Head Start Transition to Elementary School: Is the Early Intervention Sustained?

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Abstract

Poverty is a social context that has direct impact on students' performance since the conditions associated with poverty (brain development, social interactions, nutrition, and emotional environment) all play a role in developmental outcomes. Head Start is an early intervention program designed to address the unique needs of students from poverty. The Head Start Impact Study (DHHS, ACF, 2012) and other research (Lee, Brooks-Gunn, & Schnur, 1988; Ramey & Ramey, 2004) indicate that the academic achievement of low-income students who participated in Head Start is mixed as they move through elementary school. The purpose of the Head Start program is to prepare students with skills so that they begin kindergarten on an even playing field with their more advantaged peers (DHHS, ACF, 2013). Although students who participate in Head Start begin kindergarten with the appropriate readiness skills, initial gains are not maintained as they move through elementary school (Burkham & Lee, 2002).

The purpose of this mixed methods study was to examine the effects of the Head Start program as its students move through kindergarten and first grade. In the study, I analyzed data to find relationships between student performance on the Phonological Awareness Literacy Screening (PALS) (University of Virginia, 2010) and classroom practices that led to high achievement. Two Title I schools were studied. PALS scores were analyzed using t-tests, ANOVAs and multiple regressions. Reading performance in second grade was measured using scores from the Developmental Reading Assessment (Beave, 2006). Qualitative data were collected through interviews, focus groups, and document reviews. These data were utilized to make connections between the results of PALS and reading scores and the best practices being
used in schools that showed strong results for the kindergarten and first grade students in the study. By triangulating data, I uncovered relationships between best practice strategies being used in high performing schools and achievement of former Head Start enrollees.
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General Audience Abstract

Conditions associated with poverty (brain development, social interactions, nutrition, and emotional development) all play a role in a child’s developmental outcomes. Head Start is an early intervention program that addresses the unique needs of children from poverty. The purpose of the Head Start program is to prepare students with skills so that they begin kindergarten on an even playing field with their more advantaged peers (DHHS, ACF 2013). Although students who participate in Head Start begin kindergarten with the appropriate readiness skills, initial gains are not maintained as they move through elementary school (Burkham & Lee, 2002).

The purpose of this mixed methods study was to examine the effects of Head Start programs as its students move through kindergarten and first grade. In the study, I analyzed data to find relationships between student performance on the Phonological Awareness Literacy Screening (PALS) and classroom practices that led to high achievement. Reading performance at second grade was assessed using the Developmental Reading Assessment. Interviews and focus groups with principals, reading teachers, and teams of teachers from kindergarten and first grade at two Title I schools provided qualitative data regarding school practices. Results indicated that Head Start students begin kindergarten with strong early literacy skills but performance in early elementary school decreases over time. Further research is needed to determine effective practices for educators to address the needs of low-income students to ensure these students maintain the initial gains seen when they enter kindergarten.
DEDICATION

This study is dedicated to my parents, Edgar and Dorothy Rosar, who raised me to follow my dreams. As a child, my parents supported me through every endeavor and always encouraged me to work hard, be committed to my work, and to follow through on all responsibilities. My parents modeled responsibility and commitment. They worked very hard to provide for my sisters and me. My mother and father made sure that I had the opportunity to go to college and earn a Bachelor's Degree. They sat proudly at my graduation from Mansfield University of Pennsylvania. Nine years later, they were in the audience, once again, when I received my Master's Degree from Bowie State University in Maryland. Twenty-one years later, I will earn my doctorate. During the time I have been enrolled in the Doctoral Program at Virginia Tech, Northern Capital Region, both of my parents passed away. My mother was a staunch supporter of this effort, as she encouraged me from the time I enrolled until her passing. I know my parents have been with me in spirit through the trials and tribulations of this journey. Their pictures sit on the desk where I have worked for countless hours, reading and writing, in an effort to research a topic which is near and dear to my heart. It has been a very long process, but knowing that my parents would be proud of me has led me to dedicate this dissertation to them.
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I would like to thank the participants in this study. Your passion for both students and education was evident in our meetings. I am proud of the accomplishments your schools have achieved. You serve as an inspiration to educators across the region.

Finally, thank you to my husband, Byron, and daughter, Hayley, who have consistently supported this effort. You made this dream possible. I couldn't have done it without your encouragement. I love you both!
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CHAPTER 1 INTRODUCTION

American schools are facing a crisis today that will continue to grow until educational leaders, government officials, business leaders, parents, and communities can come to consensus about how to effectively address the primary issue—poverty in our country. The unprecedented rise in poverty rates across the United States has increased the number of students from disadvantaged backgrounds in classrooms (Layton, 2013, June). This increase in the numbers of children living in poverty is directly affecting performance in the classroom, leading to achievement gaps between American children who grow up in middle and upper class homes and those who grow up living in poverty (Rebell, 2007). Economically disadvantaged students start kindergarten lagging behind their more affluent peers in their academic performance, and the gap has continued to grow over time (Burkham & Lee, 2002; Ramey & Ramey, 2004). With more students growing up in poverty, it is important to look at intervention strategies that address deficits when children are still young. Head Start is a federally funded program designed to provide support in early literacy and math skills for disadvantaged youngsters (Pigott & Susman Israel, 2005).

Progress has been made over the course of the last several decades regarding educational policies aimed at improving access to education for poor and minority students (Gallagher, 2000). Starting in the mid-1960s, policies such as the War on Poverty, No Child Left Behind, and Race to the Top, and various presidential platforms have focused on increasing outcomes for poor students. George W. Bush led one of the largest efforts to increase accountability for all students when he signed the No Child Left Behind legislation in 2001 (Ravitch, 2010). Who could argue that any child should be left behind in America's schools? Not taken into account
were many factors that influence children in today's schools, such as poverty, and how to address them.

In addition to a growing number of economically disadvantaged students, American classrooms are changing with an influx of immigrants to the United States (Kirsch, Braun, Yamamoto, & Sum, 2007; Ravitch, 2010). Based on trends, researchers have predicted that by 2025 half of the school children will be White and the other half minority (Kirst & Wirt, 2009). If this trend continues, by 2050 no racial group will constitute a majority of students in schools (Kirst & Wirt). Changes in the racial composition of students have correlated with an increase in the number of students who are economically disadvantaged (Ford, 2013). This presents a problem for policy makers and educators who must take into account how to close gaps between poor and more affluent students. Additionally, emphasis must be placed on interventions provided to economically disadvantaged students. One federal program designed to address these areas for young children is Head Start.

Statement of the Problem

Studies have been completed since the 1960s to determine the effects of early education programs. These studies include the High Scope Perry Preschool Study (1962), the Carolina Abecedarian Project (1972), and the Head Start Impact Study (2012) on student achievement. Research indicates that early interventions lead to increased student performance (Smith & Bombyk, 2012). However, evidence suggests a fading effect on achievement by the end of grade three for Head Start students (Garces, Thomas, & Currie, 2000, Head Start Impact Study, 2012). These results are consistent with findings from the early 1990s indicating that short-term positive effects on achievement for low-income students fade over time (Reynolds, 1993). Results of this
nature are disappointing because students leave Head Start with what appear to be the necessary academic and social skills to be successful in kindergarten (Head Start Impact Study, 2012).

State and local officials are responsible for funding schools and programs; however, legislators must recognize that schools in the U.S. are educating an increasing number of students who live at or below the poverty line. When George W. Bush enacted No Child Left Behind in 2001, there were 32.9 million people living in poverty. In 2013, there were 45.3 million, an increase of 12.4 million people (U.S. Census Bureau, 2013). The number of Americans living in poverty (45.3 million) has a direct impact on schools, as students from lower income families had less opportunities and less resources causing them to lag behind academically (Aktar & Niazi, 2011). In the case of educating low-income students, we must continue needed supports well into elementary school. By cutting back on supports students have in Head Start, they cannot keep up with more affluent peers, thus perpetuating the problems associated with poverty (Farah, et al., 2006; Burkham & Lee, 2002).

In my professional experience as a Title I school principal, I have noted problems of declining academic success of former Head Start students. A majority of Head Start students enter kindergarten passing the Phonological Awareness Literacy Screening (University of Virginia, 2015) in the fall. Overall, Head Start students perform on-grade level throughout kindergarten, passing the Phonological Awareness Literacy Screening (PALS) (University of Virginia, 2010) at mid-year and year's end. However, they begin to lose ground by the end of first grade. The gap becomes larger as they move through elementary school (Janicki & Banicky, 2013). Under No Child Left Behind legislation, Title I schools are held to strict guidelines for meeting federal requirements for student pass rates on standardized tests (NCLB, 2002). There was a decrease in performance for these students, as they no longer outperform
other students who did not attend Head Start (Janicki & Banicky, 2013). The problem appears to be rooted in the underlying issues related to poverty that are not addressed in elementary school with the supports students received in Head Start (Burkham & Lee, 2002).

**Purpose of the Study**

The purpose of this study was to contribute to the research about factors influencing former Head Start students in the early elementary grades to understand why they may lose academic ground. I became interested in Head Start when the elementary school I led went from being approximately 13% to 59% free and reduced lunch, due to 2008 redistricting. There was a significant shift in demographics, resulting in an increase from 13 to over 250 English language learners (ELLs), as well as an increase of 46% in the number of economically disadvantaged students [Virginia Department of Education (VDOE), 2016]. It quickly became clear that as the leader of the school, I needed to help teachers and support staff understand the needs of students who live in poverty.

Looking at the student population, I became interested in studying the 30 to 40 Head Start students who came from the program each year. My interest grew because Head Start students received interventions prior to kindergarten, yet achievement (assessed through my informal observation of data) was not maintained once they progressed through kindergarten into first grade. I hypothesized that the declining results were directly related to the discontinuation of supports provided to students and families in Head Start. This hypothesis was based, in part, on my experience with a family that I worked with for nine years.

Is it possible that one child or one family can change a person’s outlook on education? For me, that family came into my life nine years ago. As I prepared for the upcoming school year, the Head Start principal told me about the oldest child. She warned me to "watch out"
because he was a rough one. She was 100% correct. He was rough. Tantrums, outbursts, curse words, defiance, and meltdowns were a daily part of life for this little boy. I cannot remember how many times he spent the entire day in my office. I had mom's phone number memorized from calling so often. We attempted rewards and consequences for behaviors, but nothing seemed to work. A connection began that year between his family and me. The child and I survived his kindergarten year, only to learn that his sister was coming in the fall. She entered kindergarten much the same way as her brother. Every person in the school knew this little girl. She threw tantrums and ate lunch in my office almost every day. One day, I overheard a teacher say, "That kid gets to eat lunch with the principal every day. What a joke. Why doesn't she just put that kid out of here for good?" That was when it clicked with me. I was not going to give up on this little girl, her brother, her mother, or her family. The experience with this family made it clear to me that, for students living in poverty, schools are the primary means at achieving a better life. I learned the power that we, as educational leaders, truly have to make a difference.

Over the course of nine years, I saw the brother and sister through good times and bad. Each came from Head Start, ready for school in regard to their academic knowledge; however, behaviors still needed work. Through careful interventions, the behaviors started to improve. The boy has moved on to middle school and is struggling to keep up with his peers. In contrast, the girl has just finished sixth grade and continues to read on grade level.

I am unsure why this particular family had such a tremendous impact on how I look at children who live in poverty. I dedicated more time to this family than any other in 30 years in the profession. Both children participated in Head Start, yet the outcomes look different for each. This family sparked my interest in learning more about what can be done to continue the support given in Head Start. Through my research, I learned more about supports for students
living in poverty as they move into kindergarten and first grade. If more steps are taken to increase educational outcomes for students early on in programs such as Head Start, we will begin to see a change in generational poverty that is plaguing our nation. If this type of change takes place, perhaps poverty will not continue to contribute to the prediction of low academic performance.

**Need for the Study**

American classrooms are changing, particularly with the influx of immigrants to the United States (Kirsch et al., 2007; Ravitch, 2010). No longer are schools filled with a majority of White students. As initiatives such as No Child Left Behind and the Every Student Succeeds Act increase accountability for schools, educators must look at outcomes for all students. More than one in five U.S. children lives in poverty today, with an even higher rate for Black and Hispanic children (Coley & Baker, 2013). Race and ethnicity are associated with a student's socio-economic status (Burkham & Lee, 2002). With an increase in the number of students from diverse backgrounds, educators need to find ways to ensure these students have necessary interventions. This presents a problem that must be addressed, as educators are being held accountable for academic achievement for all students (NCLB, 2002). Although research has focused on outcomes for Head Start students, I investigated results for Head Start students and determined how they achieved in kindergarten and first grade compared to other students.

**Research Questions**

The following research questions framed my research.

1. What factors affect Head Start students' performance in the primary grades?
2. How could family services at the elementary level (parenting education courses, home visits, emergency/crisis intervention, family goal setting or health education) help impact former Head Start students' performance?

3. What are successful schools doing to increase academic performance for former Head Start students?

**Definitions**

The following terms are used in this research.

*Caldwell Preschool Inventory*: Assessment designed to evaluate whether 3 to 6-year-old children have requisite skills to allow them to fulfill their intellectual potential in the context of the classroom setting.

*Eight Block Toy Sort*: Test designed to examine how mothers teach and communicate with their children and children's ability to categorize and verbalize rationales for their categorizations.

*Generational Poverty*: Having been in poverty for at least two generations.

*Head Start*: A program of the U. S. Department of Health and Human Services (DHHS), Administration for Children and Families (ACF) that provides comprehensive early childhood education, health, nutrition, and parent involvement services to low-income children and their families.

*Head Start Longitudinal Study*: DHHS national studies to determine the impact of Head Start on the children it serves.

*Motor Inhibition Test*: Assessment designed to examine impulsivity as children perform three motor tasks. Elapsed time is used to measure impulsivity.
**No Child Left Behind:** An act approved by the U. S. Department of Education (DOE) in 2001 to close the achievement gap with accountability, flexibility, and choice so that no child is left behind.

**Peabody Picture Vocabulary Test (PPVT):** Assessment given to 3 to 6 year-olds that measures an individual's receptive (listening) vocabulary for Standard American English and provides an estimate of verbal ability or scholastic aptitude.

**Poverty:** Refers to the economic level of students identified as being below the federal income level who receive free/reduced lunch as a result of their family income.

**School Readiness:** Describes the capabilities of children, their families, schools, and communities that will best promote student success in kindergarten and beyond.

**Survey of Income Dynamics:** A longitudinal panel survey of American families, conducted by the Survey Research Centre at the University of Michigan.

**Title I:** Refers to Part A of the Elementary and Secondary Education Act that provides financial assistance to local educational agencies and schools with high numbers or percentages of children from low-income families to help ensure that all children meet challenging state academic standards.

**Title I School:** Refers to a school that meets the requirements to receive Title I financial assistance.

**Virginia Standards of Learning:** The Commonwealth's expectations for student learning and achievement in grades K-12 in English, mathematics, science, history/social science, technology, the fine arts, foreign language, health and physical education, and driver education
Methodology

I conducted a mixed methods case study using the University of Virginia’s (2010) *Phonological Awareness Literacy Screening* (PALS) and Beave’s (2006) *Developmental Reading Assessment* (DRA) testing data to measure reading outcomes for Head Start students. I conducted statistical analyses using t-tests, analysis of variance, and multiple regressions by comparing results of students in two Title I schools. Analyses focused on the following variables: gender, socio-economic status, participation in Head Start, limited English proficiency, and race. Each variable was studied based on beginning-of-year kindergarten PALS data (FK PALS), end-of-first-grade PALS data (SP1 PALS), and the difference between beginning-of-year kindergarten and end-of-year first grade PALS data (i.e., the difference between FK and SP1 PALS). I also conducted interviews to obtain in-depth information from administrators, reading teachers, and kindergarten and first grade focus groups regarding reading performance of students. Additionally, I conducted a document review of each school's Title I plan.

Limitations and Assumptions

Limitations are factors that can weaken a study and are not within the control of the researcher (Simon, 2011). One limitation of this study was that data from one-school systems’ Head Start programs might not be able to be generalizable beyond this population. Interviews and focus groups were conducted in only two schools. The study was conducted in a specific period, which means the data collected were particular to the time being studied. The results of this study also may not be generalizable to other populations. Lastly, transiency among low-income families presented limitations because data were not available for cohort students who moved away during the period of the study (school year 2013-14 or school year 2014-15).
Assumptions in this study are focused on outcomes for low-income kindergarten and first grade students. I assumed that the population of students in the two participating schools was representative of low-income students throughout the school system. Another key assumption was that teachers have an underlying belief that all students are capable of achieving at high levels. I also assumed that teachers and administrators in both of the selected schools had similarly high expectations for all students.

Summary

Poverty continues to grow in the United States, yet educators, lawmakers, and government officials have yet to come to consensus on how to address the impact of poverty in public schools. Although all children have an equal right to an education, not all children bring the same background into the classroom (Alexander & Alexander, 2012; Burkham & Lee, 2002). Instead, middle and upper income students continue to have their educational needs met and low-income students continue to struggle (Burkham & Lee, 2002). As the face of American classrooms continues to change, consideration must be given to meeting the needs of diverse learners (Kirsch et al., 2007).

This summary of research over the last five decades points to positive outcomes for Head Start students as they begin kindergarten; yet several studies suggest that the effects fade out over time. Educators must begin to address this concern in order to assist the ever-growing population of Americans living in poverty. This study expanded on the research of Currie and Thomas (1995), Foster and Miller (2007), and Domitrovich et al. (2009) by examining outcomes for Head Start students.

In Chapter 2, I review related literature about poverty and child development, poverty in the elementary classroom, the history of Head Start, school readiness, early intervention
programs, and outcomes for students in Head Start and/or other preschool programs. Chapter 3 describes the methodology for the study, including my role as researcher, the rationale for proposed research methodology, and the instruments used. The chapter concludes with information regarding participants, the selection process, and an explanation of the data analysis process. Chapter 4 includes my findings and Chapter 5 presents a discussion of these findings.
CHAPTER 2 REVIEW OF THE LITERATURE

Poverty is a social issue that affects young children, particularly in their early educational experiences and outcomes (Smith & Bombyk, 2012). Over the last five decades, early intervention programs have provided support for students living in poverty, with Head Start being the largest. Head Start students receive specific interventions designed to allow them to begin kindergarten with readiness skills that are more closely matched to those of middle and upper class students (Smith & Bombyk, 2012).

The framework for this literature review includes how poverty affects the development of young children: brain development, social interactions, nutrition, and emotional development. Second, a discussion of the role that poverty plays in determining how well students perform in elementary classrooms is presented. Third, I examine the historical background of Head Start focusing on how poverty has been an issue in our country for decades and how this program was created to provide support for young children living in poverty. Fourth, Head Start programs and their preparation of school readiness skills are reviewed. Finally, literature is presented regarding early elementary outcomes for former Head Start students, including research comparing outcomes for students who a) attended Head Start, b) were eligible for Head Start but did not attend, c) attended other preschool programs, and d) did not attend any type of formal schooling prior to kindergarten.

Poverty and Child Development

Scientists have studied the brains of children growing up in poverty. Findings indicate that poverty can impact cognitive achievement, language development, and working memory of young children (Blair, Granger, & Peters Razza, 2005). Poverty can also affect young children's behavior and emotional responses (Hanson et al., 2013). This is because children growing up in
poverty are exposed to repeated stressors, violence, instability, and family turmoil (Hanson et al., 2013). The stressors create an environment of chaos, and the child's brain responds accordingly (Farah et al., 2006). Some brain-based responses include: lack of impulse control, diminished attention span, and need for instant gratification. These responses can directly affect a child's language development, particularly in the areas of vocabulary and phonological awareness (Farah et al., 2006).

Environmental factors for children living in poverty create situations that may lead to limitations for proper brain development. Some of these factors include toxic levels of stress, reduced access to proper nutrition, less linguistic experiences, increased noise exposure, and less cognitive stimulation (Skoe, Krizman, & Kraus, 2013). Other toxic stressors may include family turmoil, violence, instability, separation from family members and limited supervision (Blair et al., 2005). Each of these environmental factors has a direct impact on children's development, particularly when children are exposed to them on a consistent basis during their early years (Blair, et al., 2005; Farah, et al., 2006; Hanson, et al., 2013; Twardosz, 2012). In looking at cognitive neuroscience and sociology, Farah et al. (2006) determined that, "...cognitive ability is not depressed across the board among children of low SES. Rather, abilities that have been linked to specific neurocognitive systems are disproportionately affected" (p. 169) They found working memory and cognitive control to be weaker in students from low SES homes than those in middle-income homes (Farah et al., 2006). Parental stress is also associated with children's development of receptive and expressive language (Neville et al., 2013). This may lead to early learning problems for students in the primary grades when foundation academic skills are taught.

Foster and Miller (2007) researched data from the Early Childhood Longitudinal Study focusing on family socioeconomic status (SES) and parental education level. They found
parental education and SES were highly correlated. Parents who had less education tended to be in the lower socioeconomic group and parents with more education had higher income levels. This relationship was directly correlated to children's school readiness and reading achievement levels (Foster & Miller, 2007). Students from low socioeconomic environments, whose parents had less education, were prone to struggle with reading which, in turn, led to academic issues in all core subjects.

Another outcome for the lower achieving students was that their sense of self appeared to be suffering. "Although closing the phonics gap is an important step, the students in the low readiness group may not appreciate the progress because they are already judging themselves by a different standard" (p. 180). The students in the lowest group were already thinking of themselves as failures, as they had a low concept of self. Foster and Miller's data (2007) supports the research regarding the negative effects of poverty on literacy development in young children.

An additional area of importance in child development is related to nutrition. Children growing up in poverty tend to be born to mothers who do not eat nutritious food during pregnancy. In turn, these children do not eat well-balanced meals on a regular basis; typically, they eat diets containing high levels of starches and sugars with very few important vitamins and minerals (Mozes, 2008). According to the United Nations International Children's Emergency Fund (UNICEF), children who are malnourished are smaller, more likely to get sick from infections, and their brain development can suffer (UNICEF, 2012). Proper nutrition is critical to maximizing brain function and enhancing learning. Improved nutrition is central to improved student outcomes since a well-nourished student is more likely to perform better in school (UNICEF, 2012).
Poverty in the Elementary Classroom

With the number of students living in poverty increasing each year, educators are seeing more and more students coming from disadvantaged homes in their classrooms (Spears, 2014). The increase in numbers of children living in poverty is directly affecting performance in the classroom, leading to achievement gaps between American children who grow up in middle class homes and those who grow up living in poverty (Rebell, 2007). Economically disadvantaged students start kindergarten already lagging behind their more affluent peers, and the gap continues to grow over time (Ramey & Ramey, 2004). Although most children begin their formal education in kindergarten, there is a wide range in the cognitive status of students entering school. Burkham and Lee (2002) used data from the Early Childhood Longitudinal Study, Kindergarten Cohort (DOE, 2010) to determine that socio-economic status is significantly related to cognitive skills, even more so than any other factor. Educators must increase their understanding of how to work to overcome the deficits that children from low-income families bring to the classroom.

The effect of poverty on elementary aged students is important because children learn the foundations of reading in early elementary school. Basic pre-reading skills (letter recognition, beginning and ending sounds, sight words, and comprehension of text) are learned in kindergarten and first grade. Students who grow up without exposure to reading at home can have difficulty mastering reading skills. Data from the Early Childhood Longitudinal Study (1999) indicates that kindergarten students living in poverty scored five points lower on reading assessments at the beginning of the year than their more advantaged peers (Douglas & Montiel, 2008). This gap grew over time with an average scaled score 20 points lower for poor students at the end of fifth grade (Douglas & Montiel, 2008). Low-income students took until the end of
third grade to master necessary reading skills (letter recognition and beginning and ending sound knowledge); while the wealthier students had mastered these skills in first grade (Douglas & Montiel, 2008). Statistics such as these are alarming, particularly in schools where poverty is concentrated. The expectation of teachers to ensure that students are meeting standards typically does not take into account the make-up of students in the class. Schools with a higher concentration of students with significant needs require additional resources to help students overcome these challenges; differentiated instruction to meet students' learning styles is also needed. This can be difficult when low-income children begin kindergarten in lower-quality schools than higher-income students (Burkham & Lee, 2002).

Early intervention, prior to kindergarten, is one method to help students living in poverty overcome these deficits (Smith & Bombyk, 2012). Head Start is a key intervention program designed to help students enter kindergarten on par with children from higher income families. It is designed to help students gain necessary literacy, math, and social/emotional skills that are needed to be academically successful in the future. By increasing skill sets prior to kindergarten, students who participate in Head Start are able to begin elementary school with a better understanding of early literacy and math skills as well as better social/emotional skills (Lynch, 2008). Kathleen McCartney, former Dean of the Harvard School of Education stated, "The reason early education is important is that you build a foundation for school success. And success breeds success" (as cited by Smith & Bombyk, 2012, p. 168). By providing economically disadvantaged students an opportunity to begin school with skills more evenly matched to their higher SES peers, these students have a better opportunity for success in kindergarten.
In order for children who live in poverty to be successful in school, many factors must be addressed. Researchers suggest that family support, as seen in Head Start, is a continued need once students enter elementary school (Caspe, Lopez, & Wolos, 2007). The Harvard Family Research Project (HFRP) has focused on complementary learning, which is a framework of support for students that includes linked learning supports (Caspe et al., 2007). Support for elementary school students includes in-school programs, out-of-school programs and activities, health and social services, and other community-based organizations. They emphasize the need for family involvement that occurs both at school and at home (Caspe et al., 2007). Research has focused on program evaluations; however, a focus on intervention strategies, including family support, is necessary to determine how to better serve our neediest students and their families in kindergarten, first, and second grades (Reynolds, 1993).

The History of Head Start

Head Start programs have been in existence since the mid-1960s with the emphasis on providing economically disadvantaged children an opportunity for learning experiences to better prepare them for kindergarten (Currie, 2001). Head Start is a federal program that promotes the school readiness of children aged birth to five from low-income families by enhancing their cognitive skills and social and emotional development (ECLKC, 2012).

Head Start began in 1965 as part of President Lyndon B. Johnson's "War on Poverty" (ECLKC, 2012). The program was designed to provide low-income children and their parents with schooling, health, nutrition and social welfare services in order to help the children start school on an even par with more advantaged children (ECLKC, 2012). In addition to these services, parents of Head Start students are required to be active participants in their child's classroom and have access to adult education and family support services (Oyemade, Bailey,
Waxler, & Washington, 2006). The goal is to provide support to parents so they can join the workforce, which may assist in breaking the cycle of poverty.

