result in a Cronbach alpha = .70 or higher. By eliminating one question, on the survey (i.e., question number 6), the resultant alpha was $\alpha = .718$. Therefore, eliminating the question 6 about whole language resulted in the ability to form a composite score with .7 or higher reliability level. This was the only modification required to produce reliable composite scores to be used as predictor variables within the inferential section.

Descriptive Statistics

The data for the Elementary Schools with High-Achieving IREAD-3 Scores: What They Do Differently survey were gathered using 119 responses from Indiana principals of elementary schools with a third grade class and at least one lower grade level. Each participant was asked the number of years they had been the principal at their respective school and were asked to choose from the following two options: less than two years and three or more years. If a response of less than two years was chosen, the respondent was not included in the study. The respondents were then asked what the free and reduced lunch program percentage rate was for

their school. There were three choices available: 0% to 35%, 36% to 44%, and 45% to 100%. Of the 119 total responses, there were 27 (22.7%) principals from schools in the 0% to 35%, and 92 (77.3%) principals in the 45% to 100% category. The 0% to 35% category represented schools of affluence and the 45% to 100% represented schools of poverty as defined earlier in the methods section of this study. Respondents were then asked if their school contained third grade and at least one lower grade level. Either a *yes* or *no* response was required to continue the survey. Respondents that answered *no* were exited from the survey. The next descriptive question asked respondents to classify the size of their respective elementary school. The choices were less than 200, 201 to 400, 401 to 600, 601 to 800, and 800+. The 119 responses were broken down as follows: 5 (4.2%) were less than 200, 44 (37%) were between 201 to 400, 43 (36%) were in the 401 to 600 category, 21 (17.6%) were between 601 and 800, and 6 (5%) were in schools larger than 800 children. The final descriptive question asked all respondents to list their four-digit Indiana school code or number. This was used to find IREAD-3 scores for calculation of statistics. All respondents (119; 100%) provided their four-digit code.

The survey data was then broken down into the four components. Each of the remaining 32 questions fell into one of the four categories of vocabulary, fluency, comprehension, and teacher pedagogy. Each category had eight questions with the exception of the one question omitted (i.e., teacher pedagogy) to reach the alpha level of .70 for teacher pedagogy. Each question asked respondents to rate teachers in their building on a scale from 0% to 100% by 10% increments for a total of 11 choices per question.

The first section of the survey reported principals' perceptions of teaching vocabulary to build literacy skills for improving IREAD-3 passing rates. In response to the statement, "teachers increase a child's vocabulary by intentionally creating multiple ways for the child to be

exposed to new words," 51 (42.9%) principals indicated that 100% of their teachers did this. When asked about "the percentage of teachers who include vocabulary building in literacy instruction," 78 (65.5%) respondents stated that 100% of their teachers do so. "The number of teachers who regularly engage in professional development activities 100% of the time, which include vocabulary" was affirmed by 43 (36.1%) principals while 38 (31.9%) principals felt half or fewer of their teachers did so. The number of principals that believe 80% or more of their "staff use word walls to teach vocabulary" was 94 (79%). In response to "using an indirect approach to build vocabulary," principals were widely split with response ranging from 50% (n = 14), 70% (n = 13), 80% (n = 15), 90% (n = 20), and 100% (n = 38). In contrast, when asked about "a formal direct approach to build vocabulary," 96 (82.4%) principals responded that 80% or more of their teachers taught vocabulary this way. When asked about "building a child's vocabulary in multiple forms in classrooms across the school," 72 (60.5%) principals said all 100% of their teachers did this. Finally, when asked "what percentage of regular classroom teachers incorporated differentiation," 13 (10.9%) survey respondents stated 50% while 50 (42%) other respondents stated 100%.

The next section of the survey measured principal perceptions of fluency instruction in the classroom. "Teachers who work on a student's word recognition and knowing the meaning of words to build toward comprehension" was 61 (51.3%) principals said 100%. Seventy-five (63%) principals stated that 100% of their teachers included "the teaching of fluency in literacy instruction." The percentage of teachers who "regularly engage in professional development which included fluency" had 12 (10.1%) principal responses which said 50%, 15 (12.2%) principals stated 80%, and 41 (34.5%) principals reported 100%. "The teaching of fluency requires teachers to understand they must teach children to simultaneously determine what the

letters being read represent and, at the same time, construct meaning," 25 (21%) principals reported were at 80% and 50 (42%) principals reported were at 100% staff participation. In response to the statement, "teachers understand the right hemisphere of the brain helps to interpret meaning from intonation, inflexion, and rhythm," 26 (21.8%) principals reported only 50% of their teachers knew this fact. "Children are taught to use expression when reading in 100% of the classrooms" reported by 59 (49.6%) of the respondents. "Automatic recognition of words is practiced at a high level in 90% of classrooms" reported by 24 (20.2%) principals and at the 100% level among 53 (44.5%) respondents. "The number of teachers in a school that incorporate differentiation to teach fluency" was reported by 58 (48.7%) principals at the 100% level.

The third section of the survey measured principal's perceptions of teaching comprehension during literacy instruction. "The percentage of teachers who include literacy instruction in comprehension" at the 100% level was reported by 84 (70.6%) survey respondents. When asked "how many teachers participate in regular professional development covering comprehension," 48 (40.3%) principals responded 100%. When asked about "teachers discussing ways to improve reading comprehension with one another," 105 principals reported that 80% of their teachers or more did so with 63 (52.9%) principals reporting that 100% did so. Fifty-eight (48.7) of principals perceived that 100% of their "staff believe comprehension can be learned at a high level." The survey question on whether "teachers understand the left hemisphere of the brain controls reading comprehension" had a wide range of responses. For this question, 21 (17.6%) principals reported that only 50% of their staff understood this and another 18 (15.1%) principals reported only 70% possesses this understanding. "Children being taught various skills and strategies to comprehend written text" was reported by 111 principals to

be 80% of their teachers or more with 69 (58%) principals stating 100%. "The belief that the *essence* or *heart* of reading is comprehension" was reported at the 100% level of teachers by 62 (52.1%) principals. "The number of teachers which implement differentiation strategies including comprehension" was at the 100% level of teachers reported by 66 (55.5%) principals.

The final section of the survey covered teacher pedagogy in the classroom. "The percentage of teachers which were reported to teach phonics" were 80% reported by 20 (16.8%) principals and 100% reported by 54 (45.4%) principals. Seventy-four (62.2%) principals reported that 100% of their "teachers regularly engaged in collaborative activities either within or across grade levels discussing the art of teaching reading." "Teacher language" was viewed by 70 (58.8%) principals at the 100% level to influence student's reading ability development. Ninety-nine (83.9%) principals reported that 90% or more of their "teachers used the appropriate literacy instruction in phonemic awareness, phonics, vocabulary, fluency, or comprehension." "The regular classroom teacher who provides remediation for all students" in 100% of the classrooms was reported by 68 (57.1%) principals. "Including parents in the teaching of reading" was reported by 26 (21.8%) principals at the 80% level and 29 (24.4%) principals at the 100% level. Finally, "progress monitoring at regular intervals" was done by 100% of the regular classroom teachers by 83 (69.7%) principal respondents.

Whole group. The proceeding section provides an overview of the whole sample from all 119 respondents. A breakdown and comparison of responses based on different building factors will be explored to better understand literacy instruction for developing comprehension and reading skills to lead to a high (90%) passing rate on the IREAD-3. The IREAD-3 passing percentage for the buildings of all survey respondents included in the study appears in Table 3 below.

Table 3

IREAD-3 Passing Rates All 119 Respondents

Assessment	Minimum	Maximum	Mean	Standard Deviation
IREAD Passing Rates	61.10	98.73	88.90	7.46

For each of the four areas examined in the survey, including vocabulary, fluency, comprehension, and teacher pedagogy, composite responses were developed from participant responses. Each area had a low composite response, high composite response, mean, and standard deviation. For composite scores, the range in all tables is zero to 11 which represents the survey responses that ranged from 0% to 100% in increments of 10%. Since the study used an 11 point Likert-type scale, each point in Tables 4, 6, 8, and 10 through 14 represents 9.09 percentage points. Table 4 below shows the areas tested, with the minimum and maximum composite score, mean, and standard deviation.

Table 4

Composite Scores in Each Area Surveyed

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	4.13	11.00	9.38	1.38
Fluency	4.00	11.00	9.13	1.37
Comprehension	4.75	11.00	9.47	1.18
Teacher Pedagogy	5.14	11.00	9.72	1.12

Note. For minimum and maximum, the percentage levels were converted to units from 1 to 11. In the case of Fluency, the minimum of 4.00 = 30% and the maximum of 11.00 = 100%.

Participant free and reduced categories. Based upon participant responses to the limiting question, "What is the free and reduced lunch program percentage rate of your school?" schools were divided into one of two categories. Schools with responses in the 0% to 35% range

were considered schools of affluence. Responses of schools in the 45% to 100% range were deemed schools of poverty.

Affluent schools. Affluent schools were defined, in this study, by having less than 35% free and reduced lunch program rates. In Table 5 below passing rates for the IREAD-3 in schools of affluence are detailed with the minimum composite average, maximum composite average, mean, and standard deviation for the twenty-seven schools. Each category of minimum and maximum have a range from zero to 100% in eleven equal increments of 10%.

Table 5

IREAD-3 Passing Rates Respondents-Affluence

Assessment	Minimum	Maximum	Mean	Standard Deviation
IREAD Passing Rates	89.63	98.73	94.16	2.44

In-depth insight into schools of affluence was accomplished by examining composite scores in various areas. Overall, schools of affluence had a higher mean IREAD-3 score, 94.16 versus 88.90, with a much smaller standard deviation, 2.44 versus 7.46, as compared to the whole group sample. The minimum composite score recorded by schools of affluence were also much higher than the sample of the whole group.

The responses of principals of affluence perceptions were examined in the areas of vocabulary, fluency, comprehension, and teacher pedagogy. In Table 6 below, the scores for principal responses from affluent schools in each literacy development area detailed. For minimum and maximum, the percentage levels in the survey from zero to 100% were converted to units from 1 to 11.

Table 6

Composite Scores in Each Area Surveyed-Affluence

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	4.13	11.00	9.28	1.61
Fluency	4.00	11.00	9.02	1.54
Comprehension	5.29	11.00	9.30	1.28
Teacher Pedagogy	5.14	11.00	9.56	1.35

Survey responses were separated based on affluence. The composite average scores for each of the four areas of literacy instruction, as perceived by principals, were computed. The mean for each of the four individual areas of the study were lower for principals in schools of affluence as compared to the sample from the whole group or schools of poverty. Each of the four areas also had a greater standard deviation for schools of affluence when compared to both schools of poverty and the whole sample group.

***Poverty schools*.** Poverty schools were defined, in this study, by having a free and reduced lunch program rate of 45% or higher. In Table 7, the IREAD-3 scores for schools of poverty are provided in detail with the minimum composite average, maximum composite average, mean, and standard deviation for the 92 schools in this category. Each category of minimum and maximum have a range from zero to 100% in eleven equal increments of 10%.

Table 7

IREAD-3 Passing Rates Respondents-Poverty

Assessment	Minimum	Maximum	Mean	Standard Deviation
IREAD Passing Rates	61.10	97.87	87.35	7.73

IREAD-3 scores from schools of poverty had a wider span than those from schools of affluence as seen in Tables 5 and 7. The mean for the IREAD-3 passing rates in schools of poverty was lower than the mean of the whole group sample. The standard deviation was

slightly greater than the whole group while being more than three times greater than the standard deviation of IREAD-3 scores in schools of affluence.

Survey responses were broken down in the four areas examined including three areas of literacy instruction and teacher pedagogy. In Table 8 below, the responses of principals from schools of poverty are detailed. For minimum and maximum, the percentage levels in the survey from zero to 100% were converted to units from 1 to 11.

