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Kinder Camp Provides Reading Ramp : A Study to Examine the Effects of Summer Learning Loss on Beginning Readers

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Kinder Camp Provides Reading Ramp: A Study to Examine the Effects of Summer Learning Loss on Beginning Readers

by

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Dedication

Who would have ever thought the little kid from 531 Eldon St. could earn a doctorate? Well maybe somewhere in those one million times when daddy said, "Get all the education you can 'cause can't nobody ever take that away from you" I got it and figured I better keep getting it until there was no more to get. So first of all, thank you Joseph T. Dawson for being my daddy and showing me that hard work pays off. Many thanks also to Mama and Bev, Joe, Judy, and the rest of our family for your love and for always being there for me no matter what. Then there are those people along the way that have always expected excellence from me. So thank you Vicki Hogan and Dr. Roger Jones. I also could not have done this without my "double mint twin" April Bruce. We have laughed and cried and cheered each other on throughout this process. Thank you for your friendship.

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Abstract

The Problem: This study was designed to determine if twenty days of reading intervention would have an impact on preventing summer learning loss for students entering first grade.

Procedure: This action research study used an experimental design with the PALS assessment as the instrument. Using pre-test and post test data from the participant and control groups in both overall summed scores and six sub tests of literacy development, the data was compared using descriptive statistics and percentage scores. Every kindergarten student was eligible to participate and the seventeen students were chosen by computer lottery. Data was also collected for both participant and control groups relative to age, gender, socio-economic status, reading level, Pre-K attendance, and whether or not a student had or would repeat kindergarten.

Findings: This study showed evidence of reducing summer learning loss for students in the participant group. The group as a whole went up one percentage point on the post-test from the spring pre-test as compared to a loss of three percentage points for the non-participant group. In the participants group, ten out of seventeen, (59%) of the students maintained or improved their score from spring to fall. The control group had five out of fourteen (36%) of the students maintain or increase their score from spring to fall. The number of socioeconomically disadvantaged students who maintained or improved their score from pre to post test was nine out of thirteen (69%) and the control group had a three out of twelve (25%) result. The data in this study supports the body of literature that indicates that summer quality programming is important and can have an impact on reducing summer learning loss for students, especially students in poverty.

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Chapter One

Introduction

In the late 1970s there was a public service spot on television that said, "Reading is fundamental…Pass it on" (Reading is Fundamental Foundation, 1973). While almost everyone would agree that being literate is an essential life skill, the "pass it on" part comes with a great deal of challenges. The process of learning to read begins very early in a child's life in the form of learning to speak. Some would argue that other developmental milestones can also be linked as predictors of a child's success rate in learning to read. Being exposed early to oral language and print is critical to a child's success in school (National Association for the Education of Young Children & the International Reading Association, 1998). The research is seemingly endless on the topic of reading but all roads tend to lead back to the early experiences surrounding a student's first acquisition of the art of reading.

A child's kindergarten year in school today is quite different from those a generation ago. Gone are the days where this first year was primarily for socialization and learning the norms of formal schooling. Now most children learn to read during this year. Students enter school with varying ability levels and pre literacy exposure and while kindergarteners continue to acquire knowledge at different levels, almost every child demonstrates tremendous growth during this year (Klingner and Edwards, 2006).

Continuous reinforcement and practice is one of the cornerstones of success for beginning readers (NRP, 2000). One known challenge for beginning readers is the traditional school year calendar (Helf, Konrad, & Algozzine, 2008). Students in the primary grades especially, make significant strides in learning to read and then summer vacation interrupts the process at a critical time (Heinz, 1978). The regression of skills over the long summer break is commonly referred to as summer learning loss (Helf, Konrad, Algozzine 2008). Research indicates that while all students show some losses each summer, students with limited resources, commonly referred to as economically disadvantaged, suffer greater losses. For these students, the losses often continue to build over the years creating gaps between privileged and disadvantaged students (Schacter, & Jo, 2005). The No Child Left Behind Act of 2001 mandated that educators begin to address these Achievement Gaps to ensure that all students have the opportunity to be successful (NCLB, 2001).

Statement of the Problem:

Learning to read is a very involved process that begins early in life. Students are taught the essential components of reading during their kindergarten year and these skills are practiced every day enabling most students to show significant growth in their ability to decode and comprehend text during their first formal year of school. Summer vacation prevents the consistency of daily reading practice and most students demonstrate a loss of skills when school reopens. Research indicates that this loss is more significant for students in poverty, mainly due to a lack of resources available to them (Pinnell, Lyons, DeFord, Bryk, Seltzer, 1994). The need to minimize learning loss for beginning readers

exists and a body of research supports interventions such as non- traditional school calendars and quality summer programs as possible solutions.

Purpose and Significance of the Study

The purpose of this action research study is to examine the effects of a summer reading program on the reading ability of students between kindergarten and first grade as measured by the PALS assessment instrument. This study will contribute to the larger body of research as it will replicate some larger studies and serve to possibly generalize or contradict earlier findings. The action research will provide a model for local summer programming that can be used in many schools.