A working definition of poverty is “the extent to which an individual does without resources” (Payne, 2005). This translates to families without enough money to provide basic needs for their children. Statistics for 2013 indicate that there are 45.3 million people (14.5%) in the United States living in poverty (Feeding America, 2015). Of that 45.3 million people, 14.7 million children (19.9%) were children under the age of 18 (Feeding America, 2015). Many of these individuals live in "food insecure" households, needing assistance to provide food for family members. In 2013, according to Feed America, 62 percent of food insecure households participated in at least one of the three major federal food assistance programs: Supplemental Nutrition Assistance Program (SNAP), The National School Lunch Program (NSLP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

This phenomenon is referred to as families being "trapped" in a cycle of generational poverty (Payne, 2005). Social and economic scarcity during childhood can have a lasting effect and make it difficult for children who grow up in low-income families to escape poverty when they become adults (Smith, Ekono, & Robbins, 2014). Children raised in low-income homes are at higher risk for living in poverty as adults (Redd, Karver, Murphey, Moore, & Knewstub, 2011). For adults who experienced moderate-to-high levels of poverty during most of their childhood, between 35 and 46 percent continue their low SES throughout early and middle adulthood (Smith et al., 2014). These statistics are concerning as the number of Americans living in poverty continues to rise (DeNavas-Walt, Proctor, & Smith, 2013). The cycle of generational poverty can be addressed by investing in the education of young children and their parents through programs such as Head Start.
For younger parents, the risk of being poor becomes greater (Redd et al., 2011). According to the Annie E. Casey Foundation (2012), approximately 1.4 million Americans between the ages of 15 and 24 are raising dependent children. Many of these young parents do not go to school nor do they work. Without an education, these individuals have a decreased likelihood that they will find jobs which, in turn, means they will not have the means to support their young children (Annie E. Casey Foundation, 2012). These factors play out in classrooms across the United States. Head Start seeks to support the children it serves and focuses on parental education as a key component (National Head Start Association, 2013).

Head Start began as an eight-week summer program staffed by volunteers during the summer of 1965 at the height of the Civil Rights Movement (DHHS, ACF, 2013). During this time of unrest in America's history, it was evident that the education of poor children started to come to the forefront both in local communities and in Washington, D.C. In 2012, Jon N. Hale, Assistant Professor of Education at the College of Charleston, reported on the history of Head Start in Mississippi. Clearly shown in his account was the commitment of African-Americans to provide education to young, impoverished children in Mississippi. The following account tells of the trials and tribulations that Head Start workers had to endure in order to keep such programs alive for children.

Local white segregationists fired weapons and burned crosses at Head Start centers, harassed Head Start workers, evicted sharecroppers for enrolling their children, and refused to extend credit to participating black businesses. At the state level, Mississippi Senators John Stennis and James Eastland charged the Child Development Group of Mississippi (CDGM), the most visible Head Start organization in Mississippi, with fraud
and corruption and levied an assault to terminate all Head Start funding. (Hale, 2012, p. 511)

Stories such as this played out across the country, as Head Start programs fought to bring educational opportunities to children living in poverty. The volunteers had to find places to hold classes, means for obtaining materials, and transportation for the children. Their efforts were not in vain. As communities were mobilized, Head Start was seen as a success, and 20,000 students in Mississippi participated in the program through community efforts (Hale, 2012).

Head Start grew throughout the United States in the late 1960s and early 1970s because the program was seen as a success. As Head Start continued to grow, changes were made to accommodate growing needs of students being served. Bilingual and bicultural programs were added in the late 1970s - mid 1980s and the grant budget grew to over one billion dollars. The eight-week summer experience grew into a full-day, full-year program in 1998 (ECLKC, 2012).

The reauthorization of Head Start in 2007 increased monitoring for quality of programs across the country through goals aligned with state standards for early learning. Accountability for school readiness skills, the effects that the program has on students, and their academics are being closely monitored after the 2007 legislation (ECLKC, 2012). The American Reinvestment and Recovery Act of 2009 added more than 64,000 slots for Early Head Start and Head Start programs. Today, Head Start serves over a million children and their families each year (ECLKC, 2012). Since its beginning as a summer project in 1965, Head Start has served over 30 million children and their families (ECLKC, 2012).

**Head Start Programs and School Readiness Skills**

The primary goal of Head Start is to decrease the achievement gap between disadvantaged children and middle-class children by preparing them with school readiness skills
McWayne, Green and Fantuzzo (2009) identified what it means to be ready for school as:

*Emphasis must be placed on multiple domains of children's development including social and emotional competence, motor development, physical well-being, development of pre-academic skills such as emergent literacy and numeracy within the cognitive domain, as well as children's approaches to learning. (p. 1)*

For children living in poverty, these skills are not typically developed, because they live in environments with limited structure and less cognitive stimulation (UNICEF, United States Fund, 2012). Participation in Head Start cultivates these skills.

School readiness skills include those related to emotions, behaviors, and cognition. Emotional skills for children ages three to five include a child's ability to play with others, take turns, separate from caregivers, and understand right from wrong. Specifically, behavioral skills include the child's ability to follow rules and routines, pay attention, cooperate with other children, and work independently (DHHS, ACF, n.d.). Cognitive skills include: reading readiness as demonstrated by phonological awareness, knowing letters, writing one's name, recognizing rhyming words, blending sounds together to form words, and having print awareness (Rafotyh, Buchenauer, Kolb Crissman, & Halko, 2004). These areas have been indicated as longstanding challenges for children who grow up in disadvantaged homes, where they often are not exposed to reading and print materials (Douglas & Montiel, 2008).

Ramey and Ramey (2004) found that scientific advances in the fields of child development science, neurobiology, and early childhood education demonstrate that the early years are a time of rapid growth and development. Among the developmental processes children need to be successful in school is their acquisition of language, which tends to be lower in
children living in poverty. Children whose parents are professionals hear approximately 30 million more words by the age of three than children living in low-income households (Fernald, 2013). This means that disadvantaged children enter school with a deficit when it comes to starting to learn to read, as their vocabulary is limited.

Reading is a skill that is necessary for children to be successful in all areas of curriculum (McGill-Franzen & Allington, 2011). Head Start is one intervention that assists disadvantaged children as they move through developmental reading stages, particularly in the area of reading readiness. Students in Head Start have daily exposure to reading, looking at books, listening to fluent readers, working with letters and letter sounds, and a host of activities that prepare them with emergent literacy skills (DHHS, ACF, 2015). As the education field learns more about language acquisition and literacy, Head Start has branched out to include Early Head Start programs that serve children ages zero to three. This is important—the earliest years of a child's life contribute greatly to their acquisition of language (McGill-Franzen & Allington, 2011).

As students enter kindergarten, it is important they possess the necessary skills in order to thrive academically and behaviorally. This is not always the case. A 2014 report on the achievement gap of students in Kentucky found that 51% of students were not ready for kindergarten (Spears, 2014). Kentucky educators utilized the Brigance Kindergarten Screener, which was given to 50,532 kindergarten students in September of 2013. The results were staggering with the following percentages of students considered not ready for school: Blacks 55.8%, students on free/reduced lunch 62.4% and students with disabilities 71.8% (Spears, 2014). In a survey done by the Carnegie Foundation for the Advancement of Teaching, kindergarten teachers reported that only 65% of entering students were deemed ready to learn (Currie, 2000).
Early Intervention Programs

In a review of the literature, two programs along with Head Start consistently surfaced as exemplary programs: the Abecedarian Study in North Carolina (1972) and the Perry Preschool Project (1962) in Michigan. These two programs provided disadvantaged children with a preschool intervention experience. Each of these projects has been deemed successful indicating that, given the proper interventions and supports, children living in poverty can become successful students and productive citizens (Zigler, 2001).

The Carolina Abecedarian Project (1972) provided 111 children with an intensive educational experience that included center-based child care services and emphasized language development for eight hours a day, five days a week, 50 weeks per year from birth to age five. A home-school resource teacher was provided as a liaison between the home and the school (Currie, 2001). Participants in this program were less likely to need special education services, to be retained in a grade during their elementary and middle school years, or to drop out of high school (Zigler, 2001). Ramey and Ramey (2004) provided similar results for participants from the study regarding placement in special education programs. Forty-eight percent of children in the control group were placed in special education by age 15 compared to only 12% in the treatment group (Ramey & Ramey, 2004). Overall, the program demonstrated positive outcomes for participants as evidenced by a long-range follow-up study, which indicated that participants in the intervention program were twice as likely to have attended a four-year college than those in the control group (Currie, 2001).

Another program cited in the literature was The Perry Preschool Project (1962) which included 123 young African American children living in Ypsilanti, Michigan in poverty and assessed to be at high risk of school failure. Fifty-eight children were assigned to a high-quality
early care and an educational setting and 65 received no preschool experience. Intervention for the treatment group included: half-day preschool and a 90-minute home visit each week for eight months of the year over the course of two years. Teachers were highly educated, particularly in the area of child development. Participants in this program have been studied longitudinally over the course of 50 years. The results from the High Scope Perry Preschool Study demonstrate positive effects on achievement test scores, high school graduation rates, and earnings (Currie, 2001). The overall return to society was more than $16 for every dollar invested in the program, thus showing that there was an associated cost benefit (Currie 2001). Although both of these programs have been deemed successful, costs were high in relation to the number of students served. It is highly unlikely that Head Start programs can dedicate as much funding to individual students given the vast number of students served each year, in the current funding environment (Schweinhart, 2003).

**Program Outcomes**

**Outcomes for Students Who Attended Head Start**

Head Start programs have come under scrutiny throughout history. Studies have been done comparing outcomes for students who participate in Head Start with children enrolled in other types of preschool programs and/or with children who do not attend any preschool. Reflecting on these comparisons, it is important to remember Head Start programs typically enroll the neediest of children (Lee, Brooks-Gunn, & Schnur, 1988). Children enrolled in other preschools, or in no preschool, typically come from families with a higher SES.

The 2012 Head Start Impact Study examined how effects of the program carried through into the early years of elementary school. The impact of access to Head Start on children’s subsequent development and school performance at the end of kindergarten and third grade were
studied. The study was conducted with a nationally representative sample of 84 Head Start agencies and included 4,667 children who were randomly assigned to either: a) a group enrolled in Head Start, or b) a control group that enrolled in other early childhood programs or non-Head Start services selected by their parents. Data collection began in 2002 and continued through 2008, following children from the time they applied to the program through the end of third grade.

The Head Start Impact Study (2012) showed that Head Start students improved in preschool outcomes (developmental domains), but had limited impacts on performance in kindergarten through third grade. There were significant differences between the Head Start and control groups on all measures of preschool experiences, although there was little evidence of differences once children entered elementary school. Participants in this study entered Head Start as either three-or four-year-olds, therefore results were studied based on whether children had access to Head Start for one or two years before kindergarten. Clear evidence of a positive impact on children's language and literacy development while in Head Start were found, but they dissipated in elementary school. The only positive outcome remaining at the end of third grade was on the ECLS-K Reading Assessment (Head Start Impact Study, 2012).

**Head Start Outcomes Compared to Other Preschools or No Preschool**

Lee et al. (1988) completed an early one-year comparison of outcomes for students in Head Start, other preschools, and no preschool experience. Data used in their study was obtained from the 1970 Head Start Longitudinal Study (HSLS). They sought to determine results of students in Head Start when compared with students who attended other preschool programs, or students who did not attend preschool at all. Using the Peabody Picture Vocabulary Test (PPVT), the Caldwell Preschool Inventory (PI), the Motor Inhibition Test and the Eight Block
Toy Sort Lee et al. (1988) found positive outcomes for disadvantaged children when compared to children in other preschool programs and those who did not attend preschool. The main benefits were seen in language acquisition, literacy skills, vocabulary development, letter identification, and spelling (Lee et al., p. 219). Currie and Thomas (1995) found similar results and disaggregated the data. They concluded that Head Start students made significant gains in test scores among both Whites and African-Americans.

This is comparable to data obtained from early studies of outcomes for Head Start versus other preschool programs. Handler (1972) conducted a study comparing educational effects of structured preschools with daycare programs whose primary goal was to provide custodial care for children of working mothers. Interestingly, this study reports that students in daycares performed better than those in the Head Start program on both the Caldwell Preschool Inventory and the Cooperative Primary Listening Test. It was believed that a major variable in the programs was the length of the school day. Subjects who were in daycares spent full-days there, while those in Head Start participated for half-days. The amount of interaction between children and adults was significantly higher in the preschools due to the longer day. This led to increased socialization skills, which could account for the higher scores on the listening test (Handler, 1972).

In addition to schooling, parents of low-income children may struggle to find childcare for their young. Head Start provides an excellent setting that meets two needs for children: childcare and an early educational foundation. Handler (1972) discussed the need for early childhood programs due to the discrepancy in educational attainment of students from low SES families and how that discrepancy increases with years of schooling. He called it the
"cumulative deficit" and stated, "We need to focus on preschool years as the optimum point for intervention" (p. 442).

When looking at data comparing achievement of children in Head Start with children in preschool, Head Start children are typically less advantaged both in terms of demographic and cognitive ability measures. Lee et al. (1988) presented findings of their study comparing Head Start outcomes with children who attended preschool and those who did not attend any type of preschool program. In their study, they found that Head Start children were the least advantaged, more likely to be Black, lower cognitively, more likely to be raised by a single mother, had mothers with less education, and lived in more congested housing. Significant differences were found between Head Start students and one or both of the other groups based on almost all background variables in the study. The PPVT, which measures receptive vocabulary, was used to identify differences between groups. Initial results from the PPVT showed Head Start (HS) children performed lower than the students in the no preschool (NP) and other preschool (OP) groups. The Caldwell Preschool Inventory (Caldwell PI) measures a child's personal-social responsiveness, associative vocabulary, numerical concept understanding, and sensory understanding. Initial results on the Caldwell PI results were similar, as evidenced in the results shown in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Measure</th>
<th>Head Start</th>
<th>No preschool</th>
<th>Other preschool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peabody Picture Vocabulary Test (PPVT)</td>
<td>26.15</td>
<td>29.67</td>
<td>33.21</td>
</tr>
<tr>
<td>Caldwell Preschool Inventory (Caldwell PI)</td>
<td>25.33</td>
<td>27.39</td>
<td>32.17</td>
</tr>
</tbody>
</table>
The results from the PPVT and the PI were disaggregated by race, showing similar differences between the two measures. In conclusion, Lee et al. (1988) found that students in Head Start programs made short-term gains but did not perform as well as the other two groups. They found that although gaps were somewhat closed as these children entered kindergarten, the gains were not sustained as they progressed in elementary school.

**Head Start and Long Term Outcomes**

Questions regarding outcomes for children who participate in early childhood programs have been raised. One might wonder: Do children maintain gains made in Head Start or other preschool programs? Do the children lose ground once they enter elementary school classrooms? How does that play out for students as they progress through elementary school? Reynolds and Temple (1998) investigated effects of the Child Parent Center Education Program in Chicago, following children who entered the program in 1986. The Child-Parent Center Education Programs were created in Chicago Public Schools for economically and educationally disadvantaged children (p. 234). This rare longitudinal study of the program took place over five to six years from preschool through third grade Reynolds and Temple (1998). Two groups were studied: those who were in the extended intervention group and the comparison group who did not have the interventions. The study sample included 559 Black and Hispanic students, all from neighborhoods that were eligible for Title I services in the schools. "The purpose of this program was to provide up to six years of intervention that emphasized nutritional needs, coordinated adult supervision, in-service training for teachers, and reading and math" (p. 234). "Subjects were tested in reading and math using the Iowa Test of Basic Skills. Scores were used to determine the cognitive growth of students from year to year, and to assess differential group performance across test levels and grades" (p. 236). Data from the study were also used to
determine grade retention and special education placement. Variables included gender, family income level, parent education, school poverty rate, math and reading achievement, cognitive readiness at kindergarten, and achievement growth in kindergarten. The researchers experienced some problems because of the high mobility rate of this group of students. Thus, the researchers were not able to follow some students regarding the extended intervention and programs they attended. Students who continued with the two- or three-year follow-on program were studied extensively.

Overall results showed the extension of the program, beyond kindergarten into second or third grade, proved to be successful. Children who attended the full program performed better than those who were in the program that ended after kindergarten. Participants in the full three years of follow-up interventions were very close to the average achievement of Chicago public school student; participants had significantly higher test scores in grade 3 as well as in grade 7. There was a difference between those who were in the program for two years versus three years. Other data showed that, compared to low SES non participants, fewer students were retained in a grade, and there were fewer referrals to special education. This study supports the need for sustained interventions for low-income children.

Foster and Miller (2007) took the idea of intervention a step further by focusing specifically on the acquisition of phonics skills as related to reading achievement. Data for Foster and Miller's research came from the Early Childhood Longitudinal Study (1998-1999). Foster and Miller (2007) studied literacy readiness skills including letter recognition, beginning and ending sounds, sight words, words in context, and literacy inference. Students were tested at the beginning and, based on results of the assessments, were placed in three groups: low, average, and high. Reports indicated that deficiencies in the area of phonics between the three
groups remained significant at the end of kindergarten and first grade. Those students who entered school at a low readiness level made gains in their phonics but did not catch up to the average and high groups. At the end of third grade, there was no significant difference between the average and low readiness groups. The results showed that students’ ability to understand letters and letter sounds was increasing, but they were still behind students in the high group (Foster & Miller, 2007).

In the area of text comprehension, Foster and Miller (2007) reported that the low group made no gains in comprehension in kindergarten because they were still learning letter identification and letter sounds. In contrast, the average and high groups made gains in comprehension in first grade, but the low group remained low. This indicated that although the phonics gap was starting to close, a comprehension gap had been uncovered. By the end of third grade, the lowest group was not attaining at the levels of the other two groups (Foster & Miller, 2007).

Garces, Thomas, and Currie (2000) investigated long-term outcomes for Head Start participants based on responses to a survey conducted in 1995. They used data from the Panel Survey of Income Dynamics (PSID), a large nationally representative data set. The PSID started in 1968 with a survey of 4,802 households. These respondents, as well as new households formed by the original parents and their offspring, were followed since 1968. Outcomes were based on the following four indicators of economic and social success: high school graduation rates, attending college, earnings, and whether or not they had ever been charged with a crime. The findings of Garces et al. (2000) indicated that Whites had better economic and educational outcomes than African-Americans did. There were improved rates of high school graduation for African-American males compared to females. Additionally, African-Americans who
participated in Head Start were less likely to have been involved in criminal activity than their siblings who did not attend Head Start.

**Summary**

The literature regarding long-term effects of Head Start on future outcomes for participants is characterized by limitations (Domitrovich et al., 2009; Garces et al., 2000). Existing studies indicate that there are some data to demonstrate positive trends, although future research is needed. When considering the effects of Head Start and other preschool programs, it is important to keep in mind the following:

- students were not randomly assigned to Head Start,
- information collected from adults who participated in the program years ago might be skewed, as recall may not be accurate, and
- the length of time that a respondent actually participated in the program might affect their memory (some children may have only participated in an eight-week summer Head Start program, making it more difficult to remember).

Additionally, there tends to be a high transiency rate among families living in poverty, making it difficult to collect accurate data.

Although results for children who participate in Head Start are varied, a majority of the literature reviewed concluded that short-term outcomes are positive. The United States is experiencing poverty at levels that have never before been seen. This review of the literature points to a need for additional research regarding outcomes for students in Head Start. In this study, I examined Head Start students who entered kindergarten with proper readiness skills, but did not consistently show achievement commensurate with that of their more affluent peers. In particular, I considered what leaders could do to change this trajectory. How can school leaders
assist teachers to provide interventions for low SES students that will allow them to continue to keep pace with higher income students?

In Chapter 3, I present the methodology I used to examine the impact of Head Start programs through first grade. I conducted a mixed methods study to examine former Head Start students’ achievement based on PALS data from kindergarten and first grade. The goal of this study was to determine what factors led to positive outcomes for Head Start students in the selected schools.
CHAPTER 3 METHODOLOGY

As mentioned in Chapter 2, students who participate in Head Start are in the economically disadvantaged subgroup of students. The research regarding outcomes for Head Start students is inconsistent. The Head Start Impact Study (2012) indicated that Head Start students started kindergarten with the readiness skills needed, but began to show a decrease in academic gains by the end of first grade. However, research focused on this decline within the first two years of elementary school is limited. The present study was designed to determine what factors led to positive outcomes for Head Start students in first and second grade in two participating schools.

In this chapter, I include the research questions the study addresses as well as my role as researcher. Then, a discussion of ethics and confidentiality in human subjects research is followed by a description of the study design, summarized in a concept map, and study procedures. Both the quantitative data (PALS and DRA) and qualitative data (interview, focus group, and record review material) are described along with analyses used. Finally, triangulation of the statistical results and the themes and assumptions that emerged from the qualitative analyses are discussed.

Research Questions

This study was designed to address the following research questions:

1. What factors affect Head Start students' performance in the primary grades?

2. How could family services at the elementary level (parenting education courses, home visits, emergency/crisis intervention, family goal setting or health education) help impact former Head Start students' performance?

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3. What are successful schools doing to increase academic performance for former Head Start students?

**Role of the Researcher**

My passion for the achievement of Title I students drives my work as a principal. I lead a school where more than 75% of students live in poverty—a phenomenon experienced by many principals across the country. I have learned what it means for students to live in poverty; how poverty affects their brain development; how toxic stressors play a part in academic success; how various demographic variables affect classroom performance. I think about how necessary it is for educators to understand the needs of students whose lives are affected by poverty every single day. I have witnessed experienced administrators frustrated by a lack of progress for subgroups of students. Additionally, teachers frequently find excuses for students who are not making gains, which oftentimes stems from the home environment.

Because of these personal experiences, I was interested in learning more about Head Start students and its impact on future outcomes, as Title I schools enroll students in kindergarten from Head Start programs each year. As the leader of a Title I school, I understand the urgency to meet the needs of all students, in order to meet federal benchmarks. Yet, for school leaders, trying to understand the key role that poverty plays in our classrooms, this presents a challenge. Many school leaders do not understand the issues faced by today's students, particularly as they relate to poverty. In this research study, I used multiple data sources, both quantitative and qualitative, to serve as checkpoints to my perspective.

As a researcher, I needed to be aware of my biases. Because I have experience working with elementary school teachers, I took measures to ensure that participants were comfortable sharing information with me. Throughout the research process, I clearly delineated my role as a...
researcher when I conducted interviews and focus groups so that participants did not think of me as a school principal. I used a reflexive journal to keep my researcher perspective. Additionally, I used protocols to maintain a consistent process during all qualitative interviews and focus groups.

**Ethics, IRB Approval, and Confidentiality**

I looked at how two Title I schools met the educational needs of low-income students. Given the vulnerability of the young students being studied, I needed to treat their information in a confidential manner. My research involved human subjects; therefore, I developed and submitted a plan to protect study participants which was approved by the Virginia Tech's Institutional Review Board (IRB). The IRB approval document is in Appendix A. In order to protect the identity of all participants, I used pseudonyms for all identifying information regarding the research subjects including: county, school district, individual schools, and individual participants. All student data was de-identified to maintain confidentiality. I worked according to the district's IRB protocol regarding obtaining data and with district personnel to collect data. I kept all copies of my dissertation, notes, research journal, and data on my laptop, which was password protected. A thumb drive, which was kept in a locked cabinet accessible only by me, was used as a backup.

**Research Design**

I used a mixed methods case study (Stake, 2006) design for my research. By using PALS data, I was able to determine specific schools where students maintained their academic achievement initially gained in Head Start. Stake (2006) refers to multiple case studies as a way for one to study a program in different settings. I used qualitative data to find themes that led to success of students in the selected sites. In case studies, the researcher seeks to understand the
entity, both how it functions and activities associated with it. I used qualitative research to study two schools to help me interpret how teachers are using best practices to help students achieve at high levels. I compared results of low-income students who attended Head Start with those who did not. Using statistical analyses, I determined student achievement from kindergarten through first grade. According to Stake (2006), a focus within case studies, which constitute a multiple case study, allows one to find characteristics of a program. Thus, the researcher needs to show how the program appears in different contexts. By studying two Title I schools, I was able to analyze the kindergarten and first grade programs in different settings. Within these settings, I investigated instructional best practices that helped these students overcome the realities of living in poverty.

I used the *Phonological Awareness Literacy Screening* (PALS) developed at the University of Virginia (2010) data for the quantitative portion of the study. I worked with a school system’s Office of Accountability to obtain the necessary data. By analyzing district-wide PALS data, I identified two schools that showed the largest gains in PALS achievement from the beginning of kindergarten through the end of first grade; these two Title I schools were selected for the study. Once the two top performing schools were identified, I conducted statistical analyses of PALS data using t-tests, analysis of variance, and multiple regressions. Additionally, I collected DRA reading levels to identify which former Head Start students were reading above, on, or below grade level once the cohort of students was in second grade. This constituted reading comprehension outcome for the study participants.

Stake (2006) refers to a case study using multiple data points as a sound methodology when researching one topic with multiple participants. In this research, I used multiple data points, both quantitative and qualitative, to research the study topic, achievement of former Head
Start students in two schools. Data sources included PALS and DRA scores, as well as focus groups, interviews, and document reviews in the two selected schools.

The concept map I developed for this study is displayed as Figure 1. It details the progression of my research methodology. The concept map shows that the research design includes both quantitative and qualitative research methods to investigate outcomes for former Head Start students. The map indicates that district-wide PALS data was used to select two Title I schools. The two types of data collected (quantitative and qualitative) are indicated in two parallel sets of boxes which lists the specific data collected in subsequent boxes. Finally, the map indicates emerging themes that lead to student success because, ultimately, identifying these themes (i.e., factors that influenced the success of former Head Start students as they move through kindergarten and first grade) was the goal of the study.
Head Start Programs: Can Early Intervention Make a Difference?