Table 8

Composite Scores in Each Area Surveyed-Poverty

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	4.88	11.00	9.41	1.31
Fluency	4.75	11.00	9.16	1.32
Comprehension	4.75	11.00	9.53	1.15
Teacher Pedagogy	5.43	11.00	9.77	1.05

Regarding schools of poverty principal perceptions, as recorded in survey responses to literacy instruction and teacher pedagogy, had a higher composite mean than both the sample of the whole group and principals of affluence responses. The mean was higher in each of the four areas examined in the survey. The minimum score was also higher in the categories of vocabulary, fluency, and teacher pedagogy when compared to the whole group sample.

School size. School size was examined also in the survey. Principals reported which category their school fit into based on number of children. The categories were schools less than 200, 201 to 400, 401 to 600, 601 to 800, and greater than 800. In Table 9 below, the number of schools in each category is listed. The IREAD-3 passing rates are recorded by school size including the minimum, maximum, mean, and standard deviation.

Table 9

IREAD-3 Passing Rates Based on School Size

Number of Students	Schools in Study	Minimum	Maximum	Mean	Standard Deviation
< 200	5	87.50	96.07	91.37	4.01
201 to 400	44	71.30	97.87	88.12	6.31
401 to 600	43	61.10	98.73	88.91	9.25
601 to 800	21	79.40	97.50	90.81	5.20
> 800	6	70.93	95.37	85.75	9.55

Schools with less than 200 students the highest mean of any of the school categories and was higher than the sample of the whole group. The standard deviation was also lower for schools with less than 200 children compared to other categories of school size and the whole group sample. Similarly, schools with 601 to 800 students had a higher mean and lower standard deviation than the whole group sample. Large schools with more than 800 children had the lowest mean average of any category examined when compared to other school sizes, affluence, poverty, and the whole group sample. Survey responses were broken down in the four areas examined including three areas of literacy instruction and teacher pedagogy. In Table 10 below, the responses of principals from schools with less than 200 children are detailed.

Table 10

Composite Scores in Each Area Surveyed Based on School Size-Less Than 200 Students

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	8.50	11.00	9.88	1.16
Fluency	8.38	10.88	9.80	1.15
Comprehension	8.63	10.88	9.93	0.91
Teacher Pedagogy	8.00	11.00	9.91	1.20

The responses of principals from schools with less than 200 children indicate that the in each of the four areas examined, vocabulary, fluency, comprehension, and teacher pedagogy, the minimum response to number of teachers performing duties in their building are higher when

compared to the whole group sample. The maximum composite scores in fluency and comprehension were slightly lower. Finally, the in each category was higher than the whole group sample.

Survey responses were broken down in the four areas examined including three areas of literacy instruction and teacher pedagogy. In Table 11 below, the responses of principals from schools with a size of 201 to 400 children are detailed. For minimum and maximum, the percentage levels in the survey from zero to 100% were converted to units from 1 to 11.

Table 11

Composite Scores in Each Area Surveyed Based on School Size-201 to 400 Students

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	6.88	11.00	9.80	1.12
Fluency	6.50	11.00	9.44	1.10
Comprehension	7.25	11.00	9.66	1.12
Teacher Pedagogy	7.57	11.00	10.00	0.89

For schools with a student population between 201 and 400 students, two areas stood out from the rest. The mean in teacher pedagogy was far higher than any other group examined including the whole group sample. In comparison, teacher pedagogy also had a smaller standard deviation than the sample of the whole group.

Survey responses were broken down in the four areas examined including three areas of literacy instruction and teacher pedagogy. In Table 12 below, the responses of principals from schools with a student population between 401 to 600 children are detailed. For minimum and maximum, the percentage levels in the survey from zero to 100% were converted to units from 1 to 11.

Table 12

Composite Scores in Each Area Surveyed Based on School Size-401 to 600 Students

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	4.13	11.00	8.94	1.59
Fluency	4.00	11.00	8.80	1.64
Comprehension	4.75	11.00	9.20	1.37
Teacher Pedagogy	5.14	11.00	9.46	1.35

Schools with 401 to 600 children had means lower in each category examined in the survey when compared to the whole group sample. The principal responses to survey questions also resulted in the widest range of scores between minimum and maximum. This resulted in the highest standard deviation in categories of fluency, comprehension, and teacher pedagogy in the study when compared to all other school sizes, schools of affluence, schools of poverty, and the whole group sample. Each mean score in the category compared to the sample of the whole group is lower.

Survey responses were broken down in the four areas examined including three areas of literacy instruction and teacher pedagogy. In Table 13 below, the responses of principals from schools with 601 to 800 children are detailed. For minimum and maximum, the percentage levels in the survey from zero to 100% were converted to units from 1 to 11.

Table 13

Composite Scores in Each Area Surveyed Based on School Size-601 to 800 Students

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	5.50	11.00	9.26	1.26
Fluency	7.13	10.75	9.08	1.08
Comprehension	7.75	10.88	9.42	0.90
Teacher Pedagogy	7.14	11.00	9.81	1.00

The responses of principals from schools with 601 to 800 children show variation in the maximum scores. The maximum scores in fluency and comprehension were lower when compared to the sample of the whole group. For each of these two categories, the standard

deviation was lower in this segment of the study relative to the sample of the whole group. Each of the mean scores for the four areas being examined were slightly lower than the whole group sample. Finally, the minimum scores were higher for all four categories compared to the whole group sample.

Survey responses were broken down in the four areas examined including three areas of literacy instruction and teacher pedagogy. In Table 14 below, the responses of principals from schools with student populations greater than 800 students are detailed. For minimum and maximum, the percentage levels in the survey from zero to 100% were converted to units from 1 to 11.

Table 14

Composite Scores in Each Area Surveyed Based on School Size-Greater Than 800 Students

Literacy Area Surveyed	Minimum	Maximum	Mean	Standard Deviation
Vocabulary	7.75	11.00	9.52	1.42
Fluency	6.00	10.43	8.78	1.76
Comprehension	8.25	10.63	9.89	0.89
Teacher Pedagogy	8.00	9.83	9.13	0.70

The largest schools with more than 800 children had the most widely varied maximum scores of any sub-group examined or the whole group sample. The maximum scores in fluency, comprehension, and teacher pedagogy were the lowest of any school size studied and lower than schools of affluence, schools of poverty, and the whole group sample. Comparing the standard deviation to the whole group sample, both comprehension and teacher pedagogy were lower while vocabulary and fluency were higher.

Inferential Statistics

The ensuing section will review the inferential tests that were performed to draw conclusions regarding each of the null hypotheses. The first research question did not have a null hypothesis and was addressed with the use of descriptive statistics. Both of the remaining

null hypotheses were tested using multiple regression in order to determine if a statistically significant amount of variance in the IREAD-3 scores was explained by any of the predictor variables. A regression test was run, after splitting the file for each of the categories of affluence and poverty. Two separate regression tests were run to determine if the predictors, based on principal perception, of vocabulary, fluency, comprehension, and teacher pedagogy for primary teachers of literacy, explained a significant amount of the scores on the IREAD-3.

Null hypothesis 1. This study employed a multiple regression to examine the first null hypothesis and determine, in schools of affluence, if the composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers predicted a statistically significant proportion of the variance on the IREAD-3 pass rate. A multiple regression was the appropriate test to utilize because there was one criterion variable with four predictor variables. The dependent variable was the IREAD-3 passing rate percentage for each school of affluence. The independent variables were the composite scores for vocabulary, fluency, comprehension, and teacher pedagogy.

$H_0$1. The composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not explain a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of affluence. The assumption of independence of residuals was tested using the Durbin-Watson test. The Durbin-Watson test is a test that the residuals in a regression are independent (Montgomery, Peck, & Vining, 2006). The Durbin-Watson test gives a value ranging from zero to four. For there not to be a correlation between the residuals the result should be close to two. To be met as an assumption, the Durbin-Watson test looks for values near two (Montgomery et al., 2006). The assumption was met with a Durbin-Watson test equal to 1.71 as a result. Partial regression plots

were used to test for linearity (Gravetter & Wallnau, 2009). Each predictor variable demonstrated a linear relationship between itself and the criterion variable, therefore, this assumption was met.

A scatter plot was used to check for homoscedasticity to determine if all residuals are equal for all predicted values of the criterion (Tabachnick & Fidell, 2013). The assumption was met by having no evidence of residual spreading. Multicollinearity was tested using tolerance levels (Gravetter & Wallnau, 2009). This assumption was met for each predictor variable due to the fact that each tolerance level was above the .2 level. An examination of the standardized residuals determined no data points fell outside the typical pattern of points. Since no standardized residual fell outside of +1.5 or -1.5 standard deviations, no outliers were present and the assumption was met (Gravetter & Wallnau, 2009). The normality of residuals was tested using a Normal P-Plot to determine if the residuals were normally distributed (Gravetter & Wallnau, 2009). The residuals were aligned with the diagonal on the Normal P-Plot; the assumption was met. As explained in the results above, all of the assumptions were met in order to allow for the multiple regression to be used in this study.

A multiple linear regression analysis was conducted to examine the relationship between the IREAD-3 passing rate percentages and the predictor variables of vocabulary, fluency, comprehension, and teacher pedagogy. The inferential results yielded the following data output. The multiple correlation coefficient, or *R*, is the correlation between the predicted values and the observed values giving a strength of the predictors to the passing rate percentage on the IREAD-3 (Gravetter & Wallnau, 2009). The value of R = .333 in the result indicates a moderate strength of correlation. R^2, the coefficient of multiple determination, explains how much variance the predictor variables explain in the criterion variable (Gravetter & Wallnau, 2009). For the

criterion variable, 11.1% is explained by the linear combination of the predictor variables. The Adjusted R^2 is a more conservative estimate of the explained variance and takes into account the sample size and the number of predictors (Gravetter & Wallnau, 2009).

Virtually no variance was explained after the adjustment was made. The standard error of the estimate is a measure of the predictions accuracy made with a line of regression (Gravetter & Wallnau, 2009). The standard error of the estimate was 2.502 for schools of affluence.

A linear combination of variables does not explain a statistically significant amount of variance with the IREAD-3 passing rate percentages for schools of affluence, $F(4,22) = .69$, $p = .609$. Therefore, the null is retained.

Null hypothesis 2. This study employed a multiple regression to examine the second null hypothesis and determine, in schools of poverty, if the composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers predict a statistically significant proportion of the variance on the IREAD-3 pass rate. A multiple regression was the appropriate test to utilize because there was one dependent variable with four independent variables. The dependent variable was the IREAD-3 passing rate percentage for each school of poverty. The independent variables were vocabulary, fluency, comprehension, and teacher pedagogy.

$H_0$2. The second null hypothesis stated: The composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not explain a statistically significant proportion of the variance on the IREAD-3 pass rate percentage among schools of poverty. The assumption of independence of residuals was tested using the Durbin-Watson test. The Durbin-Watson test is a test that the residuals in a regression are independent (Montgomery et al., 2006). The Durbin-Watson test gives a value ranging from zero to four.

For there not to be a correlation between the residuals the result should be close to two. To be met as an assumption, the Durbin-Watson test looks for values near two (Montgomery et al., 2006). The assumption was met with a Durbin-Watson test equal to 2.19 as a result. Partial regression plots were used to test for linearity (Gravetter & Wallnau, 2009). Each predictor variable demonstrated a linear relationship between itself and the criterion variable, therefore, this assumption was met.