Research Question:

1. Can twenty days of intensive summer reading instruction reduce the level of summer learning loss for beginning readers?

Hypothesis: Students participating in the summer program will experience less loss in skill as measured by the PALS assessment between the completion of kindergarten and first grade than those students in the control group.

Nature of Study

This action research project uses an experimental research design. The researcher will use a pre/post test control group design. Participants in the experimental and control groups will take the Phonological Awareness Literacy Screening (PALS) in May 2013 and August 2013. Overall scores as well as sub test scores for students participating in the summer reading program will be compared to the control group of students who did not

attend. All students will take the spring PALS assessment as part of their regular kindergarten curriculum and all students will take the same test during the first two weeks of school in first grade. Both tests will be administered by the same teacher.

Definition of Terms

Balanced literacy: Balanced literacy is defined as a method of reading instruction that employs multiple methods of instruction including skills-based and whole language techniques (Rasinski & Padak, 2004).

Comprehension: The ability to actively make meaning, using meta-cognitive processes. This enables the reader to pick up all kinds of information from the text and construct the author's intended meaning (Fountas & Pinnel, 2006).

Intervention Strategies: Additional instructional support given to a student in addition to the standard curriculum. (Carr 2007).

National Reading Panel (NRP): The panel convened in 1997, by direction from Congress and the Director of NICHD, along with the Secretary of Education, to study the research on the various approaches to teaching reading and make recommendations for additional research needed in early reading development (NRP, 2000).

PALS: Phonological Awareness Literacy Screening (PALS), which was developed by the University of Virginia, is given to all K-3 students in Virginia three times per year. (Invernizzi, Justice, Landrum, Booker, 2004).

Phonemic awareness: The ability to notice, think about, and work with the individual sounds in spoken words. An example of how beginning readers show us they have phonemic awareness is combining or blending the separate sounds of a word to say the word ("/c/ /a/ /t/ - **cat**.") (National Reading Panel, 2000).

Phonics: A form of instruction to cultivate the understanding and use of the alphabetic principle, that there is a predictable relationship between phonemes (the sounds in spoken language) and graphemes, the letters that represent those sounds in written language and that this information can be used to read or decode words (National Reading Panel, 2000).

Poverty: The extent to which an individual does without resources (Payne 2001).

Skills based instruction: Skills-based instruction is an approach to teaching reading that involves a focus on phonics, spelling and decoding skills primarily in isolation (Stein et al., 1999).

Summer learning loss: The amount of decline in skill a student experiences over the summer break between school terms. (Alexander et al., 2001).

Whole language instruction: The theory that learning to read is a process of building new learning on existing knowledge. (Bird, 2011).

Assumptions

This study assumes that the PALS instrument is valid and reliable, and the use of the PALS with these students will provide the data necessary to answer the research question. It is also assumed that students in both the treatment and control groups participated in the PALS screening both in pre and post test situations to the best of their ability.

Limitations

There are limitations in this study. This study is quantitative and will use the numerical data generated to compare the relationships between variables. There is no

determination of causation as would possibly be revealed in narrative results as generated in a qualitative study.

Further, the PALS instrument was developed to measure phonemic awareness, spelling, and concept of word. Other instruments may have measured other skills and contributed to the research. A single instrument study may not produce comprehensive results.

Organization of the Remainder of the Study

This study is designed to explain the need for a summer reading program for rising first grade students at an urban school district in central Virginia in June, 2013. Key research in the areas of reading development, critical elements in reading instruction in the primary grades, and most importantly, the specific effects of summer learning loss on students in poverty will be examined. The study will then describe a summer program specifically designed to meet the needs of the student population in this school. The summer program served as a research study comparing two groups of children having completed kindergarten during the summer prior to first grade. This study will include a review of the literature, the methodology of collecting data and a plan for evaluating the results of the summer program, the specific data and analysis of the data, recommendations for future research, and a summary of findings.

Chapter Two

Literature Review

This chapter will examine the seminal research in the areas of reading development, literacy instruction, reading intervention, poverty, summer learning loss, and summer programming. The purpose of this review is to bring together all of the critical factors that are in play as a young child learns to read. Any of these areas studied in isolation provides a wealth of information, but only when all components are considered will there be a deeper understanding of the process as a whole.

Reading Development

Learning to read is about making connections between our spoken language and the symbolic representation of print. Children who enter school with significant deficits in their vocabulary are already at risk for difficulties in reading (National Reading Panel (NRP), 2000).

A critical factor in determining success for a beginning reader is the amount of time the student spends engaged in reading and reading related activities (NRP 2000). Most children learn to read or are very close to reading by the end of their kindergarten year. Students in an effective classroom spend a great portion of each day engaged with print and working diligently to master the art of reading (Stein, Johnson, Gutlohn, 1999).