District-wide PALS Data from Kindergarten and First Grade-SY 2013-14 and 2014-15

Two Top Achieving Title I Schools

Quantitative Data
- PALS Scores for Kindergarten and First Grade in selected schools
- DRA scores for former Head Start students from 2015-16

Qualitative Data
- Interviews with Principals
- Interviews with Reading Teachers
- Kindergarten Focus Groups
- First Grade Focus Groups
- Document Reviews
- Reflective Journal

Themes Leading to Student Success

Figure 1 Concept Map
Procedures

After analyzing results of PALS data from a cohort of students from SY 2013-14 kindergarten class and tracking their data through SY 2014-15 as first graders, I determined which two Title I schools had the largest increase in scores from the beginning of kindergarten to the end of first grade. Former Head Start students in these two schools constituted the sample for the study. I then conducted statistical analyses of PALS data for the selected cohort of students. After the analyses were completed, I identified the teachers and reading specialist working with these students and conducted interviews and focus groups regarding practices being used at the two schools. I collected additional qualitative data through document reviews. The documents included Title I plans from both schools. Peer editors were used to review my work and provide feedback on readability and content.

Case Study Site Selection

In order to answer these research questions, I selected for the study two Title I schools from the same school district in the Commonwealth of Virginia. The following process was used to identify these schools was followed.

The large local school district had an extremely diverse student population. There were many school sites, each with their own unique school characteristics. There are several Title I elementary schools in the district, which meant I was able to determine the sites where students performed at high levels compared to other schools within the district.

I worked with the school district's Office of Accountability to collect PALS data for SY 2013-2014 and SY 2014-2015 for each of the elementary schools in the district. Initial pass rates for all elementary schools on kindergarten PALS for SY 2013-2014 were compared to end-of-year first grade pass rates for SY 2014-2015. By analyzing PALS from two years of data, I
determined which two schools had the largest increase over time from the beginning of kindergarten to the end of first grade. Once these sites were determined, I followed the protocols of both the school district and Virginia Tech's IRB to contact the administrators of the schools to request permission to conduct my research in their elementary schools. See Appendix B for the e-mail requesting permission.

Case A Elementary and Case B Elementary had the highest gains of the Title I elementary schools. Specifically, Case A Elementary’s PALS pass rate increased from 71% to 82%, an increase of 11 points. Case B Elementary’s PALS pass rate increased by 23 points from 66% to 89%. Therefore, these two schools were selected as the subject of this research study. After obtaining permission from the principals, I proceeded with qualitative data collection.

**Quantitative Data**

Quantitative research focuses on collecting data and using variables to explain and predict relationships (Johnson & Christensen, 2012). By using quantitative methods, researchers can use data to test hypotheses to either confirm or disprove their theories (Johnson & Christensen, 2012). I utilized data from the *Phonological Awareness Literacy Screening* (PALS) to determine reading achievement of students participating in this study.

**PALS**

PALS is an assessment given to students in kindergarten through third grade throughout the Commonwealth of Virginia as a means to assess their phonological awareness, the foundation for reading. Components of PALS include: rhyme awareness, beginning sound awareness, alphabet knowledge, letter sounds, spelling, concept of word, and word recognition. A score is assigned to each component. The scores are added together to determine a summed score. There are fall and spring benchmarks identified by the state for each grade level.
students who fall below the benchmark are identified as needing intervention (PALS, 2015). Two versions of PALS were used: PALS-K, for students in kindergarten, and PALS 1-3, for students when they were in first grade. PALS is used to determine a child's phonological awareness. It is not a useful tool for assessing a student's reading comprehension.

Phonological awareness scores were collected, and analyzed for this study using students' PALS scores from SY 2013-14 and SY 2014-15 at the two schools (Case A and Case B elementary schools). Comparisons were made for scores collected in spring were compared with scores collected in fall spring of each student's kindergarten and first grade experience. Because PALS-K and PALS 1-3 use different measurement scales, a score similar to a z-score was created to allow for comparison (these scores will be referred to as z-scores). The z-score computed in this study differs from a true z-score because the value of 0 was set to the passing score for each of the PALS assessments rather than to the mean score. The passing score was used because I did not have access to a population mean for the PALS assessments and because the passing scores are educationally meaningful numbers. Since standard deviations were available, the z-scores were scaled such that a score of 1.0 indicate the student scored one standard deviation above the passing score on the assessment.

The formulas for calculating the z-scores differed based on the passing score and standard deviation for each assessment. The z-scores were created using the following formulas for each grade:

- Kindergarten: Student score (fall K) equals 29 divided by 18.32. I created this formula based on the fall kindergarten benchmark of 29 with 18.23 being the mean for students not needing assistance.
- Grade 1: Student score (spring 1) equals 35 divided by 9.76. Again I created this formula based on the spring first grade benchmark of 35 and 9.76 being the mean for students not needing assistance.

Statistical analyses of PALS data were conducted using JMP Pro12. The following three tests were conducted on the PALS data: t-tests, ANOVA, and multiple regression.

I analyzed PALS data from the two selected schools to identify student performance in kindergarten and first grade. Data included: Fall Kindergarten PALS scores (FK PALS); Spring first grade PALS scores (SP1 PALS); and the difference between the FK and SP1 PALS scores (Diff between FK and SP1 PALS). I conducted the three statistical analyses to examine growth over time for low-income students using the following variables: gender, SES, enrollment in Head Start, limited English proficiency, and race. Table 2 provides a summary of the measures used and labels that served as abbreviations for each measure.

Table 2
Summary of Measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Kindergarten PALS</td>
<td>FK PALS</td>
</tr>
<tr>
<td>Spring First Grade PALS</td>
<td>SP1 PALS</td>
</tr>
<tr>
<td>Difference between Fall Kindergarten</td>
<td>Diff. FK and SP1 PALS</td>
</tr>
<tr>
<td>&amp; Spring First Grade PALS</td>
<td></td>
</tr>
</tbody>
</table>

Using JMP Pro 12, I conducted independent samples t-tests to compare means of the following independent variables: gender, economic status, Head Start, and limited English proficiency for students in the two selected schools on the FK PALS, SP1 PALS, and the difference between FK and SP1 PALS. Next, I conducted analysis of variance (ANOVA) to test differences among the following racial/ethnic groups: White, Black, Hispanic, Asian, and multi-
race on FK PALS, SP1 PALS, and the difference between FK and SP1 PALS. Finally, I ran multiple regressions to predict outcomes on FK PALS, SP1 PALS, and the difference between FK and SP1 PALS using the following independent variables: gender, Case A or B Elementary, economic status, Head Start, limited English proficiency, Black, White, Asian, and multi-race. The results of the statistical analyses are presented in Chapter 4.

**DRA**

Early phonological skills ultimately lead students to become readers. It is important to determine how students comprehend what they read, in order to know whether they are progressing through the stages of literacy. A widely used assessment that measures students' reading comprehension is the *Developmental Reading Assessment* (DRA) developed by Beave (2006). Components of the DRA include: reading engagement, oral reading fluency and comprehension. Students show their understanding of text by giving both oral and written responses to comprehension questions. The examiner determines a score for each student ranging from 1 to 80. The number corresponds to a reading level, which indicates where students are reading. For example, DRA level 4 is typical for students at the beginning of first grade and level 16 is the benchmark for students at the end of first grade. The DRA is an excellent tool to determine instructional reading levels for students. One drawback to the DRA is the amount of time it takes to administer the test, since it is given one-on-one. For teachers with classes of 20+ students, testing can take many days to complete. In order to determine how former Head Start students progressed in reading comprehension after first grade, I asked principals in each school for DRA data for second grade Head Start students. By using both PALS and DRA data, I was able to understand how students in second grade performed in the area of reading for the quantitative portion of my mixed methods research.
Qualitative Data

Qualitative data can be collected through various venues which allows the researcher to study what is ordinary for the specific case being studied (Stake, 2006). Oftentimes, case studies are conducted using focus groups, observations, interviews, and document analysis. All information must be coded to allow the researcher to make meaning of data collected (Stake, 2006). In this research, I used interviews and focus groups, which allowed me to study personnel and outcomes in the successful schools. My qualitative data collection methods included interviews with principals and reading teachers at both schools as well as focus groups with kindergarten and first grade teams at both sites. All data was coded using the NVivo 11 software program. By coding data, I was able to identify themes and transfer them into data analysis worksheets (Stake, 2006). I also conducted a document review of each school's Title I Plan.

Stake (2006) discusses the importance of triangulating data in qualitative research. This enables researchers to confirm key points and assure that none are overlooked. I conducted one-on-one interviews with reading teachers and principals at the two schools. Once the interviews were completed, I conducted a focus group with kindergarten and first grade teams at each school as a means to identify participants' reflections and thoughts on teaching and learning. In the sections ahead, I will present my rationale and protocols for each of these data collection methods.

Data Sources

For this study I drew my data from staff at the two participating schools. For each of these schools I gathered data through one-one-one interviews, focus groups, and record reviews. Each of these sources is described in detail the following sections.
Interviews

Interviews are appropriate for data collection, as this approach allows the researcher to discuss a "theme of mutual interest" (Kvale & Brinkman, 2009, p. 82). I used the interview guide or topical approach (Patton, 2002). The interview guide is an approach that uses a list of questions to ensure that questioning remains consistent through each interview. A strength of the interview guide is that the interviewer can plan to allow for the best use of limited time when conducting the interview. This method of interviewing allowed me to uncover the participants’ views on reading achievement of students in kindergarten and first grade. I explored specific and general information about best practices being in the schools by structuring questions that allowed participants to give their perspective. One weakness of using interviews in qualitative research lies in the need to maintain trust between the interviewer and interviewee. Given that I was not familiar with the staff in either school, I had to build a sense of trust that allowed participants to respond freely to questions. I spent a few minutes at the beginning of each interview and focus group sharing background regarding my study and setting the tone for a positive experience. I also provided information regarding confidentiality by using the IRB consent process and requested that participants provided a pseudonym for themselves for the interview and the focus group. See Appendix C for the consent document.

The following interview protocol was used for principals:

- Generally speaking, can you give your perceptions of how former Head Start students are performing? (Prompts: academically, socially, behaviorally)
- Why do you believe they are performing this way?
- What training have you provided teachers for students living in poverty? (Prompts: differentiated instruction, Ruby Payne, etc.)
• In the course of your practice, what types of services have you seen that provide assistance to parents? (Prompts: English classes, parent education classes, family goal setting, or health education)

• What services would you like to offer parents that could increase their involvement in their child's education?

• What strategies do you use to get parents involved in their child's education?

• What are your feelings about teaching and learning for students who live in poverty? Can you share a story about a time when you worked with a student in this subgroup? (Prompts: Who was involved? What happened? How did it make you feel?)

• Do you know which students in your school participated in Head Start, pre-school, or those who had no pre-K experience? Do you think it is important for teachers to know this information? Why or why not?

• Is there anything else that you would like to add?

The protocol for the interviews with the principals is in Appendix D.

After interviewing principals, I focused on interviewing the reading teachers at each school. Reading teachers play an important role in the elementary school setting, as they help teachers better understand reading instruction and interpret results from assessments. Since reading teachers can focus all of their attention on this important area of the curriculum, I chose to interview them to get their perspective on the curriculum, instruction, and assessment in the selected schools.

The following interview protocol was used for reading teachers:

• What strengths and weaknesses do you see in your kindergarten and first grade students in reading? (Prompts: phonological skills, comprehension skills)
• What types of staff development have you used to increase teachers' strategies in reading instruction?

• What specific instructional strategies do you see teachers use to teach reading?

• How do you believe parents can support literacy at home? What do you see as the role of parental involvement in the development of literacy skills? (Prompts: strategies, etc...)

• What types of activities or programs have you see used here to promote parent engagement in the school to promote reading?

• What are your feelings about teaching and learning for students who live in poverty? Can you share a story about a time that you worked with a student in this subgroup? (Prompts: Who was involved? What happened? How did it make you feel?)

• Do you know which students in your school participated in Head Start, pre-school, or those who had no pre-K experience? Do you think it is important for classroom teachers to know this information? Why or why not?

• Is there anything else that you would like to add?

The protocol for the reading teachers’ interviews is in Appendix E.

**Focus Groups**

Focus groups are an appropriate means to quickly collect a large quantity of data (Marshall & Rossman, 2011). The cases studied included kindergarten and first grade teams in the two Title I schools with the largest increase in scores on PALS from the beginning of kindergarten to the end of first grade. Stake (2006) suggests that four to ten cases are common in multiple case studies. I studied practices being used by kindergarten and first grade teams in the two schools that performed at high levels on PALS, for a total of four teaching teams. By
conducting focus groups with the kindergarten and first grade teams in each school, I was able to collect qualitative data that provided a depth of understanding regarding best practices being utilized to yield high achievement of the young participants in this study.

The purpose of the focus groups was to gather information from teams of teachers regarding former Head Start student's performance in the classroom. This provided a greater understanding of each school and its team as it pertained to student achievement. This format provided a perspective of the teams as a whole and their thoughts on instruction for all students. The research protocol questions focused on identifying what teachers did that helped students be successful in reading. The protocol included prompts that were used when the questions were not eliciting the desired data (Marshall & Rossman).

The interview protocol for focus groups included the following questions:

- What would you say are the strengths and weaknesses of your students in reading class?
- What specific instructional strategies do you use to teach reading?
- What strategies have been used at your school to increase parent involvement in their child's education?
- How can parents provide support at home that would help students perform better in the classroom?
- What are your feelings about teaching and learning for students living in poverty?
- Is there anything else that you would like to add?

This protocol for the focus groups is in Appendix F and the focus group introduction, prompts, and closing is in Appendix G.
**Document Review**

Document review includes analysis of documents produced in the course of everyday events (Marshall & Rossman, 2011). A major advantage to using document review is to gather data regarding a school’s efforts to increase parent support through their Title I programs. One weakness of document review lies in the interpretation of the written materials (Marshall & Rossman, 2011, p. 162). I conducted a document review by examining each school's Title I plan, using a consistent review protocol. This was intended to eliminate biases and address limitations.

The following document review protocol was used for each school’s document:

- What is the history of the document?
- How did I get it?
- What guarantee is there that it is what it pretends to be?
  
  Is the document complete, as originally constructed?
- Has it been tampered with or edited? If the document is genuine, under what circumstances and for what purposes was it produced?
- Who was/is the author?
- What was he trying to accomplish? For whom was the document intended?
  
  What were the maker’s sources of information? Does the document represent an eyewitness account, a secondhand account, reconstruction of an event long prior to the writing, an interpretation?
- What was or is the maker’s bias?
  
  To what extent was the writer likely to want to tell the truth?
• Do other documents exist that might shed additional light on the same story, event, project, program, context? If so, are they available, accessible? Who holds them?

The protocol, also call document analysis authenticity protocol, is in Appendix H.

Units of Analysis

Stake (2006) describes the condition to be studied as a "quintain" meaning the targeted collection. In my research, there are two major quintains: the school and the teaching teams. Stake (2006) refers to multiple case studies being focused on at least one research question, which is the conceptual framework for building the study. My first research question focused on factors that affect Head Start students' performance in the primary grades. Since I conducted focus groups in kindergarten and first grade, the teaching teams served as the unit of analysis in the case study. My next question sought to determine the relationship between family services at the elementary level and student performance. Again, the question was asked of teaching teams, thus the teams were the unit of analysis. The final question solicited information regarding what successful schools are doing that led to increasing academic performance of former Head Start students. The school focus groups served as the unit of analysis.

Thus in the qualitative analyses, I focused on two schools, interviewed principals and reading teachers, and conducted focus groups with kindergarten and first grade teams in each. I focused on interviews and focus groups as units of analysis. I also conducted a review of each school’s Title I School Plan

Data Analysis

In a mixed methods case study, both qualitative and quantitative data must be analyzed. PALS was used for the quantitative portion of this study. I analyzed PALS data to initially determine schools that I studied. Following the selection of these two schools, I conducted
quantitative data analysis using PALS data for the cohort of students who entered kindergarten in the fall of 2013. This data was analyzed using JMP Pro 12 to conduct the following statistical measures: t-tests, ANOVA, and multiple regression. Specific information regarding the results from the analyses are presented in Chapter 4. Additional information was also collected on reading levels using DRA scores for the former Head Start students at both schools.

Qualitative data was collected at the two schools. Interviews were conducted with the principal and reading teachers of each school, and focus groups were held with the kindergarten and first grade teams in each schools. I analyzed the Title I School Plans from each site for my document reviews. Additionally, I completed reflexivity journals after each interview and focus group, and throughout the research process. A copy of the reflexivity protocol is included in Appendix I.

Stake (2006) refers to multiple case study as a way to examine something that has many cases, parts, or members. He discusses how each case is unique with its own problems, relationships, and stories. Through careful analysis of different data sources, researchers determine the quintain—that which the researcher wants to understand and then study it using cases in a multiple case study. In this study, teaching teams served as the quintain within the two schools. Stake provides researchers with the following worksheets to analyze data:

- Stake’s Worksheet #2 Themes of the Multicase Study,
- Stake’s Worksheet #3 Themes of the Multicase Study, Analyst's Notes While Reading a Case Report,
- Stake’s Worksheet #4 Themes of the Multicase Study, Ratings of Expected Utility of Each Case for Each Theme, and
Using Stake's (2006) Worksheet 2 (see Appendix J), I created four themes based on the emergence of common ideas shared during interviews and focus groups. Once the four themes were determined, I used Stake's worksheet 3 (see Appendix K) to analyze each case report for uniqueness of case situations. This information was transferred to Worksheet 4 (see Appendix L) to analyze ratings of expected utility of each case for each theme. From the data collected on worksheet 4, I developed seven assertions that were representative of the interviews and focus groups. Using worksheet 5 (see Appendix M), A Matrix for Generating Theme-Based Assertions from Case Findings Rated Important, I rated the four themes for prominence, ordinariness, utility, and importance. I analyzed the seven assertions against the four themes. This worksheet broke down each interview and focus group by the seven assertions, cross-referenced with themes. Themes and assertions are discussed in detail in Chapter 4.

All interviews and focus groups were recorded using a Sony IC handheld recorder. Interview and focus group recordings were transcribed by a professional transcriptionist. After receiving the transcriptions, I used NVivo 11 software to code the transcripts, which allowed me to transfer information from the interviews and focus groups into Stake's worksheets. By following the step-by-step process of Stake for multiple case studies, I generated themes from all qualitative data sources. In the next section, I discuss means to ensure validity and reliability in this study.

Validity

Validity in quantitative research depends on the selected instrument to ensure that it measures what it is supposed to. In this study, the Phonological Awareness Literacy Screening
was used as the assessment tool. The PALS is an assessment used throughout the Commonwealth of Virginia to measure students' knowledge of literacy fundamentals. PALS was designed through research at the University of Virginia and is approved for use by the VDOE. The PALS screening tool has undergone extensive assessment for validity including: predictive validity, where PALS was correlated to the Stanford-9, concurrent validity, where PALS was compared to the Stanford-9 on specific subsets that are similar to PALS, and construct validity where principal components and discriminant analyses were conducted to test the theoretical model on which the PALS is based.

Validity in qualitative research has been summarized by Patton, "The person doing the research is the instrument" (2002, p. 14). Leech and Onwuegbuzie (2007) refer to qualitative data as a means to strengthen research designs. The qualitative data can support the quantitative portion in a mixed methods study (Leech & Onwuegbuzie, 2007). In order to ensure validity in qualitative research, data must be collected and analyzed to show what the researcher is intending to measure. Triangulating the data by using multiple sources is one way to ensure validity. Patton (2002) discusses the importance of utilizing different data sources to test for consistency. He refers to instances where inconsistencies are found as "opportunities for deeper insight into the relationship between inquiry approach and the phenomenon under study" (p. 248). Triangulation was established through use of different data sources (principals' views and teachers' views), methods (individual interviews, focus group interviews, and document reviews) and data types (both quantitative and qualitative) (Meijer, Verloop, & Beijaard, 2002). Qualitative data were analyzed by discovering themes within the individual cases. Stake (2006) recommends creating worksheets to help analyze themes found within individual case reports. I
created these worksheets using Stake's (2006) recommendation. Worksheets used in this study are included in Appendices I, J, K, and L.

Throughout my research, I ensured validity by triangulating data from multiple data collection methods and multiple data sources. I used interview and focus group protocols to promote validity utilizing a common set of questions that were asked of participants. By following the same protocols for all interviews and focus groups, I was able to compare responses from one group/interview to the others. The protocols were not shared with participants in advance. Validity in this study was strengthened through my use of a reflexive journal. I used a specific protocol for each entry. The protocol allowed me to reflect on each interview and focus group, causing me to think in depth about the entire experience. I used the reflexive journal to consider my personal bias, as I am close to the research in my role as a principal. I made entries into the reflexive journal throughout the research and data analysis phase of my research.

Finally, I used peer review as a means to increase validity in my research. I had colleagues in my doctoral cohort read my work and provide feedback during the research process. All colleagues are educational leaders in various areas of the state. I asked them to read my work, focusing on specific sections at a time. They provided me with effective feedback that caused me to reflect and make changes in my dissertation for clarity. Sometimes, they were able to help me rethink ways that material was presented. Other times, I did not necessarily agree with their suggestions. They provided not only editorial feedback, but general thoughts on the process of research, as they are going through similar phases of writing a dissertation. This method provided another avenue for validity in my study. In the following section, I describe how my research attends to construct, internal, and external validity.
Construct Validity

Construct validity refers to the process of data collection, ensuring that proper procedures are developed and followed throughout the study. Stake (2006) calls for triangulation to ensure that the research procedures used frame a clear picture with meaning. In my work, I triangulated the quantitative and qualitative data by analyzing results of statistical analyses and comparing the information given in interviews and focus groups. I discovered areas of the study that correlated to one another, which were illuminated through the research process. One drawback to construct validity lies in researcher bias (Yin, 1994). Since I am very close to the topic of reading achievement for low-income students, I was consistently aware of this bias and worked to ensure that I look at all data collected through a clear, non-biased lens.

Internal Validity

Internal validity in research is concerned with the following major points: a) the research making sense, b) the results are credible to those who read the study, and c) the overall context of the study gives an accurate picture of the topic (Miles & Huberman, 1994). In my work, I investigated the relationship between Head Start enrollment and reading achievement for students once they are in kindergarten and first grade. By triangulating data collected, using consistent protocols, through interviews, focus groups, and document reviews, I ensured internal validity. Utilizing these methods allowed me to give an accurate picture of the best practices being used in the case study schools that are increasing reading achievement for former Head Start students when they are in kindergarten and first grade.

External Validity

External validity allows for findings of a qualitative study to be generalized to other populations (Marshall & Rossman, 2011). By focusing on multiple data sources and utilizing
specific data collection/analysis methods, the external validity can be strengthened. Stake (2006) suggests analyzing four to ten cases to allow for generalization. My research focused on a multiple case study in which I studied two schools and four different teaching teams. Through this approach, I discovered common themes that existed in both schools to increase student achievement. By triangulating the data collected from interviews, focus groups, and document reviews, I found themes that influenced the growth of former Head Start students. Since I researched two Title I schools, I was able to examine how themes were similar and different at the two sites.

**Reliability**

Reliability in research refers to consistency or stability of results found in similar cases (Johnson & Christensen, 2012). In qualitative work, reliability may be called into question due to underlying assumptions. I used statistical analyses of PALS scores along with content analysis of interviews and focus groups transcripts as well as document review results. I utilized a professional transcriber to provide transcriptions of the focus group s and the individual interviews. Since this topic is very meaningful to me and I have professional experience in this area, I needed to be mindful that my qualitative methods were not influenced by my personal biases. The use of protocols for interviews and document reviews provided transparency for my work. I also used consistent and transparent methods in my work and followed specific protocols to ensure reliability.

**Summary**

This mixed methods multiple case study research focused on how two schools are meeting the needs of formerly enrolled Head Start students in kindergarten and first grade. The case study took place within two schools using both quantitative and qualitative data.
Quantitative data was used to determine the specific schools I studied. Additionally, quantitative data was used to determine outcomes for students from the beginning of kindergarten through the end of first grade. The quantitative data were used to analyze performance of students who attended Head Start, as well as those who did not. Qualitative methods included interviews, focus groups, document reviews, and peer debriefing. I triangulated data to determine themes within the schools that led to high student achievement. My goal was to gain insight into how schools are meeting the needs of primary students, including those who attended Head Start and enabling them to make gains in reading from the beginning of kindergarten to the end of first grade.
CHAPTER 4

In earlier chapters, I focused on the role that poverty plays in the development of young children and the increase in poverty in the United States. For American children living in poverty there exists a rising achievement gap between them and children raised in middle and upper class families (Rebell, 2007). While poverty continues to grow in our country, educators, lawmakers, and government officials have been unsuccessful in addressing this achievement challenge in public schools.

Head Start is a federally funded program designed to provide education for economically disadvantaged young students in the U. S. Since Head Start began in 1965, research shows overall positive results for Head Start students as they enter kindergarten; however, the positive effects fade over time (Currie & Thomas, 1995). In Chapter 2, I reviewed research that indicates how poverty affects both child development and academic outcomes for students. The literature shows that poverty influences the development of young children particularly their cognitive development (Blair et al., 2005). The literature on the history of Head Start indicates that the purpose of the program is to provide interventions for children living in poverty that prepare them for kindergarten (Currie, 2001). I shared information regarding early intervention programs that have led to positive outcomes for students living in poverty, as well as research on outcomes for students who attended Head Start. Research was also highlighted about what it means for students to be ready for school with appropriate school readiness skills. These skills involve various domains of child development including emotional competence, motor development, physical well-being, and pre-academic skills. Pre-academic skills, including emergent literacy, is the focus of this study.
The Head Start Impact Study, described in Chapter 2, examined effects of Head Start into the early years of elementary school (2012). According to this study, outcomes at the end of Head Start were favorable; however, differences were not evident as the students moved through elementary school. The review of literature concluded with the need for further research as to why Head Start students are not maintaining academic progress through kindergarten and first grade.

The present study was designed to contribute to the limited knowledge base about Head Start students by addressing the following three research questions:

1. What factors affect Head Start students' performance in the primary grades?
2. How could family services at the elementary level help impact Head Start students' performance?
3. What are successful schools doing to increase academic performance of former Head Start students?

In Chapter 3, I shared the methodology for the study. The mixed methods case study was chosen because it allows for the use of both quantitative and qualitative data, thereby strengthening the findings. I shared how my role as the researcher of this study connected to my experiences in working in Title I schools and indicated my need to be aware of my biases when conducting the research. I also focused on the research design including qualitative and quantitative data collection and analyses and detailed the process used to collect both quantitative and qualitative data. I explained the site selection process and presented a concept map to outline the overall research plan for the study. In the next section, I explained the quantitative data collection and analysis processes. By including qualitative data through the use of interviews and focus groups, I was able to gather in-depth information about the instruction
provided for low-income students at both schools. Lastly, I concluded with a discussion of issues related to validity and reliability especially as they relate to triangulating data (Patton, 2002). I discussed specific strategies used to ensure validity including my use of interview protocols, a reflexive journal, and peer review. Additionally, I explained validity of the PALS assessment, important quantitative data used in my study. When considering reliability in this study, I shared aspects of the study used to address reliability including: statistical analysis methods, recording of interviews and focus groups, use of document analysis protocols, and use of a professional transcriber. Chapter 3 concluded with a summary of the case study used to address my research questions regarding performance of Head Start students in kindergarten and first grade.