A scatter plot was used to check for homoscedasticity to determine if all residuals are equal for all predicted values of the criterion (Tabachnick & Fidell, 2013). The assumption was met by having no evidence of the residuals spreading. Multicollinearity was tested using tolerance levels (Gravetter & Wallnau, 2009). This assumption was met for each predictor variable due to the fact that each tolerance level was above the .2 level. An examination of the standardized residuals determined no data points fell outside the typical pattern of points. Since no standardized residual fell outside of +1.5 or -1.5 standard deviations, no outliers were present and the assumption was met (Gravetter & Wallnau, 2009). The normality of residuals was tested using a Normal P-Plot to determine if the residuals were normally distributed (Gravetter & Wallnau, 2009). The residuals were aligned with the diagonal on the Normal P-Plot; the assumption was met. As explained in the results above, all of the assumptions were met in order to allow for the multiple regression to be used in this study.

A multiple linear regression analysis was conducted to examine the relationship between the IREAD-3 passing rate percentages and the predictor variables of vocabulary, fluency, comprehension, and teacher pedagogy. The regression yielded the following data output. The multiple correlation coefficient, or *R*, is the correlation between the predicted values and the observed values giving a strength of the predictors to the passing rate percentage on the IREAD-

3 (Gravetter & Wallnau, 2009). The R = .193 in the result indicates a moderate strength of correlation. R^2, the coefficient of multiple determination, explains how much variance the predictor variables explain in the criterion variable (Gravetter & Wallnau, 2009). For the criterion variable, 3.7% is explained by the linear combination of the predictor variables. The Adjusted R^2 is a more conservative estimate of the explained variance and takes into account the sample size and the number of predictors (Gravetter & Wallnau, 2009).

Virtually no variance was explained after the adjustment was made. The standard error of the estimate is a measure of the predictions accuracy made with a line of regression (Gravetter & Wallnau, 2009). The standard error of the estimate = 2.191 for schools of affluence.

A linear combination of variables does not explain a statistically significant amount of variance with the IREAD-3 passing rate percentages for schools of poverty, $F(4,87) = .85$, $p = .50$. Therefore, the null is retained.

Qualitative Findings

The second phase of this sequential mixed method study was to further explore principal perceptions of literacy instruction in their building through an interview. The data from the quantitative study provided a basis for discussion to better understand the predictor variables of vocabulary, fluency, comprehension, and teacher pedagogy for success on the IREAD-3 in poverty schools. Three schools participated in the qualitative case study interviews.

Schools which participated in the study were determined in the following manner. The IDOE provided a list of all public elementary schools IREAD-3 passing percentage scores for the 2012, 2013, and 2014 test administrations and the free and reduced lunch program percentage rates. A three-year composite average was computed for each school. A simple regression was conducted to determine a predicted IREAD-3 score based on the free and reduced lunch program

percentage rate. Schools were then ranked from highest to lowest based on the residual between the predicted, based on poverty level, and the actual scores for IREAD. Schools in the top 100 were contacted after a random number generator found at Random.org was used.

Participants and their schools were replaced with pseudonyms and coded data to maintain confidentiality. The interviewees and schools are referred to with these pseudonyms throughout the research study. A description of the pseudonym assignment process follows.

It took several attempts to either reach the building administrator and/or to have them agree to participate in the study. The first school to agree to participate and complete the interview was assigned the name Elkin Elementary School. The building administrator was assigned the name Mr. Stout. The interview at Elkin Elementary also included a third grade teacher. He was assigned the name Mr. Tines for the study. Each of the succeeding schools to agree and complete an interview were then assigned Ike Elementary School and Wellpoint Elementary School consecutively. The building administrators were similarly assigned the names of Mrs. Watts and Mrs. Landry. Table 15 below identifies the principal, teacher, and corresponding school using assigned pseudonyms.

Table 15

Correspondence of Participants and School Pseudonyms

Participant	Position	School
Mr. Stout	Principal	Elkins Elementary School
Mr. Tines	Teacher	Elkins Elementary School
Mrs. Watts	Principal	Ike Elementary School
Mrs. Landry	Principal	Wellpoint Elementary School

The schools that participated in the study were all considered poverty schools based on the criteria of this study. Each school had a free and reduced lunch program percentage rate of 45% or higher. Table 16 below provides some descriptive factors of each participant school.

Table 16

Case Study Participant School Descriptions

School	Enrollment	Predominant Ethnic Group	Free/Reduced Rate	2012 – 2014 IREAD Average	Points Above Predicted
Elkin ES	449	87% Caucasian	72%	93.6%	10.85
Ike ES	423	79% Caucasian	66%	93.6%	9.34
Wellpoint ES	192	94% Caucasian	51%	96.1%	7.85

One common factor in each school was the fact that Caucasian students were the majority ethnic group represented. In each school, the next highest ethnic population was Hispanic followed by multiracial and then Asian students (IDOE: Compass, n.d.). The regression used to identify the top 100 schools had a maximum residual of 16.84 points above the predicted score for the IREAD-3. The lowest residual for any school was -37.61 below the predicted IREAD-3 score. The schools in the study were listed as number 20, 42, and 73 respectively in the top 100 out of 994 total schools that the regression was run on.

During the interview at Elkin Elementary School, a teacher was also present. Mr. Stout invited the teacher to assist in the interview process. The teacher was assigned the label Mr. Tines and responses were noted accordingly in the transcript of the interview. In Table 17, a description of each of the participants in the study is given.

Table 17

Case Study Participant Descriptions

Participant	School	Interview Type	Identifiers
Mr. Stout	Elkin ES	On-site	Mr. Stout was a Caucasian male in his late 30's. This was his first principal position and he was starting his second year.
Mr. Tines	Elkins ES	On-site	Mr. Tine was a Caucasian male in his late 40's or early 50's. He was a third grade teacher for the past seventeen years and worked in Elkin ES for twenty-three years as a classroom teacher. He has presented nationally at reading conventions and lead workshops for neighboring school systems.
Mrs. Watts	Ike ES	On-site	Mrs. Watts was a Caucasian female in her early 50's. She has twenty-eight years of teaching experience and has been the principal at Ike ES for nine years. Prior to that she was a school counselor at Ike ES.
Mrs. Landry	Wellpoint ES	Phone Interview	Mrs. Landry was a Caucasian female in her mid- to late 30's. She has been the principal at Wellpoint ES for four years. Prior to that she was a teacher in the same district for nine years.

In each of the interviews for this study I spoke directly with the participant. In the cases of Elkin Elementary School and Ike Elementary School, I was able to conduct the interview on-site. For Wellpoint Elementary School, the interview was conducted over the phone at the convenience of Mrs. Landry. Each interview consisted of the 29 interview questions found in Appendix E. The interviews lasted between 50 minutes to an hour. Audio recordings were made along with field notes which were taken during the interviews.

Themes

Once the interviews were completed, the audio recordings and field notes were transcribed by school. I read and reread the transcripts of the interviews looking for common words, phrases, and descriptions of activities to begin to develop themes. By reading through the transcripts, a general sense of the information was gathered and allowed for a reflection on its overall meaning (Creswell, 2009). A coding process was used on the data to begin to organize the material into sections of text with similar concepts. This was done by using various colored highlighters to color-code the information and data. Then I looked for common themes to expand and develop based on analysis of the data using information from Ryan and Bernard's (2003) techniques to theme identification. I reflected on potential themes or topics which would have meaningful implications for school leaders. Member checking was utilized in that themes were shared with the on-site participants to affirm the general themes. All participants affirmed the accuracy of the themes and no edit suggestions were proposed. From this work, emerged the following themes:

1. Teachers have time during the school day to meet together to collaborate, plan, and discuss literacy skill development of their children.

2. Schools promote and embrace parents and volunteers as essential components which are included in the learning process during the school day.
3. Teachers voluntarily spend time after school to tutor students on a school-wide basis.
4. Learning is intentionally broken down into small groups based on reading level or ability.
5. Schools have a support network in place and literacy professionals to assist classroom teachers in teaching children to learn to read based on the use of data.

Theme 1. Theme 1 was teachers having time during the school day to meet together to collaborate, plan, and discuss literacy skill development of their children. Teachers having the ability to talk with each other during the school day was an important component listed by each case study interviewee. There were two primary ways that the school day was organized to allow teachers to collaborate and talk. The first way was through the use of a common planning time. Mr. Tines stated that by having a common prep period, "Teachers meet together regularly," and were able to "collaborate daily to plan instruction and discuss curriculum." During the common planning time, teachers can set goals for their classes and students. This is a time the teachers can discuss individual student progress, develop needs of students, help one another, and share ideas for improving instruction. Mr. Tines stated that he and one of his teaching partners have worked together for seventeen years and are accustomed to using the time for communicating with one another about students and planning.

The second way Mrs. Watts and Mrs. Landry both stated that teachers could collaborate with each other was through the use of professional learning communities (PLCs). The use of PLC's was a time to speak with both grade level teaching partners and across grade levels. Mrs. Landry stated, "We have really spent a lot of time in our PLC's fine tuning and making sure that

we are on the same page as we go through." Both Ike Elementary School and Wellpoint Elementary School have 45 minutes to an hour each week which is spent in PLC time. Each principal leads the PLC time by planning a focus area for each meeting. Mrs. Watts takes some of the days for PLC's to review data in groups of K to 2 and 3 to 5. She stated about her school's data, "We will look at that collectively, where is it at in the curriculum, what kind of interventions do we need." The meetings have a vision of what the schools need to focus on with teachers meeting weekly to work on to achieve those needs. Mrs. Watts discussed the focus of "our PLC's are around literacies. We are hitting on those five components throughout."

A final aspect of collaboration which teachers could gather together was in the form of district meetings and district professional development. Ike Elementary School's principal outlined the fact that the district also works as a whole on areas such as looking at writing or literacy development for English language learners with all four district elementary schools. Mrs. Landry said her district has grade level meetings three times a year. In the meetings of the three elementary schools in the district, teachers share ideas about teaching and using technology to enhance learning.

Theme 2. As the Principal at Ike Elementary School elaborated, "We are looking at a different parent resource. If you look at all four of our elementary schools, we have the highest parent participation of any of the [district] elementaries." The second theme was each school promoting and embracing parents and volunteers to be involved in the learning process during the school day. One area which came to light in each interview was the amount of parent and outside volunteers that were utilized by the schools. Each school had a large contingent to come in and assist in the literacy development of children during the school day.

The parents and volunteers spent time with teachers prior to helping children. This time spent with teachers was in training to know how to properly implement the skills and areas to be reinforced for helping children, on their level, learn to read. At Elkin Elementary School, "The volunteers include parents and retirees from the community. Parents and retirees are shown or trained what to do on their stations by the teachers." At Wellpoint Elementary School, the principal gave a similar account,

> So, teachers usually will invite parents to come in and be in station time. Some do it once a week. Some do it and try to get it more often as well. But what they do is train the parents on a certain station they would want them to work at. Maybe it is just sharing a book or a station where they are reading and hearing that fluency. It might be a comprehension station, something like that.

Parents, retirees, community members were all part of the learning process in the schools, especially in stations. "Parents are part of the Thursday activity learning stations . . ." explained Mr. Tines.

The number of volunteers was impressive. Mrs. Watts gave a description of the number of volunteers and what some of the areas they assist in during the school day.

> One of the beautiful things we have too that I didn't mention yet is that we have 54 adult volunteers in this building. That doesn't include the firefighters and the high school peers. So those are 54 adults that come into Ike Elementary School and help with something. In first grade, we have an adult, not only the teacher works on their sight in groups, but also we have volunteers that help with sight words. So, we are continuously practicing on sight words. Predominately, at the first grade, if they are not getting it

> naturally through the instruction, then we are having support to come in and help with them. Not only the assistants but with adult volunteers, too.

Each school also had the typical parent involvement in learning activities. For example, at Elkin Elementary School, "On a daily basis, children have nightly reading logs in which they are to read at home for 20 minutes. This is done each night and then a parent is to sign off on the reading log." Each school also had parent night's in which parents were invited to learn about Title I, DIBELS testing, or state standardized testing such as the ISTEP and IREAD-3. Mrs. Landry described these nights as, "It is basically a preparation night to ease parent's minds on how that will be tested and administered . . ." and in a kindergarten parent night at her school they ". . . take a time chunk out of that to describe DIBELS and how that is administered and the importance of reading."

Mrs. Watts described her school as an open and accepting environment. Her school is a place where parents feel comfortable to attend after school or extracurricular events to support their children. Even though there is some diversity within the school, parents are able to get beyond prejudices and biases. She provided the following account:

> See on graduation night (fifth grade graduation), we do not even have enough chairs. It is a full house. People standing. It is like that for every event. It's like that for kindergarten sings. I think some of it is this rich culture that has grown up around here. Some of it is, even though there is diversity, there is a real acceptance of that. So people don't feel . . . I don't think our parents don't feel uncomfortable coming to a school event. I think they come to a school event and say, "That is Sally Joe's mom, and that's such and such." It doesn't matter if it is biracial or Hispanic or whatever. They show up. I think that is the

> beautiful thing about Ike Elementary School, too. Somehow there is this culture that it is ok to come to school. Whatever you look like it is ok.

Theme 3. The third theme was teachers voluntarily spending time after school to tutor students on a school-wide basis. Each principal and teacher interviewed stated that teachers at their school spent up to four days a week after school working with students for free. "We also offer after school tutoring that is free of charge . . ." declared Mrs. Watts. This was done on a purely voluntary basis according to each interviewee. The tutoring allowed teachers to work directly with children who needed a little extra help and guidance. After being asked about interventions offered to struggling readers, Mrs. Landry provided the following account:

> This is not mandatory at my school, but my teachers tutor after school. It is just . . . It blows my mind. My teachers offer free tutoring for kids after school. It is hard to find a time when I can meet a teacher after school because all of them are tutoring with kids. I did not set that up. They did that on their own.

At Elkin Elementary School, teachers provide tutoring after school four days a week in the spring. Their after school sessions last up to an hour and a half. Mr. Tines explained more about the tutoring sessions, "Students that have been identified as struggling are able to receive additional help from a teacher. The focus is on ISTEP and IREAD preparation for children." Parents are responsible for finding transportation or picking up their child from the tutoring sessions at each school.

Theme 4. Those interviewed also outlined the fourth theme of learning being intentionally broken down into small groups based on reading level or ability. This took different forms in each building but the basic premise of having students learn in small groups was done consistently throughout the school year. Students spent time learning and practicing

literacy skills in these small groups. Elkin Elementary School and Wellpoint Elementary School expounded on their stations in which small groups were utilized. Each school used small groups for some type of remediation and intervention services also.

The groups are based on ability levels in skills being worked on. As Mrs. Watts explained, "We do small group reading based on levels so we basically, have students that are struggling, your average group, and higher abilities." Mrs. Landry detailed a similar practice at her building, "Teachers, they have their intensive students, their strategic, and their on-level students. They meet with students based on that grouping during our stations or small group time." Skill development and remediation are worked on also, explained Mrs. Landry, "Like if a student is not getting his inference. Then they are pulling them and working with them in small groups." In each of the schools, assistance is provided by the use of specialists such as Title I and special education teachers. "The Title I teacher and assistants push into rooms to assist with reading skills and small groups," explained Mr. Tines. The time in small groups is spent "zoning in specific skills to prepare them," said Mrs. Landry.

An emphasis was placed on stations or activity learning centers at Elkin Elementary School and Wellpoint Elementary School. These went beyond the normal stations or literacy centers teachers use occasionally in a ninety minute reading block. Each school spends time working on the stations to maintain consistency, training volunteers to assist in the station work, and making sure they align to the curriculum which the ISTEP and IREAD-3 cover. At Elkin Elementary School, each Thursday is dedicated to activity learning stations for the day. Mr. Tines explained, "An entire day is reserved for the stations meaning that all day Thursday is a station day for active learning experiences." Teachers collaborate and plan a whole day for all students in the grade level to participate in throughout the entire school year. There are eight to

ten activity learning stations which last up to 20 minutes. Stations are comprised of half reading and half writing based each time. Technology such as Smart Boards and iPads are incorporated into the stations also. Teachers and volunteers staff the different stations during the day. Mr. Tines believed, "The reason the activity learning stations are so successful and the children like them is because they are hands on learning."

Wellpoint Elementary School uses stations for 30 minutes each day at all levels in the school from kindergarten through sixth grade. During these stations Mrs. Landry said, "We do hit hard on the different stages of reading." The school has spent time in their PLC's learning about research based stations and how they are to be set up. Mrs. Landry stated her school used stations because,

> Making sure our research, the research says that if we keep with our stations K to six and we are showing consistency. The students will show so much more growth throughout. That is what we have really worked on that through our PLCs with our stations and our tier time.

One important component in this school is the fact that the stations are set up and run the same way. Mrs. Landry acknowledged the reason, "if I walked into stations in kindergarten and then later in third grade, I would see the same management piece, so that students know the routine." Building the consistency in the structure and format of the stations allowed students to concentrate on learning the skill and not have to spend time learning a routine or procedure. The principal believed this to be a key aspect leading to growth in literacy skills for children in her building.

Theme 5. Theme 5 was schools having a support network in place and literacy professionals to assist classroom teachers in teaching children to learn to read based on the use of

data. Each school gave examples of using data to positively impact learning and teaching. At Wellpoint Elementary School, the principal explained that "every two weeks we analyze the data." The purpose of the meetings was to have ". . . those meetings bi-weekly with the teachers and the district literacy coach, and the Title I coach together. Just analyzing it, breaking down what areas need to be focused on, forming our small groups." The feeling at Ike Elementary School was that ". . . we are fortunate to have three really strong Title I teachers." The data was able to be shared with literacy professionals beyond the classroom teacher in all cases. For example, all three schools performed some type of formative assessment at least three times during the year. At Elkin Elementary School, "The testing is done at the beginning of the year, again in the middle, and at the end of the year. We use this data to inform instruction." Similarly, at Wellpoint Elementary School, "We use our beginning of the year, middle of year and end of the year. Then again provide interventions or make small groups based on [results]." The formative assessments, while different at each school, were still used as the basis for structuring groups in which teachers could work with children. Based on student performance, each child could then be provided additional services, remediation, or assistance.

Regular progress monitoring was also a common practice at each school interviewed. Phonics is tested and progress monitored using DIBELS or AIMSweb. As Mrs. Landry stated, ". . . we have tested DIBELS and progress monitored with that." While at Ike Elementary School, the progress monitoring is used to help guide instruction. Mrs. Watts stated, "If students don't perform at certain levels, then they are identified for interventions. And we build their interventions." In the same way, Wellpoint Elementary School used DIBELS to progress monitor to ". . . find weaknesses in reading skills. Then students are placed into groups based on need or ability."

Each school also had an extensive support network of professionals in the area of teaching reading to draw upon. For example, at Elkin Elementary School "The special education teachers also do the timed fluency reading." Schools had access to Title I teachers, special education teachers, and district literacy data coaches. Each of these were a resource to the classroom teacher for help in teaching literacy skills either for instructional ideas or by pushing into the classroom to work with small groups of students. In the case of Wellpoint Elementary School, the principal said of the district literacy data coach, "I work very closely with her [district literacy data coach] and my teachers have a great trust with her." The district literacy coach is able to "provide strategies and ways to be more effective."

The support personnel and data were also used to effectively manage and operate each school's response to instruction (RTI) program. At Elkin Elementary School, the Mr. Tines explained how their program works:

> About 10 to 12 children participate four times a week in the RTI program. This is based on being identified by grades, Acuity, and the timed fluency reading. The RTI program works with or meets with children four times a week for about 30 minutes. Now specials teachers meet and work with children one day a week in the RTI time.

The way the RTI programs are designed, they are intended to support the child and the classroom teacher to promote increased learning through specialized instruction. The communication between teachers is the key. As Mrs. Watts provided details, "There is a really good flow . . . A conduit between our student services adviser" and "a reading specialist like Dr. H. We are talking all the time about students . . . It is a natural conversation that goes on."

The support network each school had in place made a difference in helping children learn to read in the perception of each participant. The ability to use data to guide instruction and lead

conversations between specialists and classroom teachers was a key component to children developing reading skills. Literacy development was furthered due to these interactions and conversations.

Summary

The chapter discussed the quantitative descriptive and inferential statistics, as well as the qualitative findings. In the quantitative section, descriptive statistics were used to answer the first research question. Null hypothesis 1 stated that in schools of affluence, composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not predict a statistically significant proportion of the variance on the IREAD-3 pass rate. The first null hypothesis was accepted. Null hypothesis 2 stated that in schools of poverty, composite scores for vocabulary, fluency, comprehension, and classroom pedagogy of elementary primary literacy teachers do not predict a statistically significant proportion of the variance on the IREAD-3 pass rate. The second null hypothesis was also accepted.

In the qualitative portion of the study, three case studies were performed. The qualitative portion of the chapter explored principal perceptions of literacy growth in their buildings. By analyzing the transcripts of the interviews and coding them, five themes developed:

1. Teachers have time during the school day to meet together to collaborate, plan, and discuss literacy skill development of their children.
2. Schools promote and embrace parents and volunteers as essential components which are included in the learning process during the school day.
3. Teachers voluntarily spend time after school to tutor students on a school-wide basis.
4. Learning is intentionally broken down into small groups based on reading level or ability.

5. Schools have a support network in place and literacy professionals to assist classroom teachers in teaching children to learn to read based on the use of data.

Overall, the interviews in the qualitative section shed light on areas that individual schools were doing which lead to higher than predicted passing rates on the IREAD-3 assessments. The case study interviews allowed me to get a glimpse of the everyday workings of three elementary schools that have demonstrated prior success on the IREAD-3. Their practices lead to buildings in which literacy was a highly valued part of the overall learning environment.

CHAPTER 5

FINDINGS, IMPLICATIONS, AND FUTURE RESEARCH

This sequential, mixed method study examined the perceptions of public school elementary principals on literacy development in schools with high achieving IREAD-3 scores. More specifically, what did the outliers, or those schools with consistently high passing percentage rates on the IREAD-3 during the first three years the assessment was administered, do differently in the primary grades leading up to the test. Public elementary school leaders may be able to better understand from the study findings and conclusions how to impact literacy development in the primary grades leading up to the IREAD-3 assessment. District administrators in public schools may also gain greater insight regarding how to structure elementary school's literacy development activities and guide principals in making decisions which may result in producing children with better reading comprehension abilities. This may allow for a higher passing percentage rate on the IREAD-3 or similar assessment. Most importantly, building and district administrators may use the results from the interviews to improve school-wide methods for literacy development in the primary grades.

This study first surveyed principals in Indiana public elementary schools to determine if there was a statistically significant difference in the variance of the predictor variables of vocabulary, fluency, comprehension, and teacher pedagogy in explaining success on the IREAD-3 in both schools of affluence and poverty. Next, I visited three elementary schools which were

all outliers in IREAD-3 passing percentage rates during the first three years the assessment was given. Three principals and one teacher were interviewed to further examine what, if anything, their schools did to promote success on the IREAD-3. The discussion centered on what their schools did to promote literacy development in the primary grades from kindergarten through third. From the transcripts of the interviews, five themes emerged.

This chapter is divided into four main sections. The first section is a discussion of the findings of the data which were collected during research. This section will present an analysis of the results of the quantitative and qualitative research conducted. The next section provides connections to the research. The third section will present implications to educational leaders on the keys to continue to improve school-wide delivery of literacy skills to primary age child and the most beneficial ways to do so. The final section outlines areas and recommendations for future research to be conducted.