This chapter contains findings from the mixed-methods case study of two high performing Title I elementary schools. I begin by describing the two case study schools by providing demographic information about each school and study participants. This is followed by a presentation of the results of the quantitative analyses conducted on PALS, FK, SP1 PALS, and DRA data for the participating cohort of students. For the qualitative findings, I present the assertions and themes discovered through analysis of the interviews, focus groups, and document reviews. The qualitative analysis process I used is based on the work of Stake (2006). In the presentation of the results I summarize findings with a discussion of triangulation of quantitative and qualitative data which suggest areas of additional research for further examining outcomes for Head Start students

Case A Elementary

Case A Elementary School is a large Title I school with a diverse population. In SY 2013-14, there were 843 enrolled students including a Head Start program with 36 participants.
The student body ethnic makeup was 75% Hispanic, 12% Black, 7% White, and 6% two or more races. The free/reduced lunch rate was 98%. Most students are bused to school from areas surrounding the school site.

The principal at Case A Elementary has been the leader of the school for 25 years. The kindergarten team has eight teachers in addition to ESOL teachers and reading specialists who provide support to students. Each kindergarten class has a part time teacher's assistant. The first grade team has seven members and is supported by similar resources as the kindergarten team (i.e., ESOL teachers and reading specialists). There are three reading teachers who work with teachers and students. The Head Start program has been housed at Case A Elementary School for 24 years. According to the principal, the program had 36 children enrolled in SY 2013-14 with two teachers and two teacher's assistants working with the children. For this research study, 96 students were studied. 20 students participated in the Head Start program and 76 did not participate in Head Start. Adult participants from Case A Elementary included: the principal, one reading teacher, the kindergarten team, and the first grade team. The principal and reading teacher participated in interviews. The kindergarten and first grade teams participated in separate focus groups.

The climate at Case A Elementary was inviting and friendly. When I entered the school, I was immediately greeted by the office staff. As I waited for the principal, parents were bringing their children into school. The office staff responded to them quickly. I noticed that both secretaries spoke Spanish to the non-English speaking parents. The principal took me to her office for the interview, where I noticed bookshelves with resources, some that I have in my own office. When we left her office to go to the kindergarten classroom for their focus group, classes were moving throughout the hallways. I watched students coming up to hug the principal. I saw
teachers walking their classes throughout the hallways. The teachers appeared friendly and happy. Students were orderly and well-behaved. The school was clean and decorated with student work. I got the sense that this school is a place where each staff member takes ownership of all students.

**Case B Elementary**

Case B Elementary School is a large Title I school serving students who live primarily within walking distance of the school. In SY 2013-14 there were 800 students in grades K-5. The Head Start program that feeds into Case B Elementary is housed in a near-by local high school with 30 participants. The kindergarten team is comprised of five teachers. The first grade team includes five teachers. The student body ethnic makeup was Hispanic-47%, White-34%, Black-12%, Asian/Pacific Islander-4%, and two or more races-4%. The free/reduced lunch rate was 62%.

The principal at Case B Elementary School has worked at the school for 34 years and as the principal for 17 years. The kindergarten team has five members, as well as ESOL teachers and reading teachers who provide support to students. Each kindergarten class has a part-time teacher’s assistant. There are four reading teachers who work with teachers and students. The Head Start program is located off-site. According to the principal, approximately 30 students enter kindergarten from Head Start each year. For this research study, 99 students from Case B Elementary School were studied. Eight students participated in Head Start and 91 did not participate in Head Start. Adult participants from Case B Elementary included: the principal, two of four reading teachers, the kindergarten team of five teachers, and the first grade team of six teachers. The principal and reading teachers participated in interviews. The kindergarten and first grade teams participated in separate focus groups.
When I arrived at Case B Elementary, I went into the office, where I was greeted by the secretary. She said she knew that I was coming and asked me to wait in the hallway for the principal. As I sat there, I could hear the physical education class in the gym. The teacher was positive and encouraging to the students. Students were laughing as they participated in the activities. I saw students coming into the office. I did notice that students travelled in pairs. After a few minutes, the secretary came out to let me know the principal was ready for me. As we went into the office, a student was talking to the principal. She was trying to clarify what the student needed. It was funny, as during her interview she referred back to this interaction saying, "It took five of us to figure out what T.G. was up here in the office for, but even you pitched right in and helped." Her office was brightly decorated with awards and diplomas hanging on the walls. When we finished our interview, we walked throughout the school. She interacted with each class that was in the hallways. Students were happy and teachers were extremely friendly. This school was immaculate. I noticed that messages were displayed regarding character education and positive expectations. As I interviewed the reading teachers and kindergarten and first grade teams, I could feel the energy in this positive learning environment.

**Student Information**

I collected demographic data about the students who were participants in this study. This data included gender, whether or not they are considered economically disadvantaged, whether or not they participated in Head Start, whether or not they are considered limited English proficient (LEP), and their races. Table 3 provides demographic information for each school, as well as combined totals.
Table 3

Demographic Information for Case A and Case B Elementary School Students

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Gender</th>
<th>Disadvantaged Status</th>
<th>Head Start Status</th>
<th>LEP Status</th>
<th>Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case A</td>
<td>96</td>
<td>45 male</td>
<td>56 disadvantaged</td>
<td>20 Head Start</td>
<td>56 LEP</td>
<td>74 Hispanic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51 female</td>
<td>40 non-disadvantaged</td>
<td>76 Non Head Start</td>
<td>40 Non LEP</td>
<td>2 White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 Black</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 Asian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 two or more</td>
</tr>
<tr>
<td>Case B</td>
<td>99</td>
<td>52 male</td>
<td>61 disadvantaged</td>
<td>8 Head Start</td>
<td>42 LEP</td>
<td>50 Hispanic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>47 female</td>
<td>38 non-disadvantaged</td>
<td>91 Non Head Start</td>
<td>57 Non LEP</td>
<td>28 White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 Black</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 Asian</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 two or more</td>
</tr>
<tr>
<td>Cases</td>
<td>195</td>
<td>97 male</td>
<td>117 disadvantaged</td>
<td>28 Head Start</td>
<td>98 LEP</td>
<td>124 Hispanic</td>
</tr>
<tr>
<td>A &amp; B</td>
<td></td>
<td>98 female</td>
<td>78 non-disadvantaged</td>
<td>167 Non- Head Start</td>
<td>97 Non LEP</td>
<td>30 White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23 Black</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>10 Asian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8 two or more</td>
</tr>
</tbody>
</table>

Quantitative Results

In this study, I used independent samples t-tests, ANOVA, and multiple regressions to analyze PALS data from the two schools. The tests allowed me to make comparisons among a number of variables to understand student outcomes. The results of each analysis is included in subsequent sections.

Independent Samples t-Tests

Independent samples t-tests are used to compare means between unrelated groups on the continuous dependent variable. For this study, the independent samples t-test was used to compare means of the following independent variables: gender, disadvantaged, Head Start, and limited English proficient on the following dependent variables: Fall Kindergarten PALS (FK
PALS), Spring First Grade PALS (SP1 PALS), and Difference between Fall Kindergarten and Spring First Grade PALS (FK PALS and SP1 PALS). Table 4 displays the results of the independent samples t-tests.

Table 4

*Results of Independent Samples t-Tests*

<table>
<thead>
<tr>
<th>Test</th>
<th>Variable</th>
<th>Mean</th>
<th>T ratio</th>
<th>P value</th>
<th>T ratio</th>
<th>Upper Confidence Limit</th>
<th>Lower Confidence Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>FK PALS</td>
<td>Female</td>
<td>1.23</td>
<td>1.11</td>
<td>0.27</td>
<td>1.11</td>
<td>0.61</td>
<td>-0.17</td>
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<tr>
<td></td>
<td>Male</td>
<td>1.01</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SP1 PALS</td>
<td>Female</td>
<td>1.38</td>
<td>-0.80</td>
<td>0.42</td>
<td>-0.80</td>
<td>0.23</td>
<td>-0.54</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>1.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference - FK and SP1 PALS</td>
<td>Female</td>
<td>0.15</td>
<td>-1.88</td>
<td>0.06</td>
<td>-1.88</td>
<td>0.02</td>
<td>-0.77</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FK PALS</td>
<td>Disadvantaged Non-Dis.</td>
<td>0.94</td>
<td>-3.27</td>
<td>0.0013*</td>
<td>-3.27</td>
<td>-1.16</td>
<td>-0.29</td>
</tr>
<tr>
<td></td>
<td>Non-Dis.</td>
<td>1.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP1 PALS</td>
<td>Disadvantaged Non-Dis.</td>
<td>1.30</td>
<td>-2.83</td>
<td>0.0051*</td>
<td>-2.83</td>
<td>-1.05</td>
<td>-0.19</td>
</tr>
<tr>
<td></td>
<td>Non-Dis.</td>
<td>1.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference - FK and SP1 PALS</td>
<td>Disadvantaged Non-Dis.</td>
<td>0.36</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.56</td>
<td>-0.35</td>
</tr>
<tr>
<td></td>
<td>Non-Dis.</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FK PALS</td>
<td>Head Start Non-Head Start</td>
<td>1.93</td>
<td>3.46</td>
<td>0.0007*</td>
<td>3.46</td>
<td>1.49</td>
<td>0.41</td>
</tr>
<tr>
<td></td>
<td>Non-Head Start</td>
<td>0.98</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SP1 PALS</td>
<td>Head Start Non-Head Start</td>
<td>1.41</td>
<td>-0.18</td>
<td>0.86</td>
<td>-0.18</td>
<td>0.50</td>
<td>-0.60</td>
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<td></td>
<td>Non-Head Start</td>
<td>1.47</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Difference - FK and SP1 PALS</td>
<td>Head Start Non-Head Start</td>
<td>-0.52</td>
<td>-3.6</td>
<td>0.0004*</td>
<td>-3.6</td>
<td>-0.45</td>
<td>-1.55</td>
</tr>
<tr>
<td></td>
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<td>0.48</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>FK PALS</td>
<td>LEP Non-LEP</td>
<td>0.62</td>
<td>-5.5</td>
<td>&lt;.0001*</td>
<td>-5.5</td>
<td>-0.65</td>
<td>-1.40</td>
</tr>
<tr>
<td></td>
<td>Non-LEP</td>
<td>1.63</td>
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</tr>
<tr>
<td>SP1 PALS</td>
<td>LEP Non-LEP</td>
<td>1.19</td>
<td>-2.82</td>
<td>0.0053*</td>
<td>-2.82</td>
<td>-0.16</td>
<td>-0.92</td>
</tr>
<tr>
<td></td>
<td>Non-LEP</td>
<td>1.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference - FK and SP1 PALS</td>
<td>LEP Non-LEP</td>
<td>0.57</td>
<td>2.39</td>
<td>0.018*</td>
<td>2.39</td>
<td>0.87</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>Non-LEP</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* indicate significant results at p<.05
Model 1: FK PALS-Disadvantaged Status

The first model investigates the impact of disadvantaged status on PALS scores of at the beginning of students’ kindergarten year. The 145 disadvantaged students and 50 non-disadvantaged students were given the Fall Kindergarten PALS (FK PALS) assessment. The results showed that disadvantaged students had a z-score of 0.94 and non-disadvantaged students had a z-score of 1.66, for a mean difference of 0.72. A t-test comparing the two was statistically significant \( t(193) = -3.27, p = 0.0013 \). In addition, the 95% confidence interval for the difference was \(-1.16 \leq \mu \leq -0.29\). The results demonstrated that non-disadvantaged students scored significantly higher than disadvantaged students on FK PALS. Possible reasons for this could be limited reading and literacy experiences in the homes of disadvantaged students.

Model 2: SP1 PALS-Disadvantaged Status

The second model investigates the impact of disadvantaged status on PALS scores for students at the end of their first grade year (SP1 PALS). The 145 disadvantaged students and 50 non-disadvantaged students were given the Spring first grade PALS assessment. The results showed that disadvantaged students had a z-score of 1.3 and non-disadvantaged students had a z-score of 1.9, for a mean difference of 0.6. A t-test comparing the two was statistically significant \( t(193) = -2.83, p = 0.0051 \). In addition, the 95% confidence interval for the difference was \(-0.19 \leq \mu \leq -1.05\). The results demonstrated that although disadvantaged students narrowed the gap by the end of the first grade, non-disadvantaged students scored significantly higher than disadvantaged students on SP1 PALS. A possible reason for this result could be that teachers are not utilizing strategies that are effective addressing the learning styles of economically disadvantaged students based on their learning styles. It is possible these students need more kinesthetic, hands-on learning activities and less worksheet style teaching in first grade.
Model 3: FK PALS-Head Start Enrollment

The third model investigates the impact of Head Start enrollment on PALS scores of students at the beginning of their kindergarten year. The 28 Head Start students and 167 non-Head Start students were given the Fall Kindergarten PALS assessment. The results indicated that Head Start students had a z-score of 1.93 and non-Head Start students had a z-score of 0.98, for a mean difference of 0.95. A t-test comparing the two was statistically significant (t(193) = 3.46, p = 0.0007). In addition, the 95% confidence interval for the difference was 0.41 ≤ μ ≤ 1.49. The results demonstrated that Head Start students scored significantly higher than non-Head Start students on FK PALS. This could be attributed to the emphasis that the Head Start program puts on teaching kindergarten readiness skills, including letters and letter sounds which constitutes a large portion of the K PALS assessment.

Model 4: Difference between FK and SP1 PALS-Head Start Enrollment

The fourth model investigates the impact of Head Start enrollment on PALS scores and the difference between the students at the beginning of the kindergarten year and the end of first grade. The Head Start students started kindergarten higher than other students, yet by the end of first grade there was no significant difference between the two groups. The 28 Head Start students and 167 non-Head Start students were given the Fall Kindergarten PALS assessment and the end of year 1st grade PALS assessment. The results showed that the difference between FK PALS and SP1 PALS for Head Start students was -0.52 and non-Head Start students was 0.48, for a mean difference of about 1. A t-test comparing the two was statistically significant (t(193) = -3.6, p = 0.0004). The measure of effect size based on the Head Start/non-Head Start standard deviation of 1.3, d=1 indicating that Head Start students gained one standard deviation less than non-Head Start students when comparing the difference from FK to SP1 PALS. In
addition, the 95% confidence interval for the difference was $-1.55 \leq \mu \leq -0.45$. The results demonstrated that the non-Head Start students scored significantly higher than Head Start students when comparing the difference over time. This could be attributed to decreased support for Head Start students that was provided in the Head Start program. It is important to note that Head Start students comprised one of the only groups in this study with a negative difference score.

**Model 5: FK PALS-LEP Status**

The fifth model investigates the impact of limited English proficiency (LEP) on PALS scores of students at the beginning of their kindergarten year. The 98 LEP students and 97 non-LEP students were given the Fall Kindergarten PALS assessment. The results showed that LEP students scored 0.62 and non-LEP students scored 1.63 for a mean difference of 1.01. A t-test comparing the two was statistically significant ($t(193) = -5.5, p < 0.0001$). In addition, the 95% confidence interval for the difference was $-1.4 \leq \mu \leq -0.65$. The results demonstrated that non-LEP students scored significantly higher than LEP students on FK PALS. This could be because of limited background knowledge and exposure to English in homes of those speaking a second language.

**Model 6: SPI PALS-LEP Status**

The sixth model investigates the impact of Limited English Proficiency (LEP) on PALS scores for students at the end of their first grade. The 98 LEP students and 97 non-LEP students were given the Spring End of Year 1st grade PALS assessment. The results showed that LEP students had a z-score of 1.19 and non-LEP students had a z-score of 1.73 for a mean difference of 0.54. A t-test comparing the two was statistically significant ($t(193) = -2.82, p = 0.0053$). In addition, the 95% confidence interval for the difference was $-0.92 \leq \mu \leq -0.16$. The results
demonstrated that non-LEP students scored significantly higher than LEP students on SP1 PALS, although the LEP students did close the gap by 0.5 of a standard deviation. Although these LEP students gained English language skills, this result could be because they still did not have enough English proficiency to match their English speaking peers.

**Model 7: Difference between FK and SP1 PALS-LEP**

The seventh model investigates the impact of LEP on PALS scores on the difference between the beginning-of-year kindergarten students and end-of-year first grade students. The 98 LEP students and 97 non-LEP students were given the Fall Kindergarten PALS assessment and the end of year 1st grade PALS assessment. The results showed that the difference between FK PALS and SP1 PALS for LEP students was 0.57 and non-LEP students was 0.10, for a mean difference of 0.47. A t-test comparing the two was statistically significant ($t(193) = 2.39, p = 0.018$). In addition, the 95% confidence interval for the difference was $0.20 \leq \mu \leq 0.87$. The results demonstrated that the non-LEP students gained significantly more than LEP students when comparing the difference over time. This could be because of the limited English skills of the LEP students. The lack of English may not allow the LEP students to make substantial progress comparable to the non-LEP students.

**ANOVA**

Analysis of Variance is a statistical method that is commonly referred to as ANOVA. This method is used to test differences between two or more groups on the same variable. In this study, the ANOVA was used to analyze the following independent variable race that includes Hispanic, Black, White, Asian, and Multi-race for FK and SP1 PALS, as well as the difference between FK and SP1 PALS.
FK PALS

The first ANOVA investigates the impact of race on Fall PALS z-scores of beginning of year kindergarten students. The 124 Hispanic, 30 White, 23 Black, 10 Asian, and 8 Multi-race students were assessed using a continuous scale, the Phonological Awareness Literacy Screening, at the beginning of kindergarten.

The overall analysis of variance showed that the groups exhibited significant differences in FK PALS (F(4, 190) = 9.4, p < .0001). Using η² as a correlation-based measure of effect showed that differences among the groups accounted for 17 percent of the overall variability in FK PALS scores.

Individual group comparisons using the Tukey-Kramer test showed significant differences between Asian and Hispanic student groups. The results showed that Asian students had a mean z-score of 2.42 and Hispanic students had a mean z-score of 0.73, which was statistically significant (p = 0.0008). In addition, the 95% confidence interval for the difference was 0.54 ≤ μ ≤ 2.85. The results demonstrated that Asian students scored significantly higher than Hispanic students on FK PALS.

The results also showed significant differences between Black students and Hispanic students. The results showed that Black students had a mean z-score of 2.05 and Hispanic students had a mean z-score of 0.73, which was statistically significant (p < 0.0001). In addition, the 95% confidence interval for the difference was 0.53 ≤ μ ≤ 2.12. The results demonstrated that Black students scored significantly higher than Hispanic students on kindergarten beginning of year kindergarten PALS assessment.

Finally, individual group comparisons using the Tukey-Kramer test showed significant differences between White and Hispanic students. The results showed that White students had a
mean z-score of 1.53 and Hispanic students had a mean z-score of 0.73, which was statistically significant (p = 0.0195). In addition, the 95% confidence interval for the difference was 0.09 ≤ µ ≤ 1.52. The results demonstrated that White students scored significantly higher than Hispanic students on kindergarten beginning of year kindergarten PALS assessment. The results of this ANOVA are displayed in Table 5.

Table 5

Model 1: Results of FK PALS ANOVA

<table>
<thead>
<tr>
<th>Level</th>
<th>Mean</th>
<th>Lower Confidence Limit</th>
<th>Upper Confidence Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-race</td>
<td>1.32</td>
<td>0.43</td>
<td>2.21</td>
</tr>
<tr>
<td>Asian</td>
<td>2.42</td>
<td>1.63</td>
<td>3.22</td>
</tr>
<tr>
<td>Black</td>
<td>2.05</td>
<td>1.53</td>
<td>2.58</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.73</td>
<td>0.50</td>
<td>0.96</td>
</tr>
<tr>
<td>White</td>
<td>1.53</td>
<td>1.07</td>
<td>1.99</td>
</tr>
</tbody>
</table>

Note. Asian/Hispanic-p value = 0.0008, Black/Hispanic-p value < .0001, White/Hispanic-p value = 0.0195

**SPI PALS**

The second ANOVA investigates the impact of race on SP1 PALS scores on end of year first grade students. The 124 Hispanic, 30 White, 23 Black, 10 Asian, and 8 Multi-race students were measured on a continuous scale Phonological Awareness Literacy Screening (PALS) assessment at the end of first grade.

The overall analysis of variance showed that some groups exhibited significant differences in SP1 PALS scores (F(4, 190) = 3.74, p = 0.0059). Using η² as a correlation-based measure of effect showed that differences among the groups accounted for 7 percent of the overall variability in SP1 PALS scores. Individual group comparisons using the Tukey-Kramer test showed significant differences between Asian and Hispanic students. The results showed
that Asian students had a mean z-score of 2.71 and Hispanic students had a mean z-score of 1.25, which was statistically significant \( (p = 0.0059) \). In addition, the 95% confidence interval for the difference was \( 0.26 \leq \mu \leq 2.66 \). The results demonstrated that Asian students scored significantly higher than Hispanic students on end of year first grade PALS assessment. The results of this ANOVA are displayed in Table 6.

Table 6

**Results of SP1 PALS ANOVA**

<table>
<thead>
<tr>
<th>Level</th>
<th>Mean</th>
<th>Lower Confidence Limit</th>
<th>Upper Confidence Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-race</td>
<td>1.81</td>
<td>0.88</td>
<td>2.73</td>
</tr>
<tr>
<td>Asian</td>
<td>2.71</td>
<td>1.88</td>
<td>3.52</td>
</tr>
<tr>
<td>Black</td>
<td>1.47</td>
<td>0.93</td>
<td>2.01</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.25</td>
<td>1.01</td>
<td>1.48</td>
</tr>
<tr>
<td>White</td>
<td>1.82</td>
<td>1.34</td>
<td>2.29</td>
</tr>
</tbody>
</table>

*Note. Asian/Hispanic -p value =0.008*

**Difference between FK and SP1 PALS**

The third ANOVA investigates the impact of race on the difference between FK and SP1 PALS scores on end of year first grade students. The 124 Hispanic, 30 White, 23 Black, 10 Asian, and 8 Multi-race students were measured on a continuous scale Phonological Awareness Literacy Screening (PALS) assessment at the end of first grade.

The overall analysis of variance showed that some groups exhibited significant differences when looking at the difference from FK and SP1 PALS scores \( (F(4, 190) = 3.16, p = 0.015) \). Using \( \eta^2 \) as a correlation-based measure of effect showed that differences among the groups accounted for 6 percent of the overall variability in the difference between FK and SP1 PALS scores. Individual group comparisons using the Tukey-Kramer test showed significant
differences between Hispanic and Black students. The results showed that Hispanic students had a mean $z$-score of 0.52 and Black students had a mean $z$-score of -0.59, which was statistically significant ($p = 0.005$). In addition, the 95% confidence interval for the difference was $0.24 \leq \mu \leq 1.96$. The results demonstrated that Hispanic students scored significantly higher than Black students when comparing the difference between FK and SP1 PALS assessments. The results of this ANOVA are displayed in Table 7.

Table 7

Results of Difference between FK and SP1 PALS

<table>
<thead>
<tr>
<th>Level</th>
<th>Mean</th>
<th>Lower Confidence Limit</th>
<th>Upper Confidence Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-race</td>
<td>0.48</td>
<td>-0.47</td>
<td>1.44</td>
</tr>
<tr>
<td>Asian</td>
<td>0.28</td>
<td>-0.57</td>
<td>1.13</td>
</tr>
<tr>
<td>Black</td>
<td>-0.59</td>
<td>-1.15</td>
<td>-0.02</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.52</td>
<td>0.27</td>
<td>0.76</td>
</tr>
<tr>
<td>White</td>
<td>0.29</td>
<td>-0.21</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Note. Hispanic/Black-$p$ value = 0.005

Multiple Regression

Multiple regression is used to predict the value of a dependent variable based on the value of two or more independent variables. The dependent variable is what the researcher wants to predict. The independent variables are used to make the prediction. The dependent variables in the three regressions were fall kindergarten PALS (FK PALS), spring first grade PALS (SP1 PALS), and the difference in PALS scores from FK to SP1. Independent variables were female, Case B Elementary, disadvantaged, Head Start, LEP, and race (Hispanic, Black, White, Asian, and multi-racial).
Regression on FK PALS

Data were collected on 195 Kindergarten students. The K PALS scores were regressed on female, Case B Elementary, Disadvantaged, Head Start, LEP, Black, White, Asian, and Multi-race. The overall regression was significant (F(9, 185) = 9.5, p< 0.000, and $R^2 = 0.3$. Case B Elementary (b = -0.57, beta = -0.21, p = 0.0022), Disadvantaged (b= -0.67, beta= -0.21, p = 0.0008), Head Start (b=0.70, beta = 0.18, p = 0.029), LEP (b= -0.52, beta= -0.19, p= 0.05), Black (b= 0.94, beta= 0.22, p= 0.0021), and Asian (b=1.69, beta = 0.27, p < 0.0001) were significant predictors of K PALS. Female (b = 0.11, beta = 0.04, p = 0.54), White (b = 0.44, beta = 0.12, p = 0.19), Multi-race (b=-0.06, beta= -0.008, p = 0.91) did not contribute significantly to the prediction of K PALS. Results show that at students Case A Elementary, non-disadvantaged, Head Start, non-LEP, Black, and Asian students performed better than students at Case B Elementary on the beginning of year kindergarten PALS assessment. The Head Start finding provides support to studies showing that this program prepares students with kindergarten readiness skills. Table 8 displays the results for this regression.