Discussion of Quantitative Findings

Research Question 1

"What is the current state of K-3 literacy instruction in public elementary schools in the state of Indiana relative to the foundational components of phonemic awareness, phonics, vocabulary, fluency, and comprehension?" This question was answered with the descriptive responses from the principal respondents on the survey. Of the 119 respondents to the survey, there were 27 (22.7%) principals from schools of affluence and 92 (77.3%) principals from schools of poverty. The schools were also broken down into size categories based on the number of total students. The 119 schools were broken down into 5 (4.2%) with less than 200 children, 44 (37%) had between 201 and 400 children, 43 (36.1%) had between 401 and 600 children, 21 (17.6%) were schools with 601 to 800 children, and 6 (5.0%) had more than 800 children.

The overall IREAD-3 passing percentage for all buildings included in the study ranged from 61.10% to 98.73%, with an average pass rate of 88.90%. The standard deviation was 7.46 for the whole group sample. Within the four component areas of literacy examined, pedagogy had the highest mean response rate of 9.7, meaning the scale ranged from 0% up to 100% by increments of 10. Therefore, 11 different levels existed. In this case pedagogy had the highest overall mean from principal responses. Pedagogy also had the highest minimum average of 5.1 from principals, meaning the scale ranged from 0% up to 100% by increments of 10. Therefore, 11 different levels existed. In this case, pedagogy had the highest minimum response from the 119 principal responses to questions in this area.

Principals indicated by responses to survey questions that instructional staff did not have a good working knowledge or grasp of how the brain works in literacy development. The left side of the brain is responsible for controlling reading comprehension. In the survey, the largest number of responses, 21 (17.6%) principals, indicated that 50% of their staff understood the fact that the left hemisphere played a role in controlling comprehension. Similarly, responses to the question about the right hemisphere scored very low. Examination of the whole group sample for fluency concepts of interpretation by the right hemisphere, 26 (21.8%) principals indicated that only 50% of their teachers knew or understood this fact.

Fluency concepts in the whole group stood out as a whole. In several areas, principals responded that their teachers did not all understand a concept. The results of 37 (31.1%) principals indicated that less than 50% of their teaching staff regularly attended professional development activities which included fluency. This included 7 (5.9%) principals that responded that no teachers in their buildings received regular professional development in the area of fluency. Finally, understanding that teaching fluency requires teachers to understand they must

teach children to simultaneously determine what the letters being read represent and, at the same time, construct meaning had mixed responses. Twenty-five (21.0%) principals marked that 80% of their teachers understood this concept. More telling was that 50 (42.0%) principals responded at the 80% or lower level for this question.

In teaching pedagogy, 53 (43.6%) principals stated that 80% or less of their teachers include phonics instruction on a regular basis. Inclusion of parents was also worth noting. Although the largest response, 29 (24.4%) principals, was at the 100% level, the second largest category was 80% with 26 (21.8%) principals. More telling was the fact that the overall cumulative percentage rate for 80% or less teachers included parents in the teaching of reading by 77 (64.7) principals.

Research Question 2

"Do vocabulary, fluency, comprehension and classroom pedagogy composite scores for elementary primary literacy teachers explain a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of affluence?" Examining the affluent schools, with poverty rates ranging from zero to 35%, the differences from the whole group sample are evident with higher minimum IREAD-3 passing rate percentage of 89.6%, higher mean average at 94.2%, and a lower standard deviation of 2.44. The 27 schools rated as affluent had scores more tightly bunched together causing the lower standard deviation. The mean of all tested components of literacy, each had a lower average, as reported by principals, than schools of poverty. The examined components of vocabulary (9.28), fluency (9.02), comprehension (9.30), and pedagogy (9.56) all had composite means which were lower. As compared to the whole group sample, each of these had lower mean composite scores.

Principals in schools of affluence rated only one examined literacy area with a higher minimum composite average as compared to schools of poverty. The minimum composite average for comprehension was 5.29 for schools of affluence compared to 4.75 for schools of poverty. This was also the only category which was higher than the whole group sample.

In evaluation of the null hypothesis using a multiple linear regression analysis, my study found no statistical significance. In other words, none of the literacy components of teaching vocabulary, fluency, comprehension, or teacher pedagogy were indicators of success on the IREAD-3 assessment. The linear combination of variables did not explain a statistically significant amount of variance with the IREAD-3 passing rate percentages for schools of affluence, $F(4,22) = .69$, $p = .609$. Therefore, the null was retained.

Research Question 3

"Do vocabulary, fluency, comprehension and classroom pedagogy composite scores for elementary primary literacy teachers explain a statistically significant proportion of the variance on the IREAD-3 pass rate among schools of poverty?" Schools of poverty had a wider variation in passing rates for the IREAD-3 with a spread from highest to lowest score of 36.77 points. This resulted in a higher standard deviation (7.73) for schools in this category. The overall mean score (87.35) was also lower.

The composite mean scores for the categories of vocabulary, fluency, comprehension, and teacher pedagogy were all higher in comparison to schools of affluence. The 92 principals reported responses reveled that vocabulary (9.41), fluency (9.16), comprehension (9.53), and teacher pedagogy (9.77) were all higher than the scores as reported by principals of affluence. The individual standard deviations of these composite score categories were also lower for

schools of affluence. Vocabulary (1.31), fluency (1.32), comprehension (1.16), and pedagogy (1.04) were all lower than schools of affluence.

In evaluation of the null hypothesis using a multiple linear regression analysis, my study found no statistical significance. In other words, none of the literacy components of teaching vocabulary, fluency, comprehension, or teacher pedagogy were indicators of success on the IREAD-3 assessment. The linear combination of variables did not explain a statistically significant amount of variance with the IREAD-3 passing rate percentages for schools of affluence, $F(4,87) = .85$, $p = .50$. Therefore, the null was retained.

Discussion of Qualitative Findings

Research Questions

1. What are the current early-literacy foundational reading skills taught which contributed to high achieving scores on the IREAD-3 for the past three years in high poverty schools?
2. How does high reading achievement occur in high poverty schools?
3. What do building level principals in high poverty elementary schools with high-achieving IREAD-3 scores cite as contributors to an effective early-literacy reading program?

The research questions were addressed through interviews with three building level principals and a classroom teacher. During process of reading and studying the transcripts of the interviews, common topics with specific subjects became apparent. These were then analyzed through a coding procedure. I approached the case study interview portion of this study as Folkestad (2008) explained, “the analysis phase in itself is a continuous process, and that we cannot easily distinguish the collection, reduction and analysis phases from each other” (p. 4). In other words, I did not a see each step of the theme development as independent, but rather each

contributing and building upon each other. The data analysis and qualitative theme development "did not occur in a vacuum" (Erlandson, Harris, Skipper, & Allen. 1993, p. 113).

The following five themes were developed after a review of the discussion transcripts and field notes from the three different schools that I was able to conduct interviews with:

1. Teachers have time during the school day to meet together to collaborate, plan, and discuss literacy skill development of their children.
2. Schools promote and embrace parents and volunteers as essential components which are included in the learning process during the school day.
3. Teachers voluntarily spend time after school to tutor students on a school-wide basis.
4. Learning is intentionally broken down into small groups based on reading level or ability.
5. Schools have a support network in place and literacy professionals to assist classroom teachers in teaching children to learn to read based on the use of data.

To confirm the credibility of my findings, I sent the five themes to all of the case study participants. Each person received an email with a copy of the themes and the qualitative section from Chapter 4. They were asked to provide comments, corrections, or any feedback about the findings as they were presented. Table 18 below details the feedback received from the member-checking process.

Table 18

Member-Checking Comments

Participant	Comments
Mr. Tines	Sorry for not getting back with you! Everything looks great. Good luck with your project.
Mrs. Watts	Thanks you for sharing. I will take some time to review and get back with you, if I have additional thoughts. I am glad that your dissertation is going well.
Mrs. Landry	Thank you very much for sending me the study update. I believe that it sounds very accurate to what we discussed during the interview. You have really put a great deal of work into the study. Thank you!!

Participants commented during each of the case study interviews about the importance of time teachers were able to spend with each other. The first theme in which schools were able to provide teachers the time to meet together to discuss curriculum, individual student progress, literacy skill development and collaborate with one another allowed for critical conversations to be communicated across the school. This was done in several fashions. A common planning period was evident in the schools and teachers were expected to use this time to work together with one another. Principals also used the common planning time to meet with grade levels to discuss grade level progress and individual children. Another means to allow conversations was in a dedicated professional learning community time. This gave teachers the time to meet in groups to review data, undergo professional development, and meet with specialists such as Title I teachers, literacy coaches, and special education teachers.

The second theme which came to light was how schools promoted and embraced parents and volunteers in their buildings each day. What was most significant was how the parents and volunteers were thought of as essential elements of the learning process. Each school went out

of their way to work with each of these groups. Parents and volunteers were trained by teachers for various small groups or literacy stations. The training included how to read to children, what to listen for, and the manner in which the school wanted the interaction to be a positive learning experience for the child. Most schools have parents and some volunteers, but these schools made it a point to be very focused in their approaches to using people willing to come into the building to work with their children. It was this commitment to finding large groups of people willing to offer volunteer time to help a child learn and then coaching the volunteers in the best practices of interactions which set these schools apart.

Another reason which the participants stated that helped make their schools so successful was the amount of time teachers spent outside of the regular school day helping students to learn and tutoring struggling children. This time spent helping students beyond the normal school day developed into the third theme. In each school, teachers commonly spent an hour or more after school helping children with no pay or stipends received for their efforts. The time was spent with students who had been identified as needing additional time learning literacy or other skills. It was a universal dedication to see children grow and continue to learn which was evident in each of the interviews. Mrs. Landry noted in our conversation that she often could not meet with teachers in her building after school because they were all working with children in tutoring sessions.

The next theme which came to light over the course of interviewing building leaders was how learning was intentionally broken down into small groups based on a child's reading level or ability. Each school did this in slightly differing manners, but literacy stations and small group learning was emphasized at each building. The key was that learning was to be done in groups of children based upon their ability. One way that each school also did this was to group

students based upon a skill they lacked or were considered low in. These groups then taught with the idea to develop the skill or remediate the weakness. Teachers would be able to trade groups and mix students from different classes or, in some cases, different grade levels to provide children with the opportunity to learn the desired skill at the correct ability level. This theme corresponded with the first theme of teachers and staff having the time and capacity to collaborate with each other.

In the course of the interviews with participants it became clear that each school used different formative assessments and had differing ways of gathering data about the children which they served. The manner in which they supported the classroom teacher was similar. The final theme developed from the interviews was the support network each school had in place to assist the classroom teacher. This included literacy professionals such as a data coach, district literacy coach, Title I staff, and special education teachers. Each of these different schools had multiple literacy professionals in place to meet with teachers. The purpose was to help children learn to read and develop literacy skills based on the data that was available within their school. Strategies were discussed and methods to reinforce or remediate deficit areas were fostered. The premise was to provide additional support for the classroom teacher. Support could also include additional assistance in the classroom from the various literacy professionals such as pushing in to work with a specific group of children on identified areas of need.

In reviewing the quantitative and qualitative portions of the study, I found that it was not one specific area of teaching such as fluency that mattered the most. It was the development by the school of an attitude of being a true learning center for all children. Barber and Mourshed (2007) identified three critical components in highly successful schools from all over the globe. They found that each school sought to find the best teachers, developed those teachers into

effective instructors, and providing a school in which the instruction delivered is the best possible for every student. In each of the schools interviewed for the qualitative portion of the study, it was evident they tried to achieve these three goals. Each principal spoke to having a good, caring staff. They sought to provide leadership and professional development such that each teacher and staff member could improve their instructional capabilities. All three schools valued every child in their building and worked to improve learning for all children. This piece did not come out in the quantitative survey, but through discussions of what makes the schools I visited special and different from other schools.

Connection of the Findings to the Literature

The mixed method design of the study had the intent to take the findings of the quantitative research and use the qualitative portion to dig deeper. In a way this occurred, but not as originally expected when the study began. I thought a connection to one of the four, or even all four, components of teaching reading in the primary grades would be discovered in the quantitative survey given to building principals. The survey found no statistical significance between IREAD-3 passing percentages and the literacy components of vocabulary, fluency, comprehension and teaching pedagogy. A potential rationale for this finding is due to the possibility that there are so many factors which comprise the ability to read which extend beyond the school. Exposure to reading at home, experiences growing up, and socioeconomic levels all play a part of a child's literacy development (Torgesen, 2004). Simply teaching vocabulary, fluency, comprehension, or using good pedagogy will not individually be responsible for predicting the IREAD-3 passing percentage rates in a school.

Each school in the state of Indiana should teach a form of literacy instruction which follows a path through the grades from kindergarten through third as prescribed by state

standards. This is supported by Chall's (1996) observation that reading development occurs over time in stages and a sequence. No one attribute is responsible for a child learning to read, but it is a process which occurs over time. This process of teaching reading was similar across the schools in the study due to the following of Indiana teaching standards for reading instruction.

What the qualitative case study interviews revealed were five themes that each successful school valued and that potentially set them apart from others in teaching literacy. The literature research which I performed indicated several areas that were key components to the teaching of literacy to primary school-aged children were followed in these high achieving schools. These five themes were part of what may be termed the best practices in teaching literacy identified by the Illinois Right to Read Initiative (2002). Consistent with what Coburn (2003) revealed, the depth and degree at which these three schools implemented these five themes set them apart from the other schools.

Several areas of the literature review were reinforced during the research phase. For example, in response to the qualitative question, "How many teachers utilize round robin reading as a practice?", each case study participant responded with an answer which indicated they understood that this type of instructional method was not considered a best practice. This confirms Rasinski's (2010) statement in *The Fluent Reader* identifying round robin reading as "not good instruction practice" (p. 21).

All respondents in the quantitative survey supported the National Reading Panel Report that came to the conclusion there were five critical areas to concentrate upon in teaching reading: Phonemic awareness, phonics, vocabulary, fluency, and comprehension (NICHD, 2000). For my research, I focused on vocabulary, fluency, and comprehension as keys to success in literacy development in passing the IREAD-3. The quantitative survey responses, for both affluent and

poverty schools, supported the fact that schools emphasized these components in the classroom as part of the curriculum outlining literacy instruction. The fourth component of teacher pedagogy included in this study was also part of both sections of the study. Affirming the work of Roskos et al. (2003), the research indicated more research-based methods are being implemented in schools. Teacher pedagogy is a key component in the literacy development of children in the primary grades, but does constitute a greater statistically significant amount than does the components of vocabulary, fluency, and comprehension.

Torgesen, Houston, Rissman, and Kosanovich (2007) wrote a guide for principals entitled *Teaching All Students to Read in Elementary School*, in which the authors outlined the critical elements of an effective reading program. These critical elements parallel four of the five themes which were developed in the course of the interviews with principals. The themes which the Torgesen et al. study addressed were:

1. Teachers have time during the school day to meet together to collaborate, plan, and discuss literacy skill development of their children.
2. Teachers voluntarily spend time after school to tutor students on a school-wide basis.
3. Learning is intentionally broken down into small groups based on reading level or ability.
4. Schools have a support network in place and literacy professionals to assist classroom teachers in teaching children to learn to read based on the use of data.

Torgesen et al. (2007) outlined the following areas as important criteria to be addressed. The classroom instruction should be high quality with follow-up using differentiated small group instruction based on student needs. The teacher should use student data to inform instruction and to properly allocate the school's instructional resources. There needs to be decision-making

meetings based on the ability to use formative assessments to guide these decisions. Schools should have resources for struggling readers such as intervention specialists. Teachers need to be provided excellent, ongoing, professional development. Finally, principals must know what is going on in their buildings and do walk-throughs in each classroom. All of these criteria were met by the schools participating in the qualitative portion of the research study. Each of these areas paralleled the four themes listed above which were developed during the qualitative interviews. It is interesting to note how closely the areas Torgesen et al. identified and how each school met those particular areas.

The final theme to be addressed was parental involvement. Each school involved parents and volunteers in the school day to assist in the teaching of reading. The Partnership for Reading (2010) stated that parental involvement can support children as they become readers. It is also important to note that Indiana House Enrolled Act 1367 requires parent notification of a child's reading difficulty, remediation efforts by the school, and failure to pass the IREAD-3 (Rose & Schimke, 2012).

Implications

The results of this study have implications for Indiana educators including classroom teachers, building level administrators, and district level administrators. "The most important goal of reading instruction in elementary school is to help students acquire the skills and knowledge they need to read grade-level text fluently and with good comprehension" (Torgesen et al., 2007, p. 1). The goal of this research was to begin the conversation of what makes children successful on the IREAD-3 assessment. There has been no research done on what successful schools do differently to attain a high passing percentage rate on the IREAD-3. It is not a case of preparing students for an examination, but rather the long-term building process

needed to teach a child how to read effectively at a third grade level. As Roskos et al. (2003) have stated, the need to distribute the knowledge already known about how to teach reading is great, but the need to act on this knowledge is even greater. This is the purpose of this paper, to continue the discussion into what makes an outstanding school stand out from the ordinary school in teaching reading so that they will have high-achieving IREAD-3 scores.

Current Teachers

Elementary teachers in the state of Indiana have several obstacles to overcome in the teaching of literacy in primary grades. Part of their problem is due to the changes in instruction which have developed in recent years. Teaching has evolved to move away from a silent classroom with straight rows of desks. Children now learn in small groups which may change based on the activity or from the results of a formative assessment. Instruction is driven by having children take simple assessments to evaluate the need for remediation. Other best practices include reteaching in small groups, tracking data, and active learning. Additionally, more senior teachers were typically not instructed in these newer methods and in many cases have not had access to professional development to update their instructional strategies. As educators have deliberated and discussed how best to teach reading to children, there have been considerable gains in the concepts, components, and content for early literacy instruction (Rayner et al., 2002; Roskos et al., 2003). Collaborative efforts, sharing, implementing small groups, and having support services are all newer concepts which may be difficult for senior teachers to adjust to and utilize in the absence of comprehensive professional development. By contrast, newer teachers to the profession have been taught in these instructional practices during their pre-service programs and are more adept at incorporating them into their daily instructional practices.

The practices identified in this study will be difficult for any teacher, either new or veteran, to fully implement on their own. They will need the support of their building administrator to fully implement the findings of this research, especially those concepts resulting from the five themes developed in the qualitative section of this study. Teachers will be able to implement some specific strategies within their classroom which were identified. "Teachers who feel encouraged and comfortable with [principal] support will [maintain] a positive climate of learning" (Richards, 2007, p. 50).

Teachers will need to be supported through the use of professional development activities. Each school in the case study portion in the qualitative section provided professional development which was continuous and based on learning about using data to inform instruction, best teaching practices, and using research-based remediation activities. Teachers need to receive more than a one-time *shot* of professional development in an area. It is more important to continue to nurture the knowledge and growth in these important instructional areas by providing teachers with multiple learning experiences. They need the chance to try new activities and then return for further discussion to expand their ability and knowledge in these areas. Best practices in classroom instruction, utilizing small group instruction, collaboration, and using data to guide instruction are all topics which should be addressed by ongoing professional development.

As an individual educator, it is important to know the research on literacy instruction and how to best implement it in the classroom (Roskos et al., 2003). Knowing the best practices and how to implement them allows the classroom teacher to begin improving literacy instruction on the classroom level. Individual classroom teachers can collaborate with grade level partners or other teachers in the same building. This collaboration may take the form of meeting with one

another or as a group during prep time, before school, or after school. Teachers may also use data that they collect in their classroom. Data may be simple things such as running records for literacy and short five question assessments. This data may then be used to divide the class into various groups for remediation, re-teaching, or extending instruction for all children. Explicit and direct instruction provided in a flexible manner, such as whole group then reinforced with small group instruction, is a key to building successful literacy programs that any classroom teacher can initiate on their own (Miller, 2013; Schickedanz, 2003).

Current Building Administrators

The group with the greatest potential impact on improving literacy education is that of building level administrators. A principal has the power to enact change on a building level. "The goal of leadership activities in this area [effective classroom instruction] is to support high quality instruction in all classrooms at each grade level" (Torgesen et al., 2007, p. 11). Building principals' ability to understand the importance of the different themes developed and the leadership capabilities to employ these on a building level are keys to successful literacy development on the classroom level.

Through the creation of daily scheduling, such as reading block times, specials of art, music, physical education, and common prep periods, a building principal can set the stage for collaborative efforts to be utilized within his or her building. The findings in the qualitative portion of the study indicate that there needs to be an intentional effort made to allow teachers the time to work together. This included common planning times, professional learning communities, and the principal meeting with grade levels to discuss topics including data, individual student progress, and teaching practices. Teachers were able to use this time to work together to create better instructional practices. The principals that participated in this study

stated that teachers in their buildings were able to discuss student data and progress, create small groups sharing children from various classrooms, and collaborate on literacy stations and lesson planning.

Principals are also the educational leaders in their buildings. The ability to determine what is important and focused on during professional development at the building level is also a key. "Our profession has never had greater clarity and consensus on what schools must do to ensure that all students learn" (Buffum, Mattos, & Weber, 2012, p. 1). In the case study interviews, each participant listed professional development in areas such as best practices, utilizing small group instruction, collaboration, and using data to guide instruction.

Teachers need to know the strengths and weaknesses of their students in order to provide the best instruction possible; they must know the reading levels at which children are reading. In order to do this, teachers need to track student progress to determine whether their instruction is having a positive impact (Rasinski, 2010, p. 181). Data is the key to guiding instruction. Formative assessments taken several times during the year for all students along with progress monitoring of children who are not at grade level are two distinct and important ways data should be utilized by teachers. "Teachers in the more effective school conduct assessment of their students' progress at regular intervals" (Postlethwaite & Ross, 1992, p. 53).

Finally, principals have the power to create an inviting environment in their building. Making parents and volunteers feel welcome and a vital part of the learning environment is a key component to developing a successful school. Having a proscribed method, with training by teachers, to use parents and volunteers during the day provides more hands to help a child learn to read. A focused utilization of outside helpers allows more individualized learning experiences for children. This in turn will provide more opportunities to read and learn the literacy skills

needed to be an effective, on grade-level reader. A simple way to use volunteers and parents is in literacy stations. It is not just having parents and volunteers in the building which matters most, but the degree and depth at which they are used to support instruction is what set the schools in the qualitative study apart.

Current District Administrators

At the upper levels of administration, several areas from this study may be supported to improve literacy instruction in individual classrooms. District leaders need to know what makes successful reading instruction beyond the mandated curriculum. It is the knowledge of what are important components of how to teach reading, using data, professional development, and providing the supporting positions which district administrators need to be aware of for improved instruction.

District administrators have the ability to provide the financial resources to support the elementary principal. For example, to support professional development activities, the district level administrator can outline what direction to take and provide the resources to the building level administrator. Having professional development activities in areas such as best practices in literacy instruction, using data to guide instruction, response to instruction, and utilizing small group or literacy stations were all given as areas that could be employed. Schools in this study stated they had focused professional development sessions lead by the building principal in these areas. The district level administrator will be able to make sure the building principal has the resources to provide these professional development activities and the authority to make sure it happens. If need be, professional development for building level administrators may be provided by the district administration.