Table 8
Results of Regression on FK PALS

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>Independent Variables:</th>
<th>Estimate</th>
<th>P Value</th>
<th>Standard Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>FK PALS</td>
<td>R square</td>
<td>.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F ratio</td>
<td>9.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P value</td>
<td>&lt;.0001*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.11</td>
<td>0.54</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>Case B Elementary</td>
<td>-0.57</td>
<td>0.0022*</td>
<td>-0.21</td>
<td></td>
</tr>
<tr>
<td>Disadvantaged</td>
<td>-0.67</td>
<td>0.0008*</td>
<td>-0.21</td>
<td></td>
</tr>
<tr>
<td>Head Start</td>
<td>0.70</td>
<td>0.029*</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>LEP</td>
<td>-0.52</td>
<td>0.05*</td>
<td>-0.19</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.94</td>
<td>0.0021*</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>0.44</td>
<td>0.19</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>1.69</td>
<td>&lt;.0001*</td>
<td>0.27</td>
<td></td>
</tr>
<tr>
<td>Multi-race</td>
<td>-0.06</td>
<td>0.91</td>
<td>-0.008</td>
<td></td>
</tr>
</tbody>
</table>
**Regression on SP1 PALS**

Data were collected on 195 first grade students. The SP 1 PALS scores were regressed on female, Case B Elementary, Disadvantaged, Head Start, LEP, Black, White, Asian, and Multi-race. The overall regression was significant ($F(9, 185) = 4.3$, $p < 0.0001$, and $R^2 = 0.17$). Case B Elementary ($b = 0.62$, beta = 0.23, $p= 0.002$), LEP ($b= -0.72$, beta = -0.26, $p= -0.013$), and Asian ($b=1.46$, beta = 0.24, $p < 0.0007$) were significant predictors of SP1 PALS. Female ($b = -0.22$, beta = -0.083, $p= 0.23$), Disadvantaged ($b= -0.31$, beta= -0.1, $p = 0.26$), Head Start ($b = -0.22$, beta = -0.06, $p = 0.53$), Black ($b = -0.28$, beta = -0.07, $p = 0.39$), White ($b =-0.49$, beta = -0.13, $p = 0.19$), and Multi-race ($b = -0.33$, beta = -0.05, $p = 0.55$) did not contribute significantly to the prediction of SP1 PALS. The results show that students at Case B Elementary, non-LEP, and Asian are predictors of better outcomes on the end of first grade PALS assessment. The Asian students continued to perform at a higher level than Hispanics. It is important to note that in this regression, Head Start was not a predictor of higher scores on end of year PALS. In the first regression on kindergarten PALS, Head Start students were predicted to score higher than non-Head Start students. This is an important finding to this study with a focus on outcomes for participants in Head Start programs. Table 9 displays the results for this regression.
Table 9

Results of Regression on SP1 PALS

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>R square</th>
<th>F ratio</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP1 PALS</td>
<td>.17</td>
<td>4.3</td>
<td>&lt;.0001*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variables:</th>
<th>Estimate</th>
<th>P Value</th>
<th>Standard Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>-0.22</td>
<td>0.23</td>
<td>-0.08</td>
</tr>
<tr>
<td>Case B Elementary</td>
<td>0.62</td>
<td>.002*</td>
<td>0.23</td>
</tr>
<tr>
<td>Disadvantaged</td>
<td>-0.31</td>
<td>0.26</td>
<td>-0.1</td>
</tr>
<tr>
<td>Head Start</td>
<td>-0.22</td>
<td>0.53</td>
<td>-0.06</td>
</tr>
<tr>
<td>LEP</td>
<td>-0.72</td>
<td>.013*</td>
<td>-0.26</td>
</tr>
<tr>
<td>Black</td>
<td>-0.28</td>
<td>0.39</td>
<td>-0.07</td>
</tr>
<tr>
<td>White</td>
<td>-0.49</td>
<td>0.19</td>
<td>-0.13</td>
</tr>
<tr>
<td>Asian</td>
<td>1.46</td>
<td>&lt;.0007*</td>
<td>0.24</td>
</tr>
<tr>
<td>Multi-race</td>
<td>-0.33</td>
<td>0.55</td>
<td>-0.05</td>
</tr>
</tbody>
</table>

Regression on Difference between FK and SP1 PALS

Data were collected on 195 first grade students. The difference between FK and SP1 PALS scores were regressed on female, Case B Elementary, Disadvantaged, Head Start, LEP, Black, White, Asian, and Multi-race. The overall regression was significant (F(9, 185) = 8.6, p < 0.0001, and R² = .29). Case B Elementary (b = 1.19, beta = 0.43, p < 0.0001), Head Start (b = -0.92, beta = -0.23, p = .0055), Black (b = -1.22, beta = -0.28, p = 0.0001) and White (b = -0.93, beta = -0.24, p = 0.0082) were significant predictors of Difference between FK and SP1 PALS. Female (b = -0.33, beta = -0.12, p = 0.064), Disadvantaged (b = 0.36, beta = 0.11, p = 0.16), LEP (b = -0.19, beta = -0.07, p = 0.48), Asian (b = -0.22, beta = -0.04, p = 0.58), and Multi-race (b = -0.27, beta = -0.04, p = 0.60) did not contribute significantly to the prediction of Difference between FK and SP1 PALS. The results show that students at Case B Elementary, non-Head Start, and Hispanic are predictors of better outcomes in the difference between FK and SP1 PALS assessments. It is important to note that in this regression, Head Start was not a predictor of higher scores when looking at the difference over time on PALS. This is an important finding.
as the former Head Start students were doing significantly worse when examining the difference between FK PALS and SP1 PALS. Table 10 displays the results for this regression.

Table 10

*Results of Regression on Difference FK PALS and SP1 PALS*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>R square</th>
<th>F ratio</th>
<th>P value</th>
<th>Independent Variables</th>
<th>Estimate</th>
<th>P Value</th>
<th>Standard Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference PALS</td>
<td>.29</td>
<td>8.6</td>
<td>&lt;.0001*</td>
<td>Female</td>
<td>-0.33</td>
<td>0.064</td>
<td>-0.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Case B</td>
<td>1.19</td>
<td>&lt; .0001*</td>
<td>0.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Elementary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disadvantaged</td>
<td>0.36</td>
<td>0.16</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Head Start</td>
<td>-0.92</td>
<td>.0055*</td>
<td>-0.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LEP</td>
<td>-0.19</td>
<td>0.48</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Black</td>
<td>-1.22</td>
<td>.0001*</td>
<td>-0.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>White</td>
<td>-0.93</td>
<td>.0082*</td>
<td>-0.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Asian</td>
<td>-0.22</td>
<td>0.58</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Multi-race</td>
<td>-0.27</td>
<td>0.60</td>
<td>-0.04</td>
</tr>
</tbody>
</table>

**Developmental Reading Assessment (DRA2)**

The *Developmental Reading Assessment* (DRA2), developed by Beave (2006), is a formative reading assessment given to students three times a year (beginning, middle, end), based on a systemic progression of reading comprehension for elementary students. Each student is assessed individually on their independent reading level, then assessed on strengths and weaknesses in the areas of oral reading fluency and comprehension. The DRA2 is a criterion-based assessment that was developed through extensive research on what makes "good readers." According to the DRA website, the following analyses were conducted to create a reliable and valid instrument: internal consistency reliability, passage equivalency, test-retest reliability, inter-rater and expert rater validities, criterion-related validity, construct validity, and content validity (DRA, 2016).
Data were collected in April 2016 to determine student reading levels based on the DRA for the former Head Start students at Case A and Case B Elementary Schools. The students were in second grade, where the target for the end of the third quarter is a level 28. It is important to note that five students from Case B have withdrawn from the school, so it was not possible to collect data for them.

The findings show that at Case A Elementary, reading levels in second grade are mixed. Based on a target of reading level 28, 45% are reading above grade level, 25% are reading on grade level, and 30% are reading below grade level. At Case B Elementary, 100% are above grade level. This data is not based on the original sample size of eight students from Head Start at Case B, as five students have moved out of the school. It appears that as reading comprehension becomes more difficult, some students are not keeping up with their peers, which correlates to the analyses of end of first grade PALS scores. Table 11 displays the DRA results for Case A Elementary and Table 12 displays the DRA results for Case B Elementary.
Table 11

*Case A Elementary DRA Results for April 2016*

<table>
<thead>
<tr>
<th>Student</th>
<th>Reading Level</th>
<th>At/On/Below Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>38</td>
<td>Above</td>
</tr>
<tr>
<td>B</td>
<td>28</td>
<td>On</td>
</tr>
<tr>
<td>C</td>
<td>18</td>
<td>Below</td>
</tr>
<tr>
<td>D</td>
<td>30</td>
<td>Above</td>
</tr>
<tr>
<td>E</td>
<td>40</td>
<td>Above</td>
</tr>
<tr>
<td>F</td>
<td>28</td>
<td>On</td>
</tr>
<tr>
<td>G</td>
<td>40+</td>
<td>Above * (gifted)</td>
</tr>
<tr>
<td>H</td>
<td>30</td>
<td>Above</td>
</tr>
<tr>
<td>I</td>
<td>20</td>
<td>Below</td>
</tr>
<tr>
<td>J</td>
<td>28</td>
<td>On</td>
</tr>
<tr>
<td>K</td>
<td>24</td>
<td>Below</td>
</tr>
<tr>
<td>L</td>
<td>24</td>
<td>Below</td>
</tr>
<tr>
<td>M</td>
<td>30</td>
<td>Above</td>
</tr>
<tr>
<td>N</td>
<td>28</td>
<td>On</td>
</tr>
<tr>
<td>O</td>
<td>12</td>
<td>Below</td>
</tr>
<tr>
<td>P</td>
<td>40</td>
<td>Above * (gifted)</td>
</tr>
<tr>
<td>Q</td>
<td>38</td>
<td>Above</td>
</tr>
<tr>
<td>R</td>
<td>30</td>
<td>Above</td>
</tr>
<tr>
<td>S</td>
<td>24</td>
<td>Below</td>
</tr>
<tr>
<td>T</td>
<td>28</td>
<td>On</td>
</tr>
</tbody>
</table>

Table 12

*Case B Elementary DRA Results for April 2016*

<table>
<thead>
<tr>
<th>Student</th>
<th>Reading Level</th>
<th>At/On/Below Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>40</td>
<td>Above</td>
</tr>
<tr>
<td>B</td>
<td>30</td>
<td>Above</td>
</tr>
<tr>
<td>C</td>
<td>30</td>
<td>Above</td>
</tr>
</tbody>
</table>

**Triangulation of Quantitative and Qualitative Data**

In a mixed methods study, the researcher looks at how quantitative and qualitative data uncovers complementary strengths (Johnson & Christensen, 2012). Johnson and Christensen (2012) share that a key advantage of mixed methods research is that the use of quantitative and
qualitative methods provides the researcher with data that shows complementary strengths and non-overlapping weaknesses. In other words, the mixed methods approach allows for different strengths and weaknesses to be discovered through analysis of all data. The mixed methods approach helps to clarify results from one methodology to the other.

Mixed methods research allowed me to use a combination of quantitative and qualitative data to study outcomes for former Head Start students. By looking at PALS scores for students in kindergarten and first grade, I was able to determine how Head Start students performed on early literacy skills. The quantitative data confirmed research regarding Head Start students entering kindergarten with appropriate readiness skills. The data also confirmed that Head Start students begin to lose ground by the end of first grade, as this group was the only group whose scores decreased over time. After the quantitative data was collected, I was able to consider these results, when I analyzed the qualitative data. For example, I noted the decrease in scores of Head Start students on SP1 PALS from results on the multiple regression. From there, I identified areas that could have contributed to this decrease in scores based on responses from teachers during focus group interviews. I noted that teachers did provide information regarding their understanding of learning needs for low-income students. There could be a connection between the quantitative data and responses given by participants during qualitative data collection. This is discussed further in Chapter 5.

The mixed methods case study methodology brought to light areas that complimented one another, as well as areas showing conflicting information. The largest area of conflict appeared in the data showing performance of students on PALS. Although the schools selected showed high overall performance for students, quantitative analyses uncovered areas of weakness. The weaknesses in data regarding students' reading performance was clarified by
responses given by participants addressing their meeting the needs of low-income students. Teachers shared information about challenges in working with students who bring limited background knowledge into the classroom. Results of the qualitative data analyses is shared in the following sections.

**Themes and Assertions**

Data collected in four interviews and four focus groups at two schools led to the emergence of four overall themes that led to success for students in kindergarten and first grade at the two elementary schools. By using Stake's (2006) Worksheet 2, Multiple Case Study Analysis, the following themes emerged:

1. The importance of building background knowledge in literacy and socio-cultural experiences;
2. Leadership was a key element to overall success of teachers and students. Leadership focused on teacher training, and creating an ethos of support was perceived as key to student success;
3. Parent support that was comprehensive, consistent, and focused on student learning helped in the overall growth of students; and
4. Instructional strategies that focused on meeting students "where they are," as well as deliberate means to motivate students, were important to student achievement.

Table 13 displays the results from Worksheet 2.
Table 13

The research questions or themes of the multi case study

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Theme 1</td>
<td>The importance of building background knowledge in literacy and socio-cultural experiences</td>
</tr>
<tr>
<td>Theme 2</td>
<td>Leadership was a key element to overall success of teachers and students. Leadership focused on teacher training, and creating an ethos of support was perceived as key to student success</td>
</tr>
<tr>
<td>Theme 3</td>
<td>Parent support that was comprehensive, consistent, and focused on student learning helped in the overall growth of students</td>
</tr>
<tr>
<td>Theme 4</td>
<td>Instructional strategies that focused on meeting students &quot;where they are,&quot; as well as deliberate means to motivate students, were important to student achievement.</td>
</tr>
</tbody>
</table>

Worksheet 2 from Stake, 2006

Using Worksheet 3, Analyst’s Notes While Reading a Case Report, I analyzed notes from each case report to determine the importance of data based on the relevance of the case for cross-case themes. I then determined a prominence of utility of each theme based on each case, using Worksheet 4. Themes and quotes from participants were listed on Worksheet 4 in a useable format. This allowed me to see evidence, support, and prominence of themes each across all interviews and focus groups. Table 14 displays the results from Worksheet 4.
| Table 4 |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| **Ratings of Utility of Themes by Case for Each Case** |

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<td><strong>Original Multi Case Themes</strong></td>
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<tr>
<td>Theme 1a: Background Knowledge: Vocabulary</td>
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<tr>
<td>Theme 1b: Background Knowledge: Letters/Letter Sounds</td>
<td>Q1, 2-Head Start</td>
<td>Q2, 3-Head Start</td>
<td>Q4-Head Start</td>
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<tr>
<td>Theme 2a: Leadership: Teacher Training</td>
<td>Q4, Q5-Ruby Payne</td>
<td>Q4-Teacher Training</td>
<td>Q5, 6, 7-Bilingual secretary</td>
<td>Q5, 6, 7-Bilingual secretary, breakfast program, small class size grant</td>
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<tr>
<td>Theme 2b: Leadership: Resource Support</td>
<td>Q6-Bilingual secretary</td>
<td>Q5, 6, 13-Reading teachers, staff development in SPOT, Reading Recovery</td>
<td>Q5, 6, 7-Resources: technology, ESOL teachers, medical assistance</td>
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<tr>
<td>Theme 3: Parent Support that is comprehensive, consistent, and focused</td>
<td>Q7, 8, 9, 10-Teaching parents how to work with children at home</td>
<td>Q7, 8, 9, 10, 11-Teaching parent strategies, early literacy with parents, materials, home language</td>
<td>Q11, 12, 13, 14, 15-Strategies for parents to support learning at home, parent education programs</td>
<td>Q10, 11, 12, 13-Teaching parents how to support reading at home</td>
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<tr>
<td>Theme 4a: Instructional Strategies: Differentiated Instruction</td>
<td>Q12, 13-Tier III intervention, Reading Recovery</td>
<td>Q16, 17, 18, 19-Strategies to teach reading based on student levels</td>
<td>Q14, 15, 16-Strategies to teach reading based on student levels</td>
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<tr>
<td>Theme 4b: Instructional Strategies: Motivation</td>
<td>Q20-Confidence and excitement</td>
<td>Q17, 18-Student excitement</td>
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<thead>
<tr>
<th><strong>Utility of Cases</strong></th>
<th>Case B Prin.</th>
<th>Case B R.T.</th>
<th>Case B Kdg. Focus Group</th>
<th>Case B 1st Grade Focus Group</th>
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<tr>
<td>Theme 1a: Background Knowledge: Vocabulary</td>
<td>Q1, 2, 3, 4-Prior knowledge and vocabulary</td>
<td>Q1, 2-Bilingual vocabulary</td>
<td>Q1, 2-Background knowledge</td>
<td>Q1, 2-Vocabulary building</td>
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<tr>
<td>Theme 1b: Background Knowledge: Letters/Letter Sounds</td>
<td>Q3, 5-Letters</td>
<td>Q5, 6, 7, 8, 9-Letters and Letter sounds</td>
<td>Q3, 4-Letter sounds</td>
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<td>Theme</td>
<td>Background Knowledge: Head Start</td>
<td>Q4-Head Start</td>
<td>Q10,11,12-Head Start</td>
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<td>Q4-Head Start L</td>
<td>Q10,11,12-Head Start H</td>
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<tr>
<td>Theme 1c:</td>
<td>Q8, 9, 10-Ruby Payne, ESOL, Cultural Awareness, Reading</td>
<td>Q11,12,13-Modeling, push-in for writing and student conferencing</td>
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<tr>
<td>Theme 2a: Leadership: Teacher Training</td>
<td>Q14, 16, 17, 18, 19, 20-Vertical planning, ESOL, Sped, Reading, Counselors, Librarian</td>
<td>Q7,8,9,10-Reading teachers, ESOL, PALS tutors, summer school</td>
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<tr>
<td>Theme 2b: Leadership: Resource Support</td>
<td>Q11, 12, 25, 29-Relationships, Communication, Consistency, Love, respect, and caring</td>
<td>Q6-Parents are welcome, knowing families</td>
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<tr>
<td>Theme 2c: Leadership: Ethos of Support</td>
<td>Q21, 22, 23, 24, 26-Vision and hearing screening, Parent liaison, Home visits, Daily discussions</td>
<td>Q14, 15, 16-Reading support, conferencing, modeling reading</td>
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<td>Theme 3: Parent Support that is comprehensive, consistent, and focused</td>
<td>Q27, 28-Understand differences in students, Individualize instruction</td>
<td>Q17, 18, 19-Knowing children's specific levels, one-on-one, checking, know deficits</td>
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<td>Theme 4a: Instructional Strategies: Differentiated Instruction</td>
<td>Q30-Trust love, whole child, grow their confidence</td>
<td>Q20-Setting stage for learning</td>
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<tr>
<td>Theme 9: Instructional Strategies: Motivation</td>
<td>Q32-Hygiene needs lead to being ready to learn</td>
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<td>Q33-Excited to learn, attitude, try hard, gratefulness, want to please</td>
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</tbody>
</table>

from Stake, 2006

*H*=high utility: the theme is prominent in this case study

*M*=middling utility:

*L*=low utility: the theme is not prominent in this case study

As indicated, the original themes can be augmented into additional themes even as late as the beginning of the cross-case analysis. Descriptions of each theme can be attached to this worksheet, so the basis of estimates can be readily examined.
From the data collected on Worksheet 4 and using Worksheet 5, A Matrix for Generating Theme-Based Assertions, I analyzed the four themes against the seven assertions. The assertions were representative of all interviews and focus groups. The assertions that came from the themes were:

1. Background knowledge including vocabulary and letter/letter sounds was an important factor for student success in reading,

2. Social understanding of school environments (routines, procedures, and interactions with other students) was a key to student success,

3. Teacher experience, resources, and targeted professional development were crucial to student success,

4. An ethos of support was created through genuine and deliberate support of teachers, students, and families by the school leader,

5. The schools’ efforts to provide parent support that was comprehensive, consistent, and focused impacted positive outcomes for students,

6. Instructional strategies were deliberately implemented with fidelity to meet students "where they are,” and

7. Teacher encouragement of student efforts led to increased confidence and motivation in students.

Both the themes and assertions are displayed in Table 15.
Table 15

Worksheet 5: A Matrix of Study Theme-based Assertions

<table>
<thead>
<tr>
<th>Assertions Developed from Themes Found in Instrumental Case Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Background knowledge including vocabulary and letter/letter sounds was an important factor for student success in reading.</td>
</tr>
<tr>
<td>2 Social understanding of school environment (routines, procedures, interactions with other students) was important for student success.</td>
</tr>
<tr>
<td>3 Teacher experience, resources, and targeted professional development were key elements to student success.</td>
</tr>
<tr>
<td>4 An ethos of support was created through genuine and deliberate support of teachers, students, and families by the school leader.</td>
</tr>
<tr>
<td>5 The schools' efforts to provide parent support that is comprehensive, consistent, and focused impacted positive outcomes for students.</td>
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<tr>
<td>6 Instructional strategies were deliberately implemented with fidelity to meet students where they are.</td>
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<tr>
<td>7 Teacher encouragement of student efforts led to increased confidence and motivation in students.</td>
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<th>Themes</th>
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### Themes cont.

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H=high importance; M=middling importance; L=low importance. A high mark means that this theme is of high importance for this case study.

By using the process of determining themes, analyzing notes from case reports, rating utility of each theme in each case, and generating theme-based assertions, I synthesized the qualitative data into four findings. The following section describes each of the four findings in this study, based on a data analyses conducted using Stake's Multiple Case Study Analysis procedures (2006).
Background Knowledge in Literacy and Socio-cultural Experiences

Members of two kindergartens and two first grade focus groups along with focus groups with reading teachers stressed that one of the most important factors in student achievement was the background knowledge that students bring with them to the classroom. This information provides support regarding factors that affect Head Start students' performance in the primary grades (research question 1). Teachers at Case A and Case B Elementary schools had the perception that students don't always come into the classroom with adequate background knowledge. They talked about the need for students to have background knowledge that includes vocabulary, knowledge of letters and sounds they make, and prior experiences that allow a child to make connections to what is being taught. Statements qualifying this need for background knowledge came from both focus groups and interviews at both schools. A member of the kindergarten focus group at Case A elementary explained:

*I would say that one of the weaknesses is the lack of vocabulary when it comes to guided reading groups and when we’re reading guided reading books. The lack of vocabulary is one of the greatest weaknesses of our students.*

Another teacher in this focus group said it more succinctly. "They’re not being exposed to these reading skills prior to coming into the classroom so they’re coming in at a disadvantage."

The first grade focus group at Case A elementary echoed the need for background knowledge in students. One teacher in this group shared this thought:

*I’d say even just orally speaking it's difficult for them to sometimes understand what they’re reading if they don’t have that in their vocabulary, their prior knowledge. So*
after they decode the word, if they link it together, they’re not sure if it's a word or not, if they don’t have it in their vocabulary.

This idea was solidified when another member of this focus group said, "And we have a high, high population of ESL students that come in speaking little to no English. So with not knowing their letters and sounds it’s very difficult to move into any type of reading." Members of the kindergarten focus group at Case B Elementary shared the same perceptions of teachers at Case A Elementary. The idea regarding the lack of letter/letter sound knowledge in students was clearly stated, "I always get some kids who have letters and sounds, but it’s decreasing right now. I think they’re coming in with maybe three or four kids who know all their letter names and most of their sounds, and then the rest don’t know them." The first grade focus group at Case B Elementary shared similar thoughts as the first grade focus group at Case A Elementary. One teacher on this team said, "I think sometimes we see there’s a vocabulary issue. Students don’t have that same background knowledge."

During interviews with reading teachers from Case A and B elementary schools, it was evident that they share the ideas of the focus groups regarding background knowledge. Each shared their observations of students' background knowledge. The reading teacher at Case A described the following:

When the kindergarten students first come into our building in the fall I see that they are lacking letter knowledge and so the first thing we do during the year is really start to work on letter knowledge and the letters in their name, and once they learn that then we start working on rhyming words, and putting words together, and they tend to do fairly well on the PALS test by the end of the year. Our first grade students, still coming in
from kindergarten, do not know all of their letter sounds. So that’s the first thing we look for to support them in that.

This is important, as the reading teacher supports teachers and students in building early literacy skills in kindergarten and first grade students.

The reading teachers at Case B Elementary spoke about background knowledge, as well as means to help students build on what they do know. One teacher summed it up with the following:

They have limited background knowledge because not only is there the lack of conversation at home, but there’s the lack of exposure to experiences. And so a lot of times, I feel like I really frontload a lot of background. Even before we do a picture walk in guided reading, where we look at the pictures and talk about what we are seeing, we have to go through and explain with prompts like, has this ever happened to you? Have you ever seen this before? Many times, we get a blank stare because they can’t make a connection to the pictures. They may not have the experiences or know what the pictures are due to a lack of exposure.

Background knowledge was seen as a weakness in students across both Case A and B elementary schools. It is important to note that this finding was different when considering if students attended Head Start, as principals, reading teachers, and the kindergarten focus groups unanimously shared their observations that students coming from Head Start possess stronger skills than those who did not. Background knowledge was stronger in the Head Start students, particularly in early literacy skills and knowledge of classroom routines. The principal at Case A Elementary was able to share her observations of Head Start students and their background knowledge:
Well I do feel—I mean I’ve had that Head Start program here 24 years and I do feel like the students really have an opportunity to even learn classroom routines, how to take turns, you know, how to get along in a group. It gives them an opportunity to really learn English. Most of our students in Head Start are ESOL students so it’s another opportunity to hear English modeled and to learn more English before they come to school. The Head Start program has evolved over time to become much more academic so a lot of students leaving Head Start now know their letters, and numbers, shapes, some of the things you hope they would have coming into kindergarten. They have stronger background knowledge than they would have without Head Start.

Additionally, she talked about how the overall school numbers have grown. Suggestions have been made to move Head Start out of Case A Elementary; however this principal believes so strongly in the program that each year she finds a way to house the program at the school:

And there have been times where we’ve talked about do we need to move them out somewhere because we just need the classrooms and you know you hate to see them go because they really have done a tremendous job with preparing students and giving them so many—just so much knowledge before they come to kindergarten, and they work well with parents.