The district curriculum is developed with teacher support and input under the guidance of the building principal or district administrator. Ensuring that the five components of literacy, phonemic awareness, phonics, vocabulary, fluency, and comprehension, are included and taught in the proper sequence is important. Using research to guide the methods of teaching reading and the specific, sequential components of instruction is a process that the district administrator may have influence over. Chall (1996) stated reading is a skill not easily learned and is a process of development over time. Roskos et al. (2003) documented the importance to distribute the knowledge of researched based literacy instruction and act on it at the classroom level. These are areas the district administrator has the ability to positively influence.

Finally, each school in the study listed having the ability to use supporting personnel such as literacy coaches, data coaches, instructional aides, Title I and special education teachers or aides. These supporting positions are keys to collaboration, disaggregating data, and improving learning opportunities for children. As Rasinski (2010) stated, teachers need to know all about their students, including their reading levels, and must be tracking student progress to guide instruction. District support for maintaining or creating these positions is important.

Future Research Recommendations

Using the results of the research conducted on schools in this study with high-achieving IREAD-3 passing percentages, recommendations are directed towards further exploration of school leaders, building level practices, and comparison of different school types based on location and ethnicity of the student population.

School Differences

In exploring the relationship between IREAD-3 scores and what the schools that achieved at a high level did differently, the qualitative portion of the study focused on schools that had a

high level of poverty and performed well on the first three IREAD-3 assessments. A regression was performed which ranked schools based on expected IREAD-3 composite scores from 2012, 2013, and 2014 based on poverty level found in their free and reduced lunch program rate versus their actual composite IREAD-3 scores from 2012, 2013, and 2014. Three schools were interviewed from the top 100 performers out of a possible 994. A comparison of schools which performed at their expected level and those which performed above and below expected level would be valuable for future consideration. Determining what constitutes above average, average, and below average needs to be done. Interviewing principals in each of the categories for comparison would be valuable to determine if outliers, either above or below, have significantly different practices.

To further evaluate the results of this study, additional research should be directed at schools with various ethnic compositions. All three schools which participated in the qualitative study were primarily composed of students which were Caucasian. Although diversity did exist in the schools, it would be valuable for future study to interview schools with differing ethic compositions. It would be especially valuable to interview principals from schools in which the student population is not composed primarily of Caucasian children. This leads to another area in which needs to be addressed for further comparison study. Schools could also be divided into three different types based on location. A comparison study could be completed based on whether a school is considered urban, suburban, or rural. The schools in the qualitative portion of the study fell into the suburban and rural categories. Further research needs to be completed to determine if schools in various settings follow the same patterns. In all areas, a greater number of participants for the case study interviews across schools with greater ethnic diversity

and from a wider range of location types would present a clearer picture of what makes the difference of high-achieving IREAD-3 schools.

Poverty and Affluent School Differences

Tableman and Herron (2004) stated that educating children of poverty has become a primary issue for politicians, schools, and communities. In the quantitative survey, a difference in the responses, between principals from schools of affluence and poverty, arose in the mean composite average for each of the areas in vocabulary, fluency, comprehension, and teacher pedagogy. Principals from schools of poverty all had mean composite responses which were higher than principals from schools of affluence. This condition held for all four areas explored in the survey. The results of this need to be further investigated to determine if principals from schools of poverty have more researched-based teaching occurring in their schools. Do these principals understand more about research-based teaching practices? More explanation or study could be undertaken to determine if the responses on the quantitative survey were due to the need, as Moats and Foorman (2008) asserted must be done, to prevent children of poverty from falling behind by using research-based practices. Furthermore, a study to explore whether high-achieving IREAD-3 schools have a literacy program with focused, supplementary interventions combined with quality research-based classroom instruction, as Torgesen (2004) claimed is present, should be considered.

Teacher Knowledge of Brain Processes

On the quantitative survey, two questions which elicited the lowest response rates by principals had to do with how the brain functions in learning to read. The left hemisphere controls comprehension skills while the right side maintains fluency functions by helping interpret intonation and expression of words as they are read (Zull, 2002). Knowledge of brain

processes and how this may help improve a child's literacy development is a potential area for further research.

Parental and Volunteer Involvement

Each of the participants in the qualitative portion of the mixed method study, responded about having parents and volunteers in large numbers assisting with various tasks during the school day. The school leaders described how they or their staff spent time training parents and volunteers to work with students in literacy stations. In the quantitative survey, the inclusion of parents in the teaching of reading by the regular classroom teacher had results that were nearly split. Although 29 (24.4%) principals responded that 100% of their teachers included parents in the teaching of reading, 26 (21.8%) principals responded that only 80% of their teachers included parents. This follows Meisels (2006) call for a need for better research into parent involvement in the educational process. Further study could examine the relationship between schools with higher rates of focused volunteer and parent involvement resulting in higher scores on standardized assessments such as the IREAD-3 or even having higher reading levels based on formative assessments.

Professional Learning Communities versus No Professional Learning Communities

"There are simple, proven, affordable structures that exist right now and could have a dramatic, widespread impact on schools and achievement-in virtually any school. An astonishing level of agreement has emerged on this point" (Schmoker, 2004, p. 424). One area in the quantitative study that received mixed results was the question on the percentage of teachers engaged in professional development in the areas of vocabulary, fluency, and comprehension. Although the responses by principals to comprehension indicated substantial professional development occurred in this component of literacy development, the other two

factors, vocabulary and fluency, received mixed results. Nearly one-third of principals indicated that 50% or fewer of their teachers engaged in professional development activities covering either vocabulary or fluency development. Given that these components form the basis for comprehension (Rasinski, 2010; Whipple, 1925), a further examination should be undertaken of the various forms of professional development topics related to utilizing the five components of literacy development rather than just comprehension skills.

A clear result of the qualitative study was the use of PLCs and the focus on teacher collaboration. Principals interviewed felt they are the educational leaders in their buildings. Each made sure teachers had the opportunity to work continue to learn about best practices, how to use data to guide instruction, and implement literacy stations in their classrooms. This was done as part of a PLC and professional development practices in each school or district. We must explore the use of PLCs that are focused on student growth through teacher professional development in these areas. A comparison of achievement by schools which implement some form of PLCs and those that do not is needed to guide continued literacy development.

Summary

Teaching children to read will always be a valuable part of an elementary school. Creating a successful reading program takes time, energy, and knowledge of research practices. For a principal wanting to improve the literacy instruction in their building Torgesen et al. (2007) explained, “The best advice is to examine the current situation in your school . . . identify the things you are already doing well, and begin developing a plan to systematically increase your effectiveness in areas that need additional attention” (p. 29). Having a high-achieving score on a standardized test such as the IREAD-3 is possible if a solid foundation in literacy instruction is

established. Schools which have been successful in the past have worked hard at teaching all children to read at or above grade level and employing every available method possible.

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APPENDIX A: QUANTITATIVE SURVEY SENT TO INDIANA PUBLIC ELEMENTARY SCHOOL PRINCIPALS

Elementary Schools with High-Achieving IREAD-3 Scores:
What They Do Differently

This survey will take 10-15 minutes to complete. It is divided into two sections. The first section contains descriptive questions regarding your experience and your elementary school. The second section contains questions regarding the teaching of reading in the primary grades, third grade and below, related to building a child's reading ability in order to be successful on the IREAD-3. The second section will ask you to describe the percentages of your staff members who perform various literacy teaching functions.

Section I: Descriptive Information

1. How many years have you been a principal at your present school?

   _____ Less than 2 full years [if selected, survey is complete]
   _____ 3 or more years

2. What is the free and reduced lunch program percentage rate of your school?

   _____ 0 - 35%
   _____ 36% - 44 % [if selected, survey is complete]
   _____ 45% - 100%

3. Does your elementary school include third grade and at least one or more lower primary grades?

   _____Yes
   _____ No
   [Yes must be selected or the survey is complete]

4. How many students attend your school?

_____ Less than 200
_____ 201 – 400
_____ 401 – 600
_____ 601 – 800
_____ 800+

5. Four Digit Indiana School Number (needed to find and calculate IREAD-3 scores):

_____
[Must have 4-digit code]

Section II: Teaching Reading in Primary Grades

In this section you will have a series of questions related to teaching reading. Please answer with the percentage of your **primary level teachers** who exhibit the quality or teaching attribute described at a *high level*. For the purpose of this study, primary level teachers are all teachers, including the regular classroom teacher, specials such as art, music, and PE, Title I, and special education who teach children between kindergarten and third grade. The scale will range from 0% up to 100% by increments of 10. For example, if half of the teachers do an action described at a *high level*, then the appropriate response will be 50%.

Please answer both questions 6 and 7 using the following statement:

What percentage of your teachers use the following types of literacy or reading curriculum?

	0%	**10%**	**20%**	**30%**	**40%**	**50%**	**60%**	**70%**	**80%**	**90%**	**100%**
6.Whole Language											
7. Phonics											

8. Teachers increase a child's vocabulary by intentionally creating multiple ways for the child to be repeatedly exposed to new words.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

9. Teachers work on student's word recognition and knowing the meaning of words to build towards better comprehension?

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

For questions 10 through 12:

What percentage of your teachers include instruction of literacy or reading which includes building…

	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10. Vocabulary											
11. Fluency											
12. Comprehension											

For questions 13 through 15:

What percentage of your teachers regularly engage in professional development activities which include…

	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
13. Vocabulary											
14. Fluency											
15. Comprehension											

16. What percentage of your teachers regularly engage in collaborative activities, either across grade levels or within grade levels, discussing the art of teaching reading or literacy instruction?

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

17. What percentage of primary level teachers use word walls?

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

18. Teachers understand that their response to students while reading may influence reading development.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

19. Teachers discuss ways to improve reading comprehension with each other.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

20. Teachers believe the skill of comprehension can be taught and learned at a high level by all children.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

21. Teaching fluency requires teachers to understand they must teach children to simultaneously determine what the letters being read represent and, at the same time, construct meaning.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

22. Teachers understand the left hemisphere of the brain helps control reading comprehension.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

23. Teachers use an indirect approach to build vocabulary. An example of an indirect or informal approach includes hearing new words used consciously by teachers in regular speech or in a book being read out loud.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

24. Teachers understand the right hemisphere of the brain helps interpret meaning from intonation, inflexion, and rhythm.

0%	10%	20%		30%	40%	50%	60%	70%	80%	90%	100%

25. Children are taught various skills and strategies to be able to comprehend written text.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

26. Teachers use a formal, direct approach to build vocabulary. An example of a formal, direct approach may include the teacher having students restate new word meanings in their own terms.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

27. At the appropriate grade level, teachers include reading instruction in phonemic awareness, phonics, vocabulary, fluency, and/or comprehension.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

28. Children are taught to use expression when reading including intonation, stressing words, and rhythm.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

29. Building a child's vocabulary is done in multiple forms in classrooms across the school.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

30. The skill of comprehension is believed to be the "essence" or heart of reading.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Finally, questions 31 to 37 pertain to only the high level implementation by a regular classroom teacher instead of all teachers who may interact with kindergarten through third grade children such as specials teachers in art, music, and PE, Title I, and special education.

31. Automatic recognition of words is practiced and taught at a high level.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

32. Remediation is provided for all struggling readers by the regular classroom teacher.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

33. Parents are included in the teaching of reading by the regular classroom teacher.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

34. Progress monitoring occurs at regular intervals to gauge reading development.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

For questions 35 through 37:

What percentage of regular classroom teachers incorporate differentiation of instruction as routine practice in the area of…

	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
35. Vocabulary											
36. Fluency											
37. Comprehension											

Thank you for your participation!

APPENDIX B: LETTER REQUESTING DATA SHARE OF CURRENT INDIANA ELEMENTARY PRINCIPAL EMAIL ADDRESSES

South Tower, Suite 600
115 W. Washington Street
Indianapolis, IN 46204
Phone: (317) 232-6610
legal@doe.in.gov

January 31, 2016

RE: Data share of current elementary principal email addresses

To Whom It May Concern:
Good afternoon! Presently, I am a doctoral candidate working on my Ph.D. in the Department of Educational Leadership at Indiana State University in Terre Haute, Indiana. As part of the study, I am working with Dr. Brad Balch from Indiana State University as my chairperson. For my research study, I am conducting a survey study of K-3 literacy instruction. The survey will determine how/what reading skills help children learn to read better which will also make them become more successful on the IREAD-3. In order to assess literacy instruction, I wish to survey elementary principals in all Indiana public elementary schools.

I am requesting access to your records of all current Indiana elementary public school principal emails.

Data Requested:
Principal email addresses for current Indiana public elementary school principals

Sincerely,
Terry Terhune
Ph.D. Candidate
Indiana State University

APPENDIX C: CONSENT TO PARTICIPATE IN QUANTITATIVE RESEARCH

ELEMENTARY SCHOOLS WITH HIGH-ACHIEVING IREAD-3 SCORES: WHAT THEY DO DIFFERENTLY

Dear Principal [name will be entered by Qualtrics],

You are being invited to participate in a research study about teaching literacy skills in primary grades to help children become more successful on the IREAD-3. All Indiana public elementary school principals are being asked to participate. This research project is being conducted by Mr. Terry Terhune as part of the requirements for a doctoral dissertation in the Educational Leadership Department at Indiana State University in Terre Haute, Indiana. Dr. Brad Balch, Professor and Dean Emeritus of the Bayh School of Education at Indiana State University, is serving as chairperson of the research study.

You may participate in this study by responding to the survey located at https://indstate.qualtrics.com/SE/?SID=SV_4UPCT3ID4IB27xb. To access this survey, please click on the survey link. If you have any questions, please contact me at (317) 989-6819 or cterhune@sycamores.indstate.edu. The survey will be available for you to complete between now and April 30, 2016.

The risk in this study is minimized because the procedures followed are consistent with standard and sound research design. Participants are not unnecessarily exposed to risk. Responses will remain confidential and not be identified, data will be reported about as a group set. Participation is voluntary for this research study and no penalty is involved for non-participation. There is no direct benefit for participation. This study will benefit the field of educational leadership by expanding the knowledge base of literacy instruction in primary grades which will lead to children successfully passing the IREAD-3.

Questions pertaining to this research study may be directed to me or Dr. Brad Balch by e-mail at brad.balch@indstate.edu or by phone at (812) 237-2802. If you have any questions about your rights as research study, you may contact the Indiana State University Institutional Review Board (IRB) by mail at Indiana State University, Office of Sponsored Programs, Terre Haute, IN 47809, by phone at (812) 237-8217, or by e-mail at irb@indstate.edu. This study (IRB# _____) was approved by the IRB on _____. Your participation and assistance are greatly appreciated. Thank you!

Sincerely,

Terry Terhune
Ph.D. Candidate
Indiana State University

Dr. Brad Balch
Chairperson
Indiana State University

APPENDIX D: FOLLOW-UP EMAIL FOR QUANTITATIVE SURVEY TO ELEMENTARY PRINCIPALS

Reading Instruction in Primary Grades as Preparation for the IREAD-3 Survey:

https://indstate.qualtrics.com/SE/?SID=SV_4UPCT3ID4IB27xb

Dear [first name],
Good afternoon! If you have not had the time to complete the survey, please take a moment to assist us. Join many of your public elementary school principal colleagues in sharing the literacy practices occurring at your school in the primary grades. This instruction determines a student's success on the IREAD-3. The survey link will remain active until Saturday, April 30th.
If you are one of the [# of respondents] which have already completed the survey on What Schools With High Achieving IREAD-3 Scores Do Differently, thank you very much! Your responses are greatly appreciated.

Thank you for your assistance!

Terry Terhune
Ph.D. Candidate
Indiana State University
(317) 989-6819
cterhune@sycamores.indstate.edu

Dr. Brad Balch
Chairperson
Indiana State University
brad.balch@indstate.edu

APPENDIX E: INTERVIEW QUESTIONS

The following questions will be used to guide the interview process:

Principal and School Background Information and Rapport Building

1. How long have you been the principal here?
2. How many teachers do you have at the K-3 levels?
3. What achievement are you most proud of about your school?

Teacher Pedagogy for Teachers in Grades K-3

4. Does your school emphasize phonics or whole language instruction to teach foundational reading skills?
5. How many teachers utilized round robin reading as a practice?
6. Does your school progress monitor reading skill development? If yes, what instrument is utilized?
7. How often do teachers engage in conversation about and attend professional development which is based on the five components of reading (phonemic awareness, phonics, vocabulary, fluency, and comprehension)?
8. Does your reading curriculum distinguish between stages of reading development and include a sequence of foundational reading skills teachers should follow?
9. How are parents included in the process of teaching reading by teachers?
10. Reading growth and instruction is an art form. How do teachers motivate children to want to learn to read?
11. Do your teachers understand and utilize the concept of "agency" in teaching literacy? (Agency is the concept of how to act and be a participant in the learning process)
12. What interventions does the school offer to:

a. All children?

b. Struggling readers?

13. Is teacher language ever discussed? For example:

c. Do all teachers including specials teachers have word walls?

d. Is there professional development on how teachers respond when a child is reading? (Are good readers spoken to differently than struggling readers)

14. How do your teachers prepare students for the IREAD-3?

Vocabulary, Fluency, and Comprehension in K-3

15. Do you have a systematic phonics program?

16. What are ways comprehension abilities are discussed across grade levels?

17. How do teachers improve word recognition?

18. How is prosody taught or discussed? (Prosody is the ability to read with rhythm, intonation, stress, and expression)

19. How does your school develop automaticity in grades K-3? (Automaticity is the automatic recognition of words in text)

20. How do your children in grades K-3 practice reading?

21. What ways do teachers utilize to build vocabulary?

22. What type of computer programs, if any, do you utilize to teach reading skills?

23. What does your school do to build background experiences for children?

24. In what ways do you remediate and what skills are remediated?

25. How are the following strengthened:

a. Vocabulary skills?

b. Fluency skills?

c. Comprehension skills?

26. How do teachers work collaboratively to teach reading?

27. Are students grouped by a reading level or Lexile score?

28. Do students change teachers or classes for part of their reading instruction based on ability levels?

29. Is there anything else you feel I should know about your school's reading instruction in grades K-3 which impacts IREAD-3 performance?

APPENDIX F: QUALITATIVE INTERVIEW INITIAL TELEPHONE TRANSCRIPT TO REQUEST PARTICIPATION

"Good morning, my name is Terry Terhune. I am working on my doctoral dissertation at Indiana State University with Dr. Brad Balch as my chairperson. I am conducting a research study about the teaching of reading practices in the primary grades leading up to successful IREAD-3 school scores. I am looking to visit two elementary schools that have free and reduced rates greater than 45% and which have consistently scored above 90% passing rate on the IREAD-3 during the initial three years it has been administered. This call is an invitation to you, as the building principal, to participate in this case study interview to highlight the reading instruction practices at your school."

"Two questions which I need to ask in order to make sure you are eligible for the study are:

1. Have you been the building administrator at this school for the previous three years?
2. Has there been any redistricting or reconfiguration affecting this school during the previous three years?

Since the answer to each of these questions was yes, you are eligible to participate in the study." ["Since the answer to question _____ was no, unfortunately, you do not qualify for the study. I wish to thank you for your time, and I appreciate the chance to speak with you today."]

"I would like to visit your school and interview you at a date and time which is convenient for you. Prior to starting the interview, I will review your rights as a human subject and present you with a consent to participate form to sign. Please remember, participating in the study is voluntary, and you may withdraw at any time you wish. I will have a series of 30 questions regarding the literacy instruction practices of primary teachers in your school. I would estimate the interview taking approximately one hour of your time. This includes signing the consent form after reviewing your participation rights."

"As a requirement of the research design, I am required to keep all responses, whether handwritten or digitally recorded, confidential. For the research study, I will only report aggregated results in the final, published dissertation. As a participant, you will have the opportunity to review your responses prior to the dissertation defense. Participants will not be referred to by their names and school names will be changed. Both will be given pseudonyms such as 'School A'."

"Are you interested in participating in an interview? What would be a good date and time for the interview? Finally, would you like a reminder email or text the day before the interview?"

"Thank you for agreeing to participate in the interview for this research study. I will be sending a follow up e-mail to confirm your participation. If you need to contact me, please call me at (317) 989-6819 or e-mail me at cterhune@sycamores.indstate.edu. I look forward to seeing you on _____."

APPENDIX G: CONSENT TO PARTICIPATE IN QUALITATIVE RESEARCH

ELEMENTARY SCHOOLS WITH HIGH-ACHIEVING IREAD-3 SCORES: WHAT THEY DO DIFFERENTLY

INTRODUCTORY LETTER

You are asked to participate in a research study conducted by Mr. Terry Terhune and Dr. Brad Balch, from the Educational Leadership Department at Indiana State University. The research study being conducted is part of the requirements for completion of a dissertation. Your participation in this study is entirely voluntary. Please read the information below and ask questions about anything you do not understand, before deciding whether or not to participate.

You have been asked to participate in this study because you are an elementary principal at a building which has demonstrated IREAD-3 scores consistently above 90% with a free and reduced lunch rate above 45%. There will be case study interviews conducted at two different elementary schools with each principal fitting the criteria above regarding literacy instruction in the K-3 grade levels.

- **PURPOSE OF THE STUDY**

The purpose of this sequential, mixed methods study is to first use a quantitative survey of elementary school principals to learn whether there is a significant difference in the teaching approach of K-3 teachers of literacy skills which will impact student performance on the IREAD-3. The qualitative case study will follow-up on the survey results with two building principals. The purpose will be to gain a deeper understanding of what their schools do to successfully prepare students to learn to read as demonstrated on the IREAD-3.

- **PROCEDURES**

If you volunteer to participate in this study, you will be asked to do the following things:

You will be asked to participate in an interview at your elementary school followed by a short tour of your building for informal observations. The interview will last approximately one-hour and will be audio taped. The researcher will also take written notes during the interview process.

The interview questions will revolve around literacy instruction of teachers in your building in grades K-3. The questions will involve teacher pedagogy and best teaching practices of literacy.

You will be contacted following the interview via email and be given the opportunity to review the transcripts of the meeting. By reviewing the transcripts, you will be able to check your responses to all questions. Your participation in this study is voluntary, meaning you have the option to decline to participate at any time during the process. If you choose to not to participate in the study, you will not be contacted in the future.

- **POTENTIAL RISKS AND DISCOMFORTS**

The researchers believe any potential risks or discomforts to be minimal. Participants may withdraw from the study at any time.

- **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

There are no direct benefits to the subject for participation in the study. By participating in the study, the field of educational leadership will benefit by the results and knowledge gained in the study. This will help principals and administrators make better informed decisions regarding literacy instruction in grades K-3 for children.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of a coding system in which the researcher will use alphabetic letters to represent the schools and pseudonyms for the building principal being interviewed. Only the researcher and chair will know the true identities of the schools and principals involved. All means of identification will be kept confidential and stored in a locked file cabinet in the researcher's home. At the end of the storage period, all data collected including audio recordings, transcripts, and other information from the case study interviews will be destroyed.

- **PARTICIPATION AND WITHDRAWAL**

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind or loss of benefits to which you are otherwise entitled. You may also refuse to answer any questions you do not want to answer. There is no penalty if you withdraw from the study and you will not lose any benefits to which you are otherwise entitled.