Although the principal at Case B elementary shared the idea that students from Head Start come to kindergarten with school readiness skills, she did not provide as much information as the Case A principal. This could be because the Head Start program is housed in a local high school. Interaction between the elementary and Head Start program is not as easily accessible as it could be if the program were housed at the elementary school.
In discussions with the kindergarten focus groups, I collected data regarding the background knowledge of Head Start students when compared to those who did not participate in the program. Commonalities from both schools' kindergarten focus groups regarding strengths of students who participate in Head Start included that students: are more acclimated to the school setting, are able to follow directions, know the routines, are more confident, know letters and letter sounds, and are already putting words together. A teacher from Case A elementary wrote her Master's thesis on differences between Head Start and non-Head Start students in the kindergarten classroom. Information she shared provided additional support regarding the background knowledge of Head Start students, when compared to students who do not have schooling prior to kindergarten:

*This was my thesis so I basically compared the children who went – who had prior schooling–and the children who didn’t, to see how academically far behind on just upper case and lower case letters, that’s all I focused on, and it was a significant difference. Because the children who were coming in from Head Start knew twelve or more letters than those who did not, and I mean this was the first week of school and I already have children who are you know academically three months behind the rest of the children who come in from Head Start.]*

The kindergarten focus group at Case B elementary had additional ideas about Head Start. One teacher in this group has seen the benefits for students as they enter kindergarten from Head Start, bringing with them more background knowledge than other students. Seeing the benefits of the program prompted her to say the following:

*And I’d be curious to know, because of the strength that I see in the kids that have had Head Start, as opposed to the kids who I would say are in the same poverty level and
have not had Head Start, how much availability there is in Head Start? Because I know that some of the kids could have qualified so there must be a lottery or something that’s going on. It’s such a huge difference that it seems like if everybody could have that–oh my gosh. That would change things.

Her comments demonstrate how she perceives benefits of students having access to early childhood educational experiences prior to kindergarten. She referenced the difference in the background knowledge (through strengths of Head Start students) when compared to peers who have not had the advantage of having this intervention.

Background knowledge was an important element in kindergarten and first grade classrooms. Teachers and administrators focused on the need to build background knowledge in their students. Participants in kindergarten felt that students who come from Head Start programs possess stronger background knowledge than other students, which was a factor in their overall success. The first grade focus groups did not comment on strengths of Head Start students related to their background knowledge. This indicates that either the first grade team did not know which students participated in Head Start or that they did not find that information relevant to their work with students in the classroom.

Leadership and an Ethos of Support

Leaders in Case A and Case B Elementary Schools set the tone for a supportive ethos in the school. Each leader was passionate about professional development of teachers. They created a culture of support by providing resources for teachers, students, and parents in a consistent manner. This support created a positive school culture. All of the participants that I interviewed shared information about how the principals provided focused professional development and resources, allowing participants to increase their skills, while increasing
student achievement. The following responses supported research questions 1 and 3 regarding factors that affect Head Start students' performance in the primary grades and what successful schools are doing to increase Head Start students' academic performance.

The principals both referred to the impact that training with Dr. Ruby Payne had on them. Payne is a leading author and consultant on helping students overcome hurdles of poverty. Her book, *A Framework for Understanding Poverty* (2005) helps educators understand differences between students who are raised in poverty and those who are not. Case A principal shared how much she learned from her first professional development session with Dr. Payne:

> Well I had the great pleasure, many, many years ago, to go see Ruby Payne, and after I sat in that workshop for one day it just crystallized so much of what I had seen here that I didn’t understand. Especially about hidden rules and why sometimes there were disconnects between teachers and parents... I started to really learn how you know perceptions were different among different classes and I really started going to a lot of her workshops. I got trained as a trainer. Yeah, and then I came back and took all of that training and worked with my staff on that.

Case A and B Elementary Schools have high percentages of students who are economically disadvantaged. It was clear that both principals found Payne's research a key factor in working with their teachers to understand the culture of this subgroup of students. The principal at Case B elementary said:

> I’ve been here 34 years. I’ve had every training that’s come along. Certainly the foundation for our training was the Ruby Payne poverty information. That was a long time ago but it hasn’t ever left us. It looked at the cultural awareness and the cultural awareness in poverty is the significant thing, I think, that we get.
Professional development for teachers was a consistent theme across all discussions. In particular, reading teachers and principals shared that an expectation in both schools is for teachers to participate in Supporting the Practice of Reading and Writing Theory in the Elementary Classroom (SPOT), which is a year-long professional training offered in the school district. One reading teacher at Case A elementary school is a facilitator for SPOT. She shared the following when asked about professional development for teachers, "I am a facilitator for that and so I do go into the classrooms and I observe the teachers and I go in and help them with anything that they need as far as with reading and writing, and we do a lot of staff development with writing. We do a lot of small group staff development." She shared that the expectation from the principal is that all teachers at Case A elementary take SPOT training in their second year at the school.

At Case B elementary, the reading teachers shared that staff development is provided through a push-in model, where classroom teachers receive support as reading teachers go into classrooms to model lessons and demonstrate how to conference with students in reading and writing. Since there are four reading teachers at Case B elementary, this support is consistent across grade levels and classrooms.

Another professional development effort at both schools has come about as a result of a district-wide emphasis on training for meeting the needs of English Language Learners. The district has an agreement with the Department of Justice to ensure teachers have adequate training to meet the needs of English Language Learners in the classroom. Each teacher is required to participate in this training to obtain 20 points each year, for the first three years, in techniques for teaching English Language Learners. The principal at Case B elementary referred to this training as an important means to increasing student achievement:
In the last few years with the ESOL training, I believe that that has helped us all do a better job of instruction because it looked at how to differentiate and how to work together. And through all of the ESOL trainings we’ve been able to really develop academic language, and academic language helps kids be successful.

Another way that leaders in both schools created a culture of support was through resources available for teachers and students. Teachers in focus groups spoke about ways that special education teachers, reading teachers, and ESOL teachers work together with grade level teams to provide support for students. It was evident that every person is on board to orchestrate learning for all (librarian, social workers, counselors, reading and special education teachers, music, art, and physical education teachers, ESOL teachers, and administrators). The principal at Case B discussed ownership of student learning by saying:

*It has to be the whole package to make students grow. Certainly the love and respect for the whole child. The ownership of every teacher. The reading teachers own responsibility for the children. The PE teachers owns responsibility for the children. And the support of the family, is the place that we have to start. And then other things fall into place if you have those three things in place.*

Technology was an important resource for each school, as teaching teams spoke about programs used to support reading (RAZ Kids, Accelerated Reader, and Starfall). These programs allow students to practice reading, not only in the classroom, but they can log on at home, as well. One teacher talked specifically about how technology is used daily in her classroom.
We have iPads and I think every classroom has at least five or more computers that the kids use every single day, and we have apps that have letters and sounds and reading activities on there that they used every single day to help them as well.

Teachers at Case B elementary discussed the focus on reading for the entire school. They were passionate when they spoke about the many ways they get books into students' hands. A teacher on the kindergarten team talked about students use of the library:

And I think that is a key to – our whole school we – I mean all of our children go to the library daily and – and you know like my children have a whole system of how they go down with their bags and pick their books. I mean even first month of school they’re going to the library.

Another member of this team discussed the overall school focus on reading by saying:

Yeah and I think a big strength to is that it’s not just teaching the strategies but I see all of our staff incorporating it like you said going to the library, getting the books and actually sitting down with books, sending books home, using that knowledge that – giving them the opportunity to practice with real text.

Both focus groups at Case B talked about weekly visits to the school library, as well as the spotlight on sustained silent reading across grade levels. The first grade focus group pointed out the cross-curricular connection between reading and other subjects:

I think also a lot of times we’ll try to tie in reading with other subjects. So reading is not just during language arts time. You know, we also read during science and math and across curriculum.

The ethos of support created by leaders at Case A Elementary and Case B Elementary was a key factor in positive outcomes. This was evident through the manner in which teaching
teams spoke so passionately about the resources and staff development that they used daily in their classrooms.

**Parent Support for Student Learning**

All interviewees and focus group members stressed the importance of working with parents in a comprehensive, consistent, and focused manner. The overall focus on helping parents to work with their children at home was a key to student success. This support looked similar in both schools. The main idea behind parent support was focused on teaching parents strategies to use with their children. Each interview participant and focus group explained what this support looks like. Responses in this section address research question 2 regarding family services at the elementary level that impact the performance of former Head Start students. Their comments included information on parent education programs that fell into the following categories: Title I Parent Education Nights, Parent Education Program (PEP), and intentional communication with parents through a variety of venues.

Both schools held Title I Parent Education Nights, where teachers worked with parents to teach strategies for reading with children at home. The principal at Case A Elementary shared this:

*So we try to do some of those beginning kinds of skills that parents can come and learn about and take home then and do them and you know now there’s just like sort of take the excuse away. Now I’m giving you the materials. I’ve shown you how to use them. Let’s use them.*

This was echoed by the kindergarten team at Case A Elementary:
We have Title I nights for math and language arts and we did – we made different games for them to play at home and they took everything home with them that they could work on. And that was school wide.

Additionally, the reading teacher at Case A Elementary shared more details regarding the Title I nights:

So in the fall we talked about early literacy and what that looks like and we had the students come with their parents, and they took their book boxes out and they read with their parents and then in the spring we had another program. Kind of expanded on the program we had in the fall, so that parents would understand where they needed to be at that time. That they were reading longer books and that they were actually using skills and strategies that they learned in school, and now that we’re school-wide we were able to have a program just one reading and we did one for K-2 one night and then we did one for 3-5 one night, and we taught the parents strategies. How the children, when they come to a word they don’t know, what they need to do. Look at the first letter, blend it out, read through it, go back. Look at the picture and cross check.

The Title I nights looked similar at Case B Elementary. The reading teachers at Case B Elementary explained how they teach parents strategies:

Yes, so the Title I teachers pair up with grade levels on most occasions. Sometimes we’ve done a couple of events where we just ask the parents of kids that we see in small group to come in, depending on what the theme or the objective is of the night, and getting the parents to come in and not just see what their kids can do – but also to learn how they can help them at home. Different strategies, and cause that is one of the questions that I feel parents ask me the most, “What can I do at home” and this gives them at least the
knowledge of what they can do. So many parents just they don’t know where to go, they
don’t know what to do. They – they’re just you know they – either you know reading was
just something that came to them, cause as it does for some people. You know it’s an
easy thing – it’s not a struggle – and they don’t know why their child is struggling with it.
Or they don’t remember how they learned how to read. Or some of them don’t have that
education experience.

The common theme of educating parents on ways to read with children at home was
prominent in both schools. The second area of parent support was focused on a county-wide
Title I initiative called the Parent Education Program (PEP). At Case A Elementary, the
principal spoke about parents wanting to learn English and how they incorporated Rosetta Stone
into the PEP program:

And then we’ve definitely done some parenting programs and we have Rosetta Stone,
which our parents have really requested to try to learn English. The Parents as
Educational Partners, PEP, really didn’t spend much time teaching English and so
parents would come but it wasn’t what they expected. So we set up Rosetta Stone for
them to come in before school and after school, in the library to practice, and I think
that’s been a great outreach.

The kindergarten focus group shared this: "Yes we have a Parent Education Program. So
the parents of our ELLs can come to this program and learn strategies that they can use with their
children to help them with academics."

Members of the first grade focus group elaborated a bit on the Parent Education Program:
And then the school-wide, we have our Parent Education Program, which the parents
can come to after school and they can learn about – just like how when their grades and
stuff come home, they can understand why they’re getting what they’re getting and how they can help at home and what kind of things they can use too. Kind of like our Title I night, but this is a weekly thing that they come to.

Finally, interviewees and focus groups at each school discussed the need for consistent communication with parents through conferences, phone calls, and weekly newsletters. All materials at both schools are translated into the home language, with Spanish being the largest non-English population. Translators are provided for parent conferences, allowing teachers to communicate with parents who speak another language. A thought that was shared during focus groups and interviews with reading teachers was the idea that parents should read to their children in their home language. Many participants felt that parents may feel that if they cannot read in English, they cannot help their children. A teacher summed it up by saying:

_I always have a conversation with parents at the beginning of the year that any literacy is good literacy. So just because you can’t read, speak or write English doesn’t mean that you shouldn’t be doing anything at home too. Keeping your home language intact is very, very, very important and for these children to be bilingual, when you get home read to them in Spanish. Write with them in Spanish. Help them, you know? And it’s a lot easier for us to transfer over that knowledge if they are literate in their home language. It’s a lot easier for us to transfer it into English. So cause a lot of parents come here and they think “Well I’m not going to be able to help them because I don’t speak English.” But that’s not the case, and we always want to make sure that they keep that home language with them and they feel comfortable doing things with their kids, even though they’re only learning English here._
The principal at Case A Elementary shared this story about how she went above and beyond to provide support for a student and her mom:

*I have on several occasions taken kids to my dentist and he works on them for free because their teeth are so terrible. They're just rotting and for young children its really— or they have like an abscessed tooth and the parent just can’t take them anywhere and so he’s taken them for free, and actually sent some of them to oral surgeons which he’s talked to, to take the cases for free because their teeth were so neglected.*

She went on to talk about how appreciative the parent was for this extra support. Interestingly, the parent shared with the principal how she had never been in such a beautiful building and seen paintings like those in the dentist's office. Although this story is not focused on academics, it clearly shows how school personnel at Case A Elementary go the extra mile to support families. The importance of parent support was a key element to student success at both schools. It was evident that the principals and teachers keep this in the forefront, as they work with parents to support student learning at home. Principals and teachers may want to consider partnering with outside agencies to provide additional support to students and families to meet the medical and social/emotional needs of students.

**Instructional Strategies for Student Learning and Motivation**

The last factor that participants stressed was the need for deliberate instructional strategies designed to meet students "where they are." Teachers were clear when discussing the manner in which they assess student progress in reading and tailor instruction to meet each child's individual needs. Each of the following responses relate directly to research questions 1 and 3 regarding factors affecting Head Start student in the elementary classroom and what successful schools are doing to increase outcomes for former Head Start students. All four
teaching teams spoke about collaborating with resource personnel (reading teachers, ESOL staff, and special education teachers) to ensure that student’s individual needs are met.

The reading teacher at Case A spoke about instruction:

*When I’m in classrooms–now I just deal with the kindergarten/first grade students mostly. So I’m in their classrooms. During guided reading groups, the teacher will choose a child to do a running record, as the other students are reading to themselves, and then they do the “mix it, fix it” again. They do the writing the word again. And that day–day two they usually do a writing, small writing, a dictated writing that day. And the teacher’s always modeling for the children, so that’s very important for them to see, and she’s always looking at “what do my students know and where do I need to take them?”*

At Case B Elementary, the reading teacher added to this saying:

*Teachers work with those students who are on or below every day, in a small group setting. It might be five kids. It might be a one on one. They always check to make sure that they’re accurate in their new books. I was talking with the first grade teacher today and everything –we were talking about the reality is we know that if something’s going to happen we do it all there, and they work it in to either practice in a center. They teach it then they–then the students might practice it in a center with a partner. They might work–and we also have a fantastic ESL staff that works with the students and they often do word work with them.*

The individualized instruction also brings out motivation within students. Teachers were enthusiastic when they spoke about students becoming excited about reading and learning. The reading teacher at Case A shared this story:
A little boy, he came in, he did not know any letter. He did not know how to write a sentence. When I asked him to write a word he wrote letters all over the page. When I gave them a dictated sentence he wrote everything vertically and so I talked to his mom and I said “Maybe he should do Reading Recovery” and she was OK with that, and after about the 12th week of Reading Recovery – Reading Recovery’s 20 weeks – this child started to write sentences, write words. He was reading and he was holding a book like an adult would read a story and he came in and he was so happy. Every day he came in “What are we going to learn today?” because he was so involved in his learning, and his parents were very supportive with his learning. He wanted to read two and three books a day. He wanted to take home more and more books, and by the end of Reading Recovery –he started at a level 0 which means he was reading nothing, - in the 20 weeks he went to a level 13.

A member of the first grade focus group at Case A also shared:

I feel like the kids are very excited to look at books and see books. A lot of them don’t have books at home. So I feel like when it comes to reading in class they’re excited. So I think that that also helps them with their progression. That they enjoy reading.

The first grade focus group at Case B continued with this idea, as they spoke about motivation:

I would say as a strength, most of the kids do come in wanting to learn. As a majority of our kids, they’re really excited to be here. They have a great attitude and are very appreciative of everything you give them and do for them in the classroom, and they want to please, and that’s been the exciting part is they really want to please you.
Finally, the one member of the kindergarten focus group at Case B told a story about a way that she provides specific attention to one student, which in turn motivates the child to begin her day on a positive note:

_I have a student who doesn’t come with her hair brushed or her teeth brushed, and that gets done so that her day can be more positive to move forward and it does make a big difference. We have to read each child and decide what they need._

The manner in which teachers and administrators in both schools provide these types of motivational support to students was an overarching factor in positive outcomes.

**Case Study and Focus Group Findings**

This multiple case study analysis of four interviews and four focus groups at two schools resulted in the following four findings:

1. The importance of building background knowledge in literacy and socio-cultural experiences,
2. Leadership was a key element to overall success of teachers and students. Leadership focused on teacher training, and creating an ethos of support was perceived as key to student success,
3. Parent support that was comprehensive, consistent, and focused on student learning helped in the overall growth of students, and
4. Instructional strategies that focused on meeting students where they are, as well as deliberate means to motivate students, were important to student achievement.

There was a preponderance of evidence to support all four findings. Together, the four findings generated a closer look into the success of kindergarten and first grade students at both schools. Participants shared their thoughts regarding the overall culture of the school and
practices being used to support students and parents. Leaders at both schools have set the tone for success through their dedication to meetings the needs of students of poverty and targeted professional development. Each finding appeared to be an integral part of the positive results these schools have seen.

**Summary**

Examination of both quantitative and qualitative data led me to better understanding of how students perform in kindergarten and first grade at Case A and Case B Elementary Schools. Quantitative data showed that former Head Start students may not always maintain the initial gains they had when entering kindergarten. The data showed that there are achievement gaps between English language learners and native English speakers. Additionally, quantitative data uncovered gaps in reading achievement among racial groups.

Qualitative data provided insight into classroom practices being used to support students in both schools. Four major themes emerged as a result of interviews, focus groups, and document reviews. The themes included: 1) The importance of building background knowledge in literacy and socio-cultural experiences; 2) Leadership was a key element to overall success of teachers and students. Leadership focused on teacher training, and creating an ethos of support was perceived as key to student success; 3) Parent support that was comprehensive, consistent, and focused on student learning helped in the overall growth of students; and 4) Instructional strategies that focused on meeting students "where they are," as well as deliberate means to motivate students, were important to student achievement. The qualitative data provided a picture of the culture and climate at Case A and Case B Elementary Schools. Interestingly, at times quantitative and qualitative data were not aligned, which leads to implications for future
research. Chapter 5 focuses on a discussion of quantitative and qualitative findings, as well as areas of additional research needed to investigate outcomes for Head Start students.
CHAPTER 5 DISCUSSION

Poverty has been shown to play a role in achievement gaps among groups of students in public education. Head Start took its roots in President Johnson’s "War on Poverty," providing evidence that poverty has been an issue in our country for decades. In earlier chapters, I discussed the federal Head Start program which seeks to provide young children living in poverty with opportunities to learn school readiness skills, such as social and emotional competence, motor development, and development of pre-academic skills (McWayne et al., 2009). Although outcomes for Head Start students show positive results at the beginning of kindergarten, the effects appear to diminish over time (Currie and Thomas, 1995). The Head Start Impact Study (2012) pointed to decreasing outcomes for Head Start students as they move through elementary school. Despite Head Start’s long history, research on the long-term effects of Head Start on future outcomes is somewhat limited. As our country continues to see a rise in the number of students living in poverty, additional research regarding outcomes for Head Start students is needed.

This study expands on the research of Currie and Thomas (1995), Foster and Miller (2007), and Domitrovich et al. (2009) by examining outcomes for Head Start students. Given the increase in the number of students living in poverty, there is a need for research on ways to increase academic outcomes for low-income students. The conceptual framework for this study emerged from a review of the literature on Head Start and other early childhood programs. The literature review focused on poverty and child development and how poverty affects children in the elementary classroom. Brain based research focused on the development of children growing up in poverty was highlighted. Children growing up in poverty are exposed to repeated stressors which, in turn, affect their brain growth. Brain-based responses have been shown to
impact a child's language development directly (Farah et al., 2006) which is manifested in elementary classrooms. The foundations of reading are learned in the primary grades (Douglas & Montiel, 2008); therefore, it is important that teachers recognize the effects of poverty in the primary grades.

Mixed methods research is seen as a means to gather in-depth on a subject (Johnson & Christensen, 2012). I selected a mixed methods research design to allow me to use quantitative data regarding outcomes for Head Start students while obtaining qualitative data to further explain best practices being used in the early grades with former Head Start students. I described the quantitative data used in the study and the data analysis procedures I used to investigate outcomes for students based on FK and SP1 PALS. I also discussed the collection of qualitative data including the processes used for interviews with principals and reading teachers and the protocols used to increase validity of the data. In order to understand instructional practices and beliefs of staff, I conducted teacher focus groups at both schools. The data collected through interviews and focus groups, as well as document reviews, were triangulated. Finally, I examined ways to ensure both validity and reliability of the data. Johnson and Christensen (2012) refer to validity in mixed-research as legitimation. In this study, validity for both methodologies was addressed (Johnson & Christensen, 2012).

In the fourth chapter, I reported the findings from the quantitative and qualitative analyses. I provided background information on and demographic descriptions of Case A and Case B Elementary Schools and study participants. The school descriptions provided information to better understand both the population studied and the overall climate of the schools.
Results of quantitative analyses (t-tests, ANOVA, and multiple regressions) were shared with a focus on the statistically significant findings. The first key finding indicated that Head Start students start kindergarten with much higher scores on PALS than non-Head Start students; however, the Head Start Group was the only group whose PALS scores decreased when comparing assessment results in fall of kindergarten to spring of grade one. This finding is important as it corroborates findings published in the literature (Douglas & Montiel, 2008; Burkham & Lee, 2002). I also reported reading comprehension levels for the Head Start cohort of students in this study. Seventy-four percent of Head Start students were reading at or above grade level; however, 26% were reading below grade level now that they are in second grade.

The analysis of the content of transcripts of the interviews and focus groups, and document reviews was conducted using worksheets based on Stake's (2006) Multiple Case Study Analysis process. Four findings from the qualitative data collection process included:

- The importance of building background knowledge in literacy and socio-cultural experiences;
- Leadership was a key element to overall success of teachers and students. Leadership focused on teacher training, and creating an ethos of support was perceived as key to student success;
- Parent support that was comprehensive, consistent, and focused on student learning helped in the overall growth of students; and
- Instructional strategies that focused on meeting students "where they are," as well as deliberate means to motivate students, were important to student achievement.

Chapter 4 concluded with a summary of how my findings demonstrate a need for further research regarding outcomes for Head Start students. In this chapter, I discuss both quantitative
and qualitative findings and their implications for educational leaders and teachers. I conclude with the importance of continuing the supports provided in Head Start to continue to promote these students’ success throughout elementary school.

**Effects of Poverty on Student Achievement**

Poverty is a social issue that affects young children, particularly regarding their performance in school. According to the 2015 Annual Report by Feeding America, 48 million Americans live in food-insecure households. Of that 48 million, 15 million are children. Research regarding outcomes for students living in poverty shows that language development, cognitive achievement, and working memory are impacted by exposure to repeated stressors, such as violence and instability (Blair et al., 2005; Hanson et al., 2013). Students from low SES environments have been shown to be prone to struggle in reading which led to academic issues in all subjects (Foster & Miller, 2007).

Neuro-scientists have studied how environmental factors impact brain development for children living in poverty (Blair et al., 2005; Farah et al., 2006; Hanson et al., 2013; Twardosz, 2012). Findings indicate that working memory and cognitive function may be weaker in students from low SES homes. Additionally, exposure to toxic stressors may lead to early learning problems for students in primary grades where the foundations of reading are taught (Neville et al., 2013). Brain-based responses to toxic stressors included diminished attentions spans and the need for instant gratification (Farah et al., 2006). This is critical information for educators working in high-poverty schools, since teachers must address student needs if the student is to succeed.

In this study, I found that teachers in the focus groups spoke to deficits of low-income students that confirmed much of the research. Teachers spoke of students' weaknesses in
vocabulary and background knowledge. They discussed limited exposure to reading at home. They talked about a lack of conversations at home. Some teachers actually referred to their students as, "coming in with a blank slate." Their perceptions of students were focused on what students didn't know, as opposed to ways to address what they needed to know in the classroom. Burkham and Lee (2002) determined that SES status was significantly related to cognitive skills—more so than any other factor. With this in mind, teachers must find strategies to address ways to increase cognitive skills.

Although teachers in this study spoke about strategies used to teach early literacy skills, they did not speak to differences between students from low-SES families and higher-income families. One teacher shared that they don't need to look at a student’s economic situation. She felt that teachers meet students' needs by looking at where they are. Her thought was that there is no difference between students from different income levels. This speaks to the need for teachers to understand that there are actual physiological differences between students, including those that are a result of living in poverty. Brain-based research shows that low-income students are exposed to toxic stressors (Hanson et al., 2013). This leads to negative brain-based responses, such as lack of impulse control, diminished attention spans, and the need for instant gratification (Farah et al., 2006). These responses may impact a child's language development which, in turn, can lead to problems with the early stages of literacy (Foster & Miller, 2007). With a growing number of students growing up in poverty, it is crucial that educators are aware of brain-based research. Teachers need to address differences among students and provide instruction based on the research regarding brain-based learning. Conversations regarding the needs of children raised in low socioeconomic environments must be a focus in Title I schools.
When considering studies regarding brain development for children growing up in poverty, teachers need to understand what the research means for their teaching. If students' brains are developing differently because of environment, teachers need to consider this information when planning lessons and determining ways to assess student learning. Teachers need to find ways to focus their attention on addressing areas such as working memory and cognitive control in order to assist their low-SES students. Differences between students from low-income environments and those who grow up in middle class homes call for different strategies. Jensen (2013) provides educators with specific areas of focus when working with students living in poverty. Areas include: a) health and nutrition, b) vocabulary, c) effort, d) hope and growth mind-set, e) cognition, f) relationships, and g) distress. Jensen (2013) discusses ways that educators can increase outcomes for students when teachers address these areas. His number one suggestion for teachers is that they build relationships with students and understand differences that show up in classrooms, based on student's SES-status. The research is plentiful that shows the differences affect children raised in poverty. It is crucial for teachers to understand the differences and address them in their instructional practices.

Overall, the effect of poverty on student outcomes in this study confirmed the research of Burkham and Lee (2002). In their book, *Inequality at the Starting Gate: Social Background Differences in Achievement as Children Begin School*, the authors discuss the effects of poverty on children as they enter kindergarten. Analyzing data from the 1998 Early Childhood Longitudinal Study-Kindergarten Cohort (DOE, 2010), Burkham and Lee found that low-SES children scored 0.47 standard deviations below middle-SES children in reading. In this study, disadvantaged students scored 0.72 standard deviations below non-disadvantaged students at the beginning of kindergarten. By the end of first grade, disadvantaged students were still below
non-disadvantaged students with a difference of 0.60 standard deviations. Although the gap had narrowed, there was still a significant difference between students living in poverty and those who do not.

Poverty is a factor that impacts students in classrooms across the country. With more students living in poverty each year, it is clear that schools must find ways to address the needs of students who fall into this subgroup. Teachers must have an understanding of how poverty affects students, particularly in the areas of neurocognition and brain development. Additional research is needed that will provide teachers with strategies they can use to help students overcome challenges related to poverty.

**Professional Development for Teachers**

Professional development focused on students living in poverty is crucial for Title I schools which all have a high percentage of economically disadvantaged students. Principals at both case schools talked about professional development for teachers focused on the work of Ruby Payne. In her book, *A Framework for Understanding Poverty* (2005), Payne includes in her work about generational poverty, hidden rules of the class in which one is raised, and how schools operate from middle-class norms. Each principal in this study felt that this information was important for teachers to know and understand. They provided on-going training based on Payne’s work for their teachers.

Interestingly, none of the teachers in the study commented about professional development based on Payne's work. This is an important aspect of this study, as research shows that students living in poverty not only have developmental differences, but operate from a different set of norms. If teachers do not receive training about the differences in either area, how can they adequately address students’ needs? Principals discussed the importance of
professional development regarding children who live in poverty, yet the teachers in this study did not indicate that this professional development impacted their work. This finding raises questions about the nature of poverty-focused professional development. How does it impact teachers? Leaders and teachers have different roles in the school; while they share many common interests, the day-to-day demands of their jobs are very different. While the two principals here spent a lot of time during their interview talking about Payne, the teachers were more focused on the instructional needs of students. It would be useful to see research that examines the lasting impact of professional development that is focused on poverty for Title I schools.

The school system has a focus on improving instruction for English language learners. The principal at Case B Elementary spoke about the district's focus on meeting the needs of English language learners. She discussed professional development focused on teaching English language learners through collaboration and co-teaching models and felt that this has helped teachers meet the needs of all students. Teachers in the study did not speak about this area of professional development. They did talk about collaboration with English Speakers of Other Languages (ESOL) teachers; however, none focused on the ESOL training being provided. I found this to be interesting, given that the principal felt the on-going training was a factor in student success. This raises additional questions about perceptions of the utility and impact of professional development. How do leaders perceive professional development experiences? How do teachers perceive them? In this study, there appeared to be a disconnect between professional development that was provided and what teachers felt was important.

Classroom teachers spoke about professional development focused on reading as well as collaboration with reading teachers. They shared the benefits of participating in Supporting the
Practice of Reading and Writing Theory (SPOT) training. Members of the four focus groups felt that SPOT training had a significant impact on their classroom practice. It was clear that leaders in both schools provided professional development opportunities for teachers; however, the importance of specific trainings appeared to differ between administrators and teachers. Jensen's work regarding disadvantaged students could provide brain-based strategies for teachers to address differences affecting students in their classrooms. The implications for teachers are plentiful. They must begin to understand differences between students in their classrooms and research that will help students who bring varying backgrounds into the school setting.

**Head Start Students' Performance**

Head Start programs focus on preparing children with readiness skills to begin kindergarten (National Head Start Association, 2012). The Head Start Impact Study (2012) showed that Head Start students increased their early language and literacy skills, but that the effects faded out over time. In the Head Start Impact Study (2012), significant differences were noted between Head Start students and control groups at the beginning of kindergarten; however, there was little evidence of sustained progress for the Head Start students. Foster and Miller (2007) reported similar findings in their study of students and their acquisition of reading skills. Students who started in the lowest group in their knowledge of phonics continued to struggle with comprehension at the end of third grade (Foster & Miller, 2007). First grade students in Foster and Miller's study did not make gains in reading comprehension, as they were still learning prerequisite phonics skills necessary to be able to read (Foster & Miller, 2007). A comprehension gap was being uncovered as students’ progress from kindergarten through third grade.
Head Start students in this study demonstrated performance that was similar to the aforementioned studies. Quantitative data analyses showed that Head Start students outscored non-Head Start students on PALS at the beginning of kindergarten in both schools. The difference was significant as Head Start students entered kindergarten, with Head Start students performing one standard deviation above non-Head Start students. This provided evidence suggesting Head Start students were ready for kindergarten. Results over time concur with the findings of the Head Start Impact Study (2012) and Foster and Miller (2007). By the end of first grade, Head Start students' performance improved, but not at a rate that was seen in other students. The Head Start students' made gains, but did not maintain the initial gains when measured by the standard on PALS, which increased over time. Head Start students and Blacks were the only groups in this study whose scores decreased from fall of kindergarten to spring of first grade. This is unfortunate but confirmed my original hypothesis that Head Start students do not maintain their initial academic gains as they move through elementary school. Although time and money was invested in the youngest, neediest students, they were not able to keep up with their more advantaged peers as they progressed through the primary grades.

I asked participants in interviews and focus groups if they could identify students in the school who had participated in Head Start. Some participants were not able to identify the Head Start students. Participants who knew which students attended Head Start articulated about the strengths of students who come from the program. They identified key areas such as early literacy knowledge and socio-cultural awareness that were stronger in the Head Start students. It is interesting that some participants could not identify the Head Start students, as I believe it is important for teachers and administrators to know this information. If school administrators and teachers know that students attended Head Start, they may be able to continue the supports
offered in the program. This might allow them to continue to achieve at similar levels to their more advantaged peers. It has been shown that supporting students in their first three years of elementary school can help with the transition from Head Start (Caspe, Lopez, & Wolos, 2007). The findings in this study show that challenges experienced by economically disadvantaged students continue once they are in elementary school. By knowing that a student had been enrolled in Head Start, school staff could continue to provide supports used in the Head Start program for both students and families and facilitate a better trajectory for academic success. On the other hand, teachers might allow personal biases regarding low-income students to influence their belief in the ability of Head Start students to achieve at levels commensurate with higher income students. This is a consideration when deciding if teachers need to know whether or not a student participated in Head Start. This also raises questions as to whether schools should mandate supports for former Head Start students as they move into elementary school.

The literature regarding support for elementary school students emphasized the need for family involvement both at school and at home. Caspe et al. (2007) reported on The Harvard Family Research Project that provides learning supports for students. Supports included in-school and out-of-school programs as well as health and social service organizations (Caspe et al., 2007). The Carolina Abecedarian Project (1972) and The Perry Preschool Project (1962) were early examples of programs that provided disadvantaged children with preschool intervention experiences (Currie, 2001; Zigler, 2001). Each of these programs provided academic support to students and included home resource teachers and home visits. Although the two schools in this study are doing well, participants did not go so far as to extend relationships with outside agencies. This could be another way to support student learning.
Reading Results for Head Start Students

Students enter school with varying levels of literacy skills. As students learn to read, they progress through stages in the process. The stages include emergent literacy, phonics, fluency, and reading comprehension (Foster & Miller, 2007). Results of this study indicate that Head Start students possessed strong emergent literacy skills. Scores on the spring first grade PALS assessment indicated that Head Start students did not progress through the stages of phonics and fluency. First grade teams did not provide information as to why Head Start students did not make the progress seen in other groups. The transition from emergent literacy through the developmental stages of reading is critical for students to be successful in reading (Foster & Miller, 2007). Students must be able to transition from decoding words to comprehending what they read.

The findings from this study on reading show mixed-results for Head Start students. The PALS assesses phonological awareness, alphabet knowledge, knowledge of letter sounds, spelling, and concept of word (Invernizzi, Juel, Swank, & Meier, 2015). The results of the PALS assessments revealed that Head Start students performed above all other groups when entering kindergarten. By the end of first grade, Head Start students' scores decreased relative to that of their peers. As previously stated, Head Start and Blacks were the only groups that showed a decrease in their scores—a less than positive outcome for this group. However, when examining results in reading comprehension, I found the data contradicted the results of the spring grades assessment. Using the DRA scores for Head Start students, I obtained student reading levels based on the DRA target of 28 for third quarter, second grade students. According to the most recent data for the cohort, 74% of Head Start students were reading at or above the target. Twenty-six percent were reading below the target.
At first glance, data from PALS that showed Head Start students reading performance declined from fall of kindergarten to the spring of first grade. Although Head Start students increased over time, they were not making progress commensurate with their peers. Seventy-four percent were reading at or above the DRA target by the third quarter of second grade. It could be that the second grade teachers, focusing on comprehension skills, phonological awareness and fluency, led students to comprehend at DRA-targeted levels. Or it might be that students who were identified by PALS scores at the end of first grade received additional support from reading teachers. Although 74% of the students were reading and comprehending at desired levels at the end of the third quarter of second grade, 26% were not. Future research is needed to determine correlations between PALS and DRA, so that educators can make informed decisions regarding reading instruction for low SES students.

**Location of the Head Start Program**

Participants felt that Head Start students bring more background knowledge to the classroom and that Head Start had a positive impact on children's language and literacy development. This aligns with findings in the Head Start Impact Study (2012). Teachers at both schools shared that Head Start students enter the elementary school with a better understanding of early literacy skills and stronger socio-cultural skills. Teachers and administrators shared that Head Start students knew the routines of the classroom, were able to follow directions, and had better social interactions with other students.

Knowledge of which students participated in Head Start was more pronounced at Case A Elementary, where the program was housed in the school building. Participants felt that having the Head Start program in the school allowed them an opportunity to interact with the Head Start teachers. This promoted greater collaboration as students transitioned into kindergarten. The
The principal at Case A Elementary shared that the Head Start program has evolved and has a greater focus on academics now than it did two decades ago.

The participants at Case B Elementary were not as well versed in their knowledge about Head Start. The Head Start program that feeds into Case B Elementary is housed at a local high school that is approximately ten miles away. Collaboration between Head Start and Case B Elementary is difficult due to differences in schedules and the distance between schools. Case B Elementary also had a much smaller population of students from Head Start, which could be due, in part, to the location of the program.

The sample size of Head Start student differed in the two schools, with a much larger Head Start population at Case A Elementary. Given the sample size, questions arise regarding location of Head Start programs. Does having Head Start housed in the elementary school allow for better collaboration between the Head Start and elementary teachers? Is there an increase awareness of supports provided to Head Start students when the program is located in the elementary school? Is the potential impact of differences in locations of Head Start programs an area worthy of additional research? The implications for students may be cause for study. Research on the benefits of housing Head Start programs in elementary schools may uncover data for policy makers pointing to the need to increase the number of programs located in existing elementary schools.

**The Role of Principals**

Principals impact student learning (Seashore-Louis, 2010). They are second only to teachers when it comes to impacting student achievement (Seashore-Louis, 2010). Principals set the tone for the school community by sharing their vision, mission, and set of core beliefs with all stakeholders of the school (Habegger, 2008). In this study, principals provided teachers with
an ethos of support. Each principal influenced school culture in a positive way by providing teachers with the resources and professional development needed to make a difference in student learning. Although the two principals participating in this study demonstrated supportive leadership, each retired at the end of SY 2015-16. At retirement, they left a legacy of support for staff, students, and families after providing consistent leadership for decades.

The principals in this study provided their schools with stable leadership. A unique factor in these schools was the longevity of the principals. The principal at Case A Elementary school has been the leader for 25 years. At Case B Elementary, the principal has led the school for 17 years, but has been a staff member for 34 years. Each of these principals led their respective schools for years beyond the average tenure of a principal in the U.S. which, according to Seashore-Louis et al. (2010), is three to four years. Loeb, Kalogirdes, and Horng (2010) found that the average tenure for principals in schools with a high percentage of students on free and reduced lunch was only 2.5 years. High achievement of students could be attributed, in part, to the stability of leadership within the school. This supports research showing that principals are an influential factor in student achievement, particularly when there is minimal turn-over of leadership (Seashore-Louis et al., 2010).

Parent Support Focused on Student Learning

Parent support is an essential part of student learning (Redding, Langdon, Meyer, & Sheley, 2004). School-wide parent engagement is linked to student achievement (Redding et al., 2004). Parent support in both case schools was comprehensive, consistent, and focused on student learning. Schools provided support to parents through parent education programs, consistent communication, and intentional relationship building. Principals expected teachers to be relentless in communicating with parents. Teachers explained that if parents did not show up
for conferences, teachers were expected to call and continue efforts to communicate. There was a culture of no excuses when it came to communicating with parents.

All participants at Case B Elementary made note of the proximity of the school to the community. They explained that most of the students walk to school with their parents. This allowed teachers to have conversations with parents on a daily basis, if necessary. Teachers and administrators felt this was a benefit in their efforts to know and communicate with students' families. On the other hand, at Case A Elementary, students are transported to school on buses. Daily communication with parents was not easy, as the parents were not at the school as often as at Case B.

Each school has a full-time bilingual parent liaison since the student population in the schools had a high percentage of Spanish-speaking families. The parent liaison helped with translating for parents and teachers in the schools' efforts to engage parents. Principals in each school stressed that having a parent liaison is a key to effective communication with families. Parent liaisons were responsible for the Parent Education Programs (PEP) which focused on providing systemic learning opportunities for parents. Teachers shared that they work with the parent liaison in their building to translate both written and oral communication. They believed the parent liaison is an essential component of their school culture.

Finally, teachers perceived parents to be an important factor in student achievement. They did not always feel that parents support student learning at home; however, they were committed to providing parents with programs demonstrating how to work with their children. Participants explained that talking to parents about reading with their children in the home language is important. Another perception that teachers shared was the importance of parents conversing with their children. They felt that parents do not always have conversations with
their children. A child's vocabulary development is strongly influenced by parent communication (Hart & Risely, 2003). Communication within low-income families is often focused on negative reinforcement, while children in higher income homes receive more praise (Hart & Risley, 2003). There is a gap in the vocabulary of students in low-income homes, when compared to their more affluent peers (Hart & Risley, 2003). The foundations of vocabulary are created in the home. Teachers in this study felt that, for their low-income students, limited vocabulary influenced their students.

Parents play an important role in education. In this study, participants felt that parents were consistently encouraged to be partners with the school. Teachers communicated with parents through conferences, newsletters, phone calls, and informal meetings at arrival and dismissal. Principals shared stories of strong relationships with parents. The principal at Case A Elementary shared a story about a family that she worked with where the mother got deported and the children's uncle came to take care of them. He worked until 5:00 p.m., so the principal kept the students in her office until he got there each day. She worked with the uncle to ensure they were cared for. One day, the girl actually called the principal "mom" which she said was one of the most meaningful experiences she has had in her career. Similarly, the principal at Case B Elementary shared a story about a family that moved out of state. The mother worked for months to get her children back to Case B Elementary because she felt such a strong connection to the school. Each of these stories shows how principals understood their role in building bridges to parents and caregivers to promote the well-being and education of students.

**Instruction Focused on Student Needs**

Participants in this study spoke to the need to differentiate instructional strategies to meet students "where they are" for instruction. This is commonly referred to as differentiated
instruction. The process of differentiating instruction is commonly thought to be a teacher reacting to a student's needs (Tomlinson, 1999). Three main ways for teachers to differentiate instruction are differentiation of process, of content, and of product (Tomlinson, 1999).

Teachers in this study focused on differentiation of process and content. They discussed methods used to achieve differentiation using small group and individualized instruction based on reading assessment results. Focus groups discussed the use of centers focused on literacy skills, and example of differentiated by content. Students participated in center activities on a daily basis, during which they used technology and hands-on materials to build their understanding of words and phonics and to develop phonemic awareness. Teachers met with guided reading groups differentiated by student reading levels. They used strategies from Jan Richardson's book, *The Next Step in Guided Reading: Focused Assessments and Targeted Lessons for Helping Every Student Become a Better Reader* (2009), to assess students using running records and to plan instruction based on individual student reading levels—thereby differentiating by content.

Although participants shared means to differentiate by process and content, they appeared limited on ways to differentiate by product. Differentiation by product refers to ways students demonstrate what they have learned by designing products based on learning goals (Tomlinson, 1999). Teachers might want to consider ways to assess student learning by offering choices of products, such as projects using technology or the arts. These types of products could allow students to demonstrate their learning in ways that address their brain-based learning styles. It would require further inquiry to determine whether teachers at the two schools provided options for assessment products; however, given the extent to which they described their differentiation of content and processes suggests that assessment is an area to which they have given less
thought. There is little written about the manner in which instructional leaders approach assessment practices in Title I eligible schools, and this finding suggest that further inquiry might be relevant. Teachers in this study did not share information regarding differentiation by product. Perhaps if teachers focused on differentiating by product, students’ cognitive strengths could be shown in their work.

Implications for Practice and Research

The quantitative and qualitative data collected in my study led to questions regarding outcomes for Head Start students. As federal accountability increases for all educators, those students who are at the greatest risk of failing must be given continuous supports to help them succeed. I believe the following implications for practice and research provide information for educators to consider as they work to meet the needs of all students.

Leadership

This research focused on two schools and their efforts to increase student outcomes. In the study, the most compelling theme was how important the leader of the school is in creating an ethos of support for teachers and students. Principals have a tremendous impact on student achievement (Seashore-Louis et al., 2010). Teachers felt that the principals set the tone for high expectations for both school personnel and students. Additionally, principals expected strong communication between the school and families. The expectation in both schools was that teachers must find ways to increase parental involvement. The importance of parents being partners with the school is a key to student success (Henderson & Mapp, 2002). This expectation is only realistic when the administrator makes it a priority. Research shows that students do better in school when parents play a role in their learning (Henderson & Mapp,
Both principals made parent partnerships a priority. The effort to engage parents in their children's education was consistent and intentional in both schools.

It was clear that the principals led their schools through a clear vision and ethos of support. The connection between the quantitative and qualitative data led me to recommendations for school leaders related to outcomes for Head Start students. Implication for school leaders are described in the following sections.

Support for Head Start Students

Head Start programs offer support to low SES children and families prior to elementary school. Overall, students coming from Head Start begin school with a strong skill set. Data in this study shows that Head Start students begin to lag behind by the end of first grade. Continuing the level of support for students and families could help with better outcomes for Head Start students once they enter elementary school. This support can be provided through consistent communication with families and ensuring that parents continue to engage with the school. Additionally, an important part of Head Start programs includes partnerships with outside agencies to provide parent education courses, crisis intervention for families, and medical resources for children. Elementary schools need to consider these supports since the need for them continues once the children begin elementary school.

Professional Development

School administrators will want to continue to provide professional development regarding research on students living in poverty. Payne's book, *A Framework for Understanding Poverty* provides teachers with an overview of differences between social classes. In this study, principals felt that this training was important; however, teachers did not mention the impact of the training. This type of training must be on-going, as needs of students are ever changing.
Poverty is an adaptive leadership challenge, one that schools can make changes to address. As the numbers of students living in poverty increases each year, teachers will continue to face challenges in their classrooms that require greater understanding of their learners and their own personal orientation towards poverty. The research on brain-based learning is powerful, demonstrating that low-income children need focused instruction to help them overcome challenges they face. If teachers do not know and understand the tremendous impact of poverty on children's brain development, they may not provide instruction to address the cognitive limitations brought about by toxic stressors for low SES students.

**Ethos of Support**

Educators working in Title I schools face a variety of challenges, given the high number of economically disadvantaged students. As teachers face increasing demands for all students to demonstrate achievement on standardized tests, this challenge may seem overwhelming. A key finding in this study was the ethos of support provided by principals. Teachers felt that the school leaders supported them through available resources and professional development. The ethos of support is needed, particularly in Title I schools. Teachers in this study shared that, although the responsibilities are extensive when working in a Title I school, the support of the principal and other teachers on the team was important.

**Expansion of Head Start**

Poverty continues to be a factor in our society (Walt, Proctor, & Smith, 2013). Children from poverty need extra support to achieve at high levels (Smith & Bombyk, 2012). Continued learning about ways to meet low-income students' educational needs is worthwhile. I recommend additional research on ways to expand Head Start to more eligible students. Research over the last few decades points to the benefits of Head Start programs; however, Head
Start can only support a small percentage of students living in poverty. Additional research on how to improve the quality of pre-kindergarten experiences for low-income students is needed. What types of supports can be given to students who qualify for Head Start, but do not "make the cut" due to limited space in programs? A thorough investigation into ways to support the neediest students is warranted.

**Title I and Non-Title I Schools**

My research focused on outcomes for Head Start students in two Title I schools. Head Start students enter classrooms in both Title I- and non-Title I schools; however, research on outcomes for Head Start students in non-Title I-schools is limited. This could be due to fewer numbers of low-income students attending schools in more affluent areas. This study should be replicated to determine outcomes for former Head Start students in non-Title I schools. By using more schools and a wider range of participants, researchers may be able to determine if there is a difference for Head Start students in schools with a lower percentage of economically disadvantaged students.

**Long-range Outcomes**

The current study focused on outcomes for Head Start students in kindergarten and first grade. Additional research is needed to determine outcomes for Head Start students as they move through elementary school. A longitudinal study could also be conducted to determine the academic performance of cohorts of Head Start students through high school to track graduation rates. A study of this nature could focus on continuation of family support as students move from elementary to middle school and from middle to high school. This could provide additional information on longer-term outcomes in reading for students who attend Head Start.
Summary

This study confirmed my informal observations of Head Start students' performance. These students enter kindergarten "ready to learn" but begin to lose ground by the end of first grade. Teachers face challenges in working with students from low-socio economic backgrounds. The landscape of education has changed over the last several decades, in that teachers are now accountable for increased outcomes for the performance of all students. Thus, meeting the needs of low-income students is increasingly important.

From this study, I strengthened my viewpoint that teachers need on-going professional development that is strategically designed to meet the needs of their students. Brain-based research indicates that students living in poverty have a different physiological make-up. This information, coupled with the research of Payne, shows that educators need to know and understand differences between their students. SES is a factor in classrooms. Individual students' needs are different. Teachers must know and understand these differences in order to meet the academic needs of all students. In this study, teachers were passionate about their work; however, they did not articulate their understanding of the differences between low-SES and higher-SES students. There are differences that must be addressed in the classroom.

Administrators are a key to student success. This viewpoint was strengthened as I listened to teachers talking about the support provided by their administrators. Principals who set an ethos of support developed strong relationships with staff, students, and parents which, in turn, led to increased academic outcomes. The principals in this study have led their staff with conviction and provided an ethos of support and dedication for meeting the needs of students who come from poverty. Their teachers knew their leader’s expectations and faced each day with that in mind.
This study showed me that challenges faced in the two Title I schools were similar. Teachers must meet the needs of students who speak other languages. Students come to school with a variety of background experiences. Teachers have to provide support for students and families that goes beyond planning lessons and teaching during the school day. It takes a village to meet the needs of students living in poverty. This was clearly shown in both schools, as classroom teachers worked collaboratively with resource teachers to provide targeted instruction for students. Effectively supporting students is a team effort begins with the school leader. The culture in each school was collaborative, collegial, and focused on student learning. Teachers and administrators shared their on-going dedication to meeting the needs of students, regardless of challenges they faced.

Through this research, I learned additional information about Head Start, including the inclusive nature of the program. A large component of Head Start includes involvement of parents in their child's education. Families are involved in Head Start through volunteer opportunities and parent education programs. Teachers in Head Start are required to make home visits, help parents to set goals for the family, and provide resources for parents in health care. Head Start programs partner with various agencies to promote health and nutrition. The focus in Head Start is one of overall support for the child and the family. School leaders can learn from practices being used in Head Start programs. Findings in this study showed that Head Start students begin to lose ground by the end of first grade. Perhaps if school leaders were to implement practices similar to those used in Head Start, outcomes for students would be more favorable. There are lessons to be learned from Head Start that can help elementary school personnel working to meet the needs of all students.
When thinking about the family that I spoke of in Chapter 1, I continue to wonder why this family peaked my interest in students living in poverty. Both students are in middle school now. I check in on their progress to see how they are doing in school. I still think of them daily and hope that they are successful. Clearly, the relationship we formed when they were in kindergarten continues to be a strong bond. I will continue to communicate with this family, hoping that the relationship we formed in some way influences their future success.

Head Start programs provide low-income students an opportunity to enter school with proper readiness skills (Smith & Bombyk, 2012). Short-term outcomes for Head Start students are promising; however, long-range outcomes do not appear to be positive (Head Start Impact Study, 2012). The needs of students living in poverty do not change once they enter elementary school, thus supports need to continue. As the curriculum becomes more difficult from one grade to another, it is even more important to support Head Start students. Clearly, discontinuation of supports provided in Head Start is not yielding positive outcomes for students.

Supporting children who have gone through Head Start programs well into elementary school is worthy of additional research. With additional supports, the trajectory for low-income students who participate in Head Start will be better—possibly leading to a decrease in poverty that plagues our country. As more research is conducted, additional recommendations can be made to increase the performance of Head Start students throughout their elementary education.
REFERENCES


Smith, S., Ekono, M., & Robbins, T. (2014). *State policies through a two-generation lens: Strengthening the collective impact of policies that affect the life course of young*


APPENDICES

Appendix A  IRB Approval Document
Appendix B  Approved E-mail to Elementary School Principals
Appendix C  Informed Consent Document
Appendix D  Interview Protocol Guide for Principals
Appendix E  Interview Protocol Guide for Reading Teachers
Appendix F  Interview Protocol Guide for Focus Groups
Appendix G  Focus Groups Introduction/Prompts/Closing
Appendix H  Document Analysis Authenticity Protocol
Appendix I  Reflexivity Protocol
Appendix J  Multiple Case Study Analysis-Worksheet 2
Appendix K  Analyst's Notes While Reading a Case Report-Sample of Worksheet 3
Appendix L  Worksheet 4-Ratings of Expected Utility of Each Case for Each Theme
Appendix M  Matrix for Generating Theme-Based Assertions from Case Findings
MEMORANDUM

DATE: April 22, 2016

TO: Kami M Patrizio, Daria Groover

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)

PROTOCOL TITLE: Head Start Programs: Can Early Intervention Make a Difference?

IRB NUMBER: 16.082

Effective April 22, 2016, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the Amendment request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: Expedited, under 45 CFR 46.110 category(ies) 5, 6, 7
Protocol Approval Date: February 8, 2016
Protocol Expiration Date: February 7, 2017
Continuing Review Due Date: January 24, 2017

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal/work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.
Appendix B: Approved E-mail-Elementary School Principals

Dear XXX,

I am writing today to ask your consideration to participate in a research study I am conducting about reading performance of kindergarten and first grade students. Would you be willing to participate in my research? I am researching best practices being used in Title I schools that lead to success of former Head Start students, as well as economically disadvantaged students. Additionally, I am willing to discuss this further either by phone or in person, if necessary. Thank you in advance for any help you can provide. I would be honored if you would accept this invitation to participate.

Sincerely,

Daria Groover
(phone number)
(email address)
Appendix C: Informed Consent Document

IRB Approval Form-Informed Consent
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: Head Start Programs: Can Early Intervention Make a Difference?
Research Investigators: Daria Groover, dariag5@vt.edu (phone number)
Dr. Kami Patrizio, kpatrizi@vt.edu (phone number)

I. Purpose of this Research Project
The purpose of this mixed methods research is to contribute to the research regarding outcomes for former Head Start students in reading as they move through kindergarten and first grade. I will seek to determine best practices being used in elementary schools that lead to positive results for students who attended Head Start by identifying common themes leading to success in reading in two schools. I will seek to understand commonalities among participants in the two schools being studies. My anticipated findings are that increased support for parents and families influence outcomes for former Head Start students as they move into elementary school from Head Start.
Quantitative data will include: data from the Phonological Awareness Literacy Screening (PALS) assessment to determine the two schools that will be studied. Once the schools are determined, I will analyze data from the Developmental Reading Assessment (DRA) to determine student growth in reading. Qualitative data will include: interviews with principals and reading teachers, focus groups with kindergarten and first grade teams. All data will be collected in Prince William County Schools, Manassas, VA.
This study is part of my dissertation, which is partial fulfillment of the requirements for the degree of Doctor of Education in Educational Leadership and Policy Studies at Virginia Tech.

II. Procedures
I plan to analyze quantitative data from the Phonological Awareness Literacy Screening (PALS) test for your school division to determine the highest achieving Title I and Non-Title I school. Next, I will collect qualitative data including interviews with principals and reading teachers at these two schools. My next step will be to conduct focus group interviews with the kindergarten and first grade teams in the two schools. Additionally, I will conduct document reviews including data that the schools collect regarding reading achievement from the Developmental Reading Assessment (DRA) to examine students’ reading comprehension skills. The interviews and focus groups will be audio-recorded and transcribed by a transcriptionist. The interviews and focus groups will be approximately one hour in length and will be conducted at a mutually convenient location. After collecting all qualitative data, it will be analyzed to determine common themes relating to best practices in Head Start education.

Data collected, including transcripts of interviews, audio recordings of interviews, and documents created by the investigator will be kept confidential by the investigator and retained for three years following publication of the study. After that, the investigator will destroy all hard copies by shredding them and data stored on technology will be deleted.
III. Risks
There are minimal risks to subjects who participate in this study. There is a slight risk that participants might feel emotional discomfort during the interviews.

IV. Benefits
Participants may experience minimal benefit from the reflection inherent in focus group or interview participation in this study. No promise or guarantee of benefits has been made to encourage participation.

V. Extent of Anonymity and Confidentiality
All data will be collected confidentially. Pseudonyms will be used for the school division and schools. Each participant will be identified using a pseudonym and case number for each focus group and interview. All written transcriptions will be deidentified through use of case numbers. I will use pseudonyms to protect the identity of the school system and individual schools to ensure confidentiality.

The Virginia Tech (VT) Institutional Review Board (IRB) may view the study’s data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Compensation
There is no compensation for participating in this study.

VII. Freedom to Withdraw
It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being asked of you without penalty.

Please note that there may be circumstances under which the investigator may determine that a subject should not continue as a subject.

Should you withdraw or otherwise discontinue participation, you will be compensated for the portion of the project completed in accordance with the Compensation section of this document.

VIII. Questions or Concerns
Should you have any questions about this study, you may contact one of the research investigators whose contact information is included at the beginning of this document. Should you have any questions or concerns about the study’s conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the VT IRB Chair, Dr. David M. Moore at moored@vt.edu or (540) 231-4991 or Dr. Kami Patrizio at kpatrizi@vt.edu or (703)538-8477.
XI. Subject's Consent

Participants may review the written transcript of the interview within ten days of the date it is sent. Please indicate if you would like to review the transcript by checking the appropriate option below:

_____ I would like to review the written transcript of my interview.
_____ I do not wish to review the written transcript of my interview.

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

____________________________________________ Date__________
Subject signature

____________________________________________ Subject printed name

____________________________________________ Investigator signature

____________________________________________ Investigator printed name

____________________________________________ Dissertation Chair signature

____________________________________________ Dissertation Chair printed name

(Note: each subject must be provided a copy of this form. In addition, the IRB office may stamp its approval on the consent document(s) you submit and return the stamped version to you for use in consenting subjects; therefore, ensure each consent document you submit is ready to be read and signed by subjects.)
Appendix D: Interview Protocol Guide for Principals

Interview Case Number: ____________________________________________

Interviewee position: ______________________________________________

Date of Interview: ________________________________________________

Principals:

1. Generally speaking, can you give your perceptions of how former Head Start students are performing? (Prompts: academically, socially, behaviorally)

2. Why do you believe they are performing in this way?

3. What training have you been involved with regarding students living in poverty?
   (Prompts: differentiated instruction, Ruby Payne, etc.)

4. In the course of your practice, what types of services have you seen that provide assistance to parents? (Prompts: English classes, parent education classes, family goal setting, or health education)

5. What services would you like to offer parents that could increase their involvement in their child's education?

6. What strategies do you use to get parents involved in their child's education?

7. What are your feelings about teaching and learning for students who live in poverty? Can you share a story about a time that you worked with a student in this subgroup? (Prompts: Who was involved? What happened? How did it make you feel?)

8. Do you know which students in your school participated in Head Start, pre-school, or those who had no pre-K experience? Do you think it is important for teachers to know this information? Why or why not?

9. Is there anything else that you would like to add?
Appendix E: Interview Protocol Guide for Reading Teachers

Interview Case Number: ______________________________________________

Interviewee position: ______________________________________________

Date of Interview: _________________________________________________

Reading Teachers:

1. What strengths and weaknesses do you see in your kindergarten and first grade students in reading? (Prompts: phonological skills, comprehension skills, fluency)

2. What types of staff development have you used to increase teachers' strategies in reading instruction?

3. What specific instructional strategies do you see teachers use to teach reading?

4. How do you believe parents can support literacy at home? What do you see as the role of parental involvement in the development of literacy skills? (Prompt: strategies, etc...)

5. What types of activities or programs have you seen used here to promote parent engagement in the school to promote reading?

6. What are your feelings about teaching and learning for students who live in poverty? Can you share a story about a time that you worked with a student in this subgroup? (Prompts: Who was involved? What happened? How did it make you feel?)

7. Do you know which students in your school participated in Head Start, pre-school, or those who had no pre-K experience? Do you think it is important for classroom teachers to know this information? Why or why not?

8. Is there anything else that you would like to add?
Appendix F: Interview Protocol Guide for Focus Groups

Focus group case number: ______________________________________________________

Date of Interview: __________________________________________________________

Focus Groups:

1. What would you say are the strengths and weaknesses of students in your reading class?

2. What specific instructional strategies do you use to teach reading?

3. What strategies have been used at your school to increase parent involvement in their child's education?

4. How can parents provide support at home that would help students perform better in the classroom?

5. What are your feelings about teaching and learning for students living in poverty?

6. Is there anything else you would like to add?
Appendix G: Focus Groups Introduction/Prompts/Closing

Good morning/afternoon. Thank you for taking the time to join our discussion of reading achievement of former Head Start students. My name is Daria Groover and I represent Virginia Tech, as I am working on my doctorate in education. I want to hear how teachers feel about the achievement of former Head Start students. I have invited your team to participate because you have experience with kindergarten/first grade students. Your students have shown growth in the area of reading and I want to tap into your experiences.

Today we will be discussing your thoughts and opinions about former Head Start students and families. There are no wrong answers but rather differing points of view. Please feel free to share your point of view even if it differs from what others have said.

Before we begin, let me suggest some things that will make our discussion more productive. Please speak up—only one person should talk at a time. I am tape recording the session because I don't want to miss any of your comments. We will be on a first name basis. In my report, there will not be any names attached to comments. You may be assured of confidentiality. I respectfully ask that cell phones are turned off and put out of sight.

My role here is to ask questions and listen. I will not participate in the conversation, but want you to feel free to talk with one another. I will be asking five questions and will move the discussion from one question to the next. There is a tendency in these discussions for some people to talk a lot and some people not to say much. But, it is important for me to hear from each of you today because you have different experiences. So if one of you is sharing a lot, I may ask you to let others talk. And if you aren't saying much, I may ask for your opinion.

We have placed name card in front of you to help me remember names. Let's begin.
Prompts:

Would you explain that further?
Can you give me an example of what you mean?
Would you say more?
Is there anything else?
Please describe what you mean?
I don't understand.
Tell me more about that.
How does that work?

For the group:

Who else has something?
What about the rest of the group?
I see people nodding their heads; tell me about it.
Who else has something that might be a bit different?

Closing the group:

Have we missed anything?
Is there anything we should have talked about but didn't?

Adapted from, "Moderating Focus Groups, Focus Group Kit 4" by Richard A. Krueger
Appendix H: Document Analysis Authenticity Protocol

Date:
Document Analyzed:

Document analysis authenticity protocol

Questions for determining authenticity:

- What is the history of the document?
- How did I get it?
- What guarantee is there that it is what it pretends to be?
  Is the document complete, as originally constructed?
- Has it been tampered with or edited?
  If the document is genuine, under what circumstances and for what purposes was it produced?
- Who was/is the author?
- What was he trying to accomplish? For whom was the document intended?
  What were the maker’s sources of information? Does the document represent an eyewitness account, a secondhand account, reconstruction of an event long prior to the writing, an interpretation?
- What was or is the maker’s bias?
  To what extent was the writer likely to want to tell the truth?
- Do other documents exist that might shed additional light on the same story, event, project, program, context? If so, are they available, accessible? Who holds them?
Appendix I: Reflexivity Protocol

Date: 
Location: 
Participants: 
Facilitator: 

Field notes / Reflexivity Protocol

1.) ”The pensieve” (Gerstl Pepin & Patrizio, 2009; Rowling, 2000):

2.) Thick, rich description (including context):

3.) Notable Quotes:

4.) Self Reflexivity
Prompts: ” What do I know? How do I know what I know? What shapes and has shaped my perspective? How have my perceptions and my background affected the data I have collected and my analysis of those data? How do I perceive those I have studied? With what voice do I share my perspective? What do I do with what I have found?” (Patton, 2002, p. 495)

5.) Reflexivity about participants
Prompts: “How do those studied know what they know? What shapes and has shaped their world view? How do they perceive me, the inquirer? Why? How do I know?” (p. 495)

6.) Reflexivity about audience
Prompts: “How do those who receive my findings make sense of what I give them? What perspectives do they bring to the findings I offer? How do they perceive me? How do I perceive them? How do these perceptions affect what I report and how I report it?” (p. 495)
Appendix J: Multiple Case Study Analysis-Worksheet 2

Themes Chart—Adapted from Stake, 2006 Worksheet 2

Research questions:
1. What factors affect Head Start students' performance in the primary grades?
2. How could family services at the elementary level (parenting education courses, home visits, emergency/crisis intervention, family goal setting, or health education) help impact former Head Start students' performance?
3. What are successful schools doing to increase academic performance for former Head Start students?

Worksheet 2: Themes of the Multicase Study

| Theme 1: The importance of building background knowledge in and socio-cultural experiences. |
| Theme 2: Leadership was a key element to overall success of teachers and students. Leadership focused on teacher training, and creating an ethos of support was perceived as key to student success. |
| Theme 3: Parent support that was comprehensive, consistent, and focused on student learning helped in the overall growth of students. |
| Theme 4: Instructional strategies that focused on meeting students "where they are" as well as deliberate means to motivate students, were important to student achievement. |

(Stake, 2010)
**Appendix K: Analyst's Notes While Reading a Case Report-Sample of Worksheet 3**

**Worksheet 3-Case B: Analyst's Notes while reading a case report**

Case ID: _____Case B Principal_______

<table>
<thead>
<tr>
<th>Synopsis of case:</th>
<th>Case Findings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case B Elementary School is a large Title I school, comprised of students who</td>
<td>Theme 1-Yes</td>
</tr>
<tr>
<td>primarily live within walking distance of the school. There are 800 students in</td>
<td>Theme 2-Yes</td>
</tr>
<tr>
<td>grades K-5. The Head Start program that feeds into Case B Elementary is housed</td>
<td>Theme 3-No</td>
</tr>
<tr>
<td>in a local high school. The principal at Case B Elementary School has worked</td>
<td>Theme 4-No</td>
</tr>
<tr>
<td>at the school for 34 years, as the leader for 17 years. The ethnic breakdown of</td>
<td>Theme 5-Yes</td>
</tr>
<tr>
<td>the student population is: Hispanic-47%, White-34%, Black-12%, Asian/Pacific</td>
<td>Theme 6-Yes</td>
</tr>
<tr>
<td>Islander-4%, and Two or more races-4%. Sixty two percent of students receive</td>
<td>Theme 7-Yes</td>
</tr>
<tr>
<td>for free/reduced lunch. There are 99 students in the cohort being studied, with</td>
<td>Theme 8-Yes</td>
</tr>
<tr>
<td>8 of them being former Head Start students.</td>
<td>Theme 9-Yes</td>
</tr>
</tbody>
</table>
### Uniqueness of case situation

For program/phenomenon: Case B Elementary School is within the actual community. Parents walk their children to school each day and pick them up. The Head Start program is housed in a different facility.

Principal at Case B for 17 years; Has worked at Case B Elementary for 34 years

Title I School

Doctorate in School Administration and Policy Studies

Quantitative data shows that students make strong gains on PALS from beginning of kindergarten to end of first grade. Students in this cohort increased the pass rate on PALS from 66%-89%.

### Possible excerpts for cross-case report:

Q1 The academic piece that’s most significant for us is the prior knowledge there and it is the vocabulary, the academic vocabulary, and since we know that we approach that as our standard operating procedure to build that prior knowledge and to work on that vocabulary for all children.

Q2 All of the ESOL trainings we’ve been able to really develop academic language, and academic language helps kids be successful.

Q3 The academic piece that’s most significant for us is the prior knowledge there and it is the vocabulary, the academic vocabulary, and since we know that we approach that as our standard operating procedure to build that prior knowledge and to work on that vocabulary for all children.

Q4 Technology has helped tremendously. A teacher is doing her reading group and she can click on the computer and bring the picture up that they’re talking about – of the real live picture. Because the kids may not have seen a volcano or may not have seen something like that,

Q5 Since Head Start’s not in our building I don’t have that picture of them. But I know we get about 35 Head Start student a year.

Q6 That’s why they’re in Head Start. We have the spectrum of children and poverty does play a part in their development.

Q7 If they did have Head Start, oh you might not have had as much as I’d hope you had. Sometimes it does come into play when we look at is their delay unexpected, and as we look toward needing other services.

Q8 I’ve been here 34 years. I’ve had every training that’s come along. Certainly the foundation for our training was the Ruby Payne poverty stuff. That was a long time ago but it hasn’t ever left us, and in the last few years with the Dept. of Justice training – I mean with the ESOL training, I believe that that has
helped us all do a better job of instruction because it looked at how to differentiate and how to work together.

Q9 It looked at the cultural awareness and the cultural awareness in poverty is the significant thing, I think, that we get and all of the ESOL trainings we’ve been able to really develop academic language, and academic language helps kids be successful.

Q10 And then the last thing we’ve trained – our reading staff decided that the issue we were having was not just reading stamina, but it was them understanding – for the kids to understand that the strategy you’ve learned at the reading table needs to go into your reading on your independent level. So they’ve trained me and they’ve trained us on how to – we do a – we call it silent sustained reading and response.

Q11 My strategy is to make sure that the teachers develop a relationship with the families.

Q12 Why aren’t they coming to school? Well you need to call and find out before I send them a letter? You guys need to go knock on the door before I send them a letter.

Q13 That they are consistent across the grade levels. Because the kids don’t have time to bounce around. We can’t be changing things on them. We’ve got to allow them the time to get comfortable with the strategy, and they be able to put it to use the next year and not have wonder. So that horizontal alignment with instruction.

Q14 We have two days a year – a half a day where they get to do some stuff with just their grade level. So then they’re prepared to go up and do it vertically. The vertical piece is we have staff meetings every Friday so we talk about some of it then. We are not the team meeting school – I mean not team meeting – we are not the big, once a semester have a big work day at school.
Q15 It has to be the whole package to make students grow. Certainly the love and respect for the whole child. The ownership of every teacher. The reading teachers own the children. The PE teachers own the children. And the support of the family, is the places that we have to start. And then other things fall into place if you have those three – those three things in place.

Q16 We have frequently an ESOL teacher; a special ed teacher, the classroom teacher, and then first grade and second grade always a reading teacher available during team planning and during their planning in the morning or the afternoon. So they talk about it and they think about bit.

Q17 We’ve all become better teachers of reading, thanks to our reading team, and so that is one of the reasons why they’re performing better because we can allow them to have that reading instruction on the levels where they are.

Q18 We have two school counselors. We have a lot of folks available to grow their social norms and their social understanding, and behaviorally the same thing.

Q19 We have the best librarian in the world, who helps with that, and so with the resources from the teaching staff, the resources that we have financially and the commitment from our parents.

Q20 We’ve got Reading Recovery. That helps the struggling readers.

Q21 We have different kinds of events where the parents participate in, as well as vendors, like the dentist and the – and then we have the Lions Club van for hearing and the Lions Club van for vision screening—so those kinds of things.

Q22 We also have a parent liaison who just knows - you know, when they say “Well how do you know what language they want?” “Cause I talked to them and that’s the language they told me they want.”
Q23 But the guidance counselor will go with the teacher and they’ll knock on the door, or Mr. Stone will go with the teacher and they’ll knock on the door if they need it. Because we’re here – it takes us two minutes to get somewhere.

Q24 500 of our kids walk so we have access to our parents a lot. So when they go out and - and say “We’re having Title I tonight – Title I Reading night and we’ve got ice cream.” Or “We’re having the science fair tonight and we’re having…” so we make ourselves available to having conversations with parents every day.

Q25 My strategy is to make sure that the teachers develop a relationship with the families,

Q26 Because we are a walking school we see our parents so much, that you could have a conversation with them any day because they’re right out front and they’re willing to come and talk to you.

Q27 The first thing is because of the training that the teachers have and the practice that the teachers do. They have very – you know they plan to differentiate. They understand the differences that they need to provide in a class.

Q28 In our school I don’t think it’s that important to know who attended Head Start because our need to individualize instruction for all kids is pretty significant.

Q29 It’s a trust in knowing that someone loves and cares for them, outside of just academics. We care about the whole child. So I think that’s a big deal too.

Q30 The oldest boy was retained, and to look at him now and to look at the confidence now – just because he’s been in a school where his mom feels comfortable and the mom is willing to support us.

| Relevance of case for cross-case themes: | Factors: |
| Theme 1: Background Knowledge: |    |
Vocabulary- Q1, 2, 3, 4

Theme 2: Background Knowledge: Letters/Letter Sounds-

Theme 3: Background Knowledge: Head Start- Q5, 6, 7

Theme 4: Leadership: Teacher training- Q8, 9, 10

Theme 5: Leadership: Resource support- Q14, 16, 17, 18, 19, 20

Theme 6: Leadership: Ethos- Q11, 12, 13, 15, 25, 29

Theme 7: Parent Support that is comprehensive, consistent, and focused on helping their children with academics- Q21, 22, 23, 24, 26

Theme 8: Instructional Strategies: Differentiation- Q27, 28

Theme 9: Instructional Strategies: Motivation- Q30

L: Low importance
M: Medium importance
H: High importance

Commentary:

(Stake, 2010)
## Appendix L: Worksheet 4-Ratings of Expected Utility of Each Case for Each Theme

(Stake, 2010)

<table>
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<td><strong>Original Multicase Themes</strong></td>
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<tr>
<td>Theme 1a: Background Knowledge: Vocabulary</td>
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<td>Q1, 2-Vocab./Prior Knowledge</td>
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<td>L</td>
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<td>Q3-Letters/Letter Sounds</td>
<td>Q2, 3-Letters/Letter Sounds</td>
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<td>Q2, 3-Head Start</td>
<td>Q4-Head Start</td>
<td>M</td>
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<td>Theme 2a: Leadership: Teacher Training</td>
<td>Q4, Q5-Ruby Payne</td>
<td>Q4-Teacher Training</td>
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<td>Theme 2b: Leadership: Resource Support</td>
<td>Q6-Bi-lingual secretary</td>
<td>Q5, 6, 13-Reading teachers, staff development in SPOT, Reading Recovery</td>
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<td>Theme 2c: Leadership: Ethos of Support</td>
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<td>Q8, 9, 10-Teachers feel supported</td>
<td>Q8, 9-Teacher satisfaction/Encouragement</td>
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<td>Theme 3: Parent Support that is comprehensive, consistent, and focused</td>
<td>Q7, 8, 9, 10-Teaching parents how to work with children at home</td>
<td>Q7, 8, 9, 10, 11-Teaching parent strategies, early literacy with parents, materials, home language</td>
<td>H</td>
<td>Q10, 11, 12, 13-Teaching parents how to support learning at home</td>
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<td>Theme 4a: Instructional Strategies: Differentiated Instruction</td>
<td>L</td>
<td>Q12, 13-Tier III intervention, Reading Recovery</td>
<td>Q16, 17, 18, 19-Strategies to meet student's needs in reading</td>
<td>Q14, 15, 16-Strategies to teach reading based on student levels</td>
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<td>Theme 4b: Instructional Strategies: Motivation</td>
<td>L</td>
<td>L</td>
<td>Q20-Confidence and excitement</td>
<td>Q17, 18-Student excitement</td>
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<td>Utility of Cases</td>
<td>Case B Prin.</td>
<td>Case B R.T.</td>
<td>Case B Kdg. Focus Group</td>
<td>Case B-1st Grade Focus Group</td>
</tr>
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</tr>
<tr>
<td>Theme 1a: Background Knowledge: Vocabulary</td>
<td>Q1, 2, 3, 4-Prior knowledge and vocabulary</td>
<td>Q1,2-Background knowledge</td>
<td>Q1,2,3,4-Background knowledge and communication</td>
<td>Q1,2-Vocabulary building</td>
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<td>Q3, 5-Letters</td>
<td>Q5,6,7,8,9-Letters and Letter sounds</td>
<td>Q3,4-Letter sounds</td>
</tr>
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<td>Theme 1c: Background Knowledge: Head Start</td>
<td>Q5, 6, 7-Head Start</td>
<td>Q4-Head Start</td>
<td>Q10,11,12-Head Start</td>
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</tr>
<tr>
<td>Theme 2a: Leadership: Teacher Training</td>
<td>Q8, 9, 10-Ruby Payne, ESOL, Cultural Awareness, Reading</td>
<td>Q11,12,13-Modeling, push-in for writing and student conferencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theme 2b: Leadership: Resource Support</td>
<td>Q14, 16, 17, 18, 19, 20-Vertical planning, ESOL, Sped, Reading, Counselors, Librarian</td>
<td>Q7,8,9,10-Reading teachers, ESOL, PALS tutors, summer school</td>
<td>Q15,16,17,18-ESOL, Library, Technology, Bilingual secretary</td>
<td>Q5,6,7-Library, reading teachers, ESOL,</td>
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<td>Theme 2c: Leadership: Ethos of Support</td>
<td>Q11, 12, 13,15, 25, 29-Relationships, Communication, Consistency, Love, respect, and caring</td>
<td>Q6-Parents are welcome, knowing families</td>
<td>Q13,14-Administration-expectations, caring for all students</td>
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<td>Theme 3: Parent Support that is comprehensive, consistent, and focused</td>
<td>Q21, 22, 23, 24, 26-Vision and hearing screening, Parent liaison, Home visits, Daily discussions</td>
<td>Q14, 15, 16-Reading support, conferencing, modeling reading</td>
<td>Q19,20,21,22, 23,24-Walking students-see parents daily, make connections, home language, Parent Ed. Program</td>
<td>Q8,9,10,11,12, 13,14,15-Parent conferences, reading strategies, reading in Native language, computer programs</td>
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<tr>
<td>Theme 4a: Instructional Strategies: Differentiated Instruction</td>
<td>Q27, 28-Understand differences in students, Individualize instruction</td>
<td>Q17, 18, 19-Knowing children's specific levels, one-on-one, checking, know deficits</td>
<td>Q25,26,27,28, 29,30,31-Sound boxes, word building, writing, action-based learning, decoding, independent reading</td>
<td>Q16-Small groups-heterogeneous &amp; homogeneous, cross-curricular connections, spelling/writing, center work, Developmental Spelling Assessment, Data analysis, Running records</td>
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</table>
Low utility means that the theme is not prominent in this case study. As indicated, the original themes can be augmented into additional themes even as late as the beginning of the cross-case analysis. Descriptions of each theme can be attached to this worksheet, so the basis of estimates can be readily examined.

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<td>Theme 4b: Instructional Strategies: Motivation</td>
<td>Q30- Trust love, whole child, grow their confidence L</td>
<td>Q20- Setting stage for learning L</td>
<td>Q32-Hygiene needs lead to being ready to learn M</td>
<td>Q26, 27, 28-Excited to learn, attitude, try hard, gratefulness, want to please H</td>
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## Appendix M: Worksheet 5 Matrix for Generating Theme-Based Assertions from Case

### Findings Rated Important

### Assertions Developed from Themes Found in Instrumental Case Studies

1. Background knowledge including vocabulary and letter/letter sounds was an important factor for student success in reading.
2. Social understanding of school environment (routines, procedures, interactions with other students) was important for student success.
3. Teacher experience, resources, and targeted professional development were key elements to student success.
4. Ethos was created through genuine and deliberate support of teachers, students, and families by the school leader.
5. The schools’ efforts to provide parent support that is comprehensive, consistent, and focused impacted positive outcomes for students.
6. Instructional strategies were deliberately implemented with fidelity to meet students where they are.
7. Teacher encouragement of student efforts led to increased confidence and motivation in students.

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H=high importance; M=middling importance; L=low importance. A high mark means that this theme is of high importance for this case study.
(Stake, 2010)