McCoach et al. (2006) studied the growth of children's reading development from the beginning of kindergarten through the first grade year. The researchers operated with the assumption that all students begin kindergarten with different levels of reading ability. The study focused on individual students and their growth patterns. The work was based on the body of research surrounding achievement gaps between advantaged and disadvantaged students in the area of reading. The Early Childhood Longitudinal Study—Kindergarten (ECLS-K), was the basis for the data. This instrument also allowed McCoach and his colleagues to consider a host of factors including: race and ethnicity, gender, kindergarten entry age, and academic achievement in reading. McCoach et al. (2006) found that first grade students gained an average of 2.65 points per month of school, averaging 17 points from the beginning to the end of the 1st grade year. The researchers noted that there is a significant jump in reading achievement at some point between kindergarten and first grade. Growth happened at different rates for all children but the data indicated that almost all students experienced this rapid achievement gain prior to the end of first grade.

The process of learning to read is a complex journey of brain development and exposure to print and guidance with language. The critical element in the process is the instruction the child receives during those vital months of development. The next section will examine several instructional models and analyze the research of the Balanced Literacy Model which is in the forefront of current reading instructional practices.

Literacy Instruction

Research in reading instructional practices has gone in many directions over the years. For the purpose of this study, the focus will center on the components of a Balanced Literacy approach and the research findings as it applies to beginning readers. There are many models of reading instruction in the body of literature that have been recognized as effective; however the current trends are leaning towards Balanced Literacy. These trends drive the selection of available curriculum materials and also professional development necessary for effective implementation. This section will make mention of other models for the purpose of comparison.

One traditional school of thought is the skills based literacy programs. These are structured, teacher directed practices of reading and writing. The delivery method is primarily whole group with some small group instruction. This method is still used in many schools and is typically centered on a basal reader and skills based worksheets (Carr, 2007). Daily lessons include spelling, phonics, and other isolated decoding skills (Stein et al., 1999). In recent years however, many schools have moved away from this more traditional approach and some have come back to it after trying other methods. This method was most popular until the mid 1980s when the nation then trended towards whole language.

The whole language approach is almost the exact opposite of the direct instruction models. Bird (2011) describes this model as follows: “it is a way of living and learning with students in classrooms while helping them learn to live and make a positive difference within the communities that extend beyond the classroom — the school, the neighborhood, and the global community” p.133. Curriculum in this model emphasizes

authentic literature and teaches skills through discovery and student's applied meanings. Teachers do not teach phonics or specific strategies for reading in isolation but rather through thematic, all inclusive units of study. Materials include a wealth of print, journals, and experience based learning. This model was heavily used in the 1980s and came under harsh criticism in the 1990s and was largely abandoned by the early 2000s. Standardized test scores fell in many places which launched a "back to basics" campaign in reading instruction (Manzo, Kennedy 1999). Many would argue that there were some key pieces in whole language that should not have been dismissed. This notion led to a theoretical marriage of skills and holistic approaches which has led to the birth of Balanced Literacy.

A Balanced literacy program is a multi-tiered reading and writing approach that incorporates direct instruction with student led learning. There is a strong vocabulary and oral language component as well. A key ingredient of balanced literacy is the connection of reading and writing to all subject areas (Cunningham, Hall & Sigmon 1998; Fountas & Pinnell, 1996). Reading is not taught as an isolated subject. The guiding principles found in several models in the literature are similar to those of found in the Balanced Literacy Program designed by Fountas and Pinnell in 1998. This model is designed for beginning readers in kindergarten through grade three and is organized around the following concepts: (a) all students are capable of learning to read and write, (b) literacy is a constructive and social process, (c) oral language is the foundation of literacy development, (d) students' reading knowledge develops optimally in an organized and print-rich learning environment, (e) demonstrations are essential for scaffolding learning,

and (f) students learn most effectively when they take the primary responsibility for their own learning experience (Scharer, Pinnell, Lyons, & Fountas, 2005).

The controversy over best practices led the National Reading Panel to settle the dispute by putting forth that high quality reading instruction in the primary grades addresses phonemic awareness, phonics, spelling, reading fluency, vocabulary, and reading comprehension (National Reading Panel 2000). It is particularly important that young students at risk for reading difficulties receive explicit instruction in phonological awareness and phonics with many opportunities to apply skills in stories they read (National Reading Panel, 2000). The National Reading Panel recommended instruction in reading comprehension should also help students gain some awareness of their own cognitive processes while reading. In order for many students to learn to comprehend text, it is necessary for teachers to model and directly teach the practice of applying comprehension strategies (Denton, Solari, Ciancio, Hecht, Swank, 2010). In other words, teachers need to model thinking out loud and spend time teaching children how to connect with text.

A study by Bitter, O'Day, Gubbins & Socias (2009) examined the balanced literacy practices in the San Diego School District. The research included 101 classrooms in 9 high poverty elementary schools. They observed these classrooms five times over two years and examined reading achievement data over a two year period. The focus of the study was to determine if balanced literacy instructional practices had an impact on reading achievement. The results indicated that in classrooms where reading comprehension instruction had high levels of students' engagement, achievement scores were higher. Students in these classrooms spent a great deal of time making connections

with the text and discussing what was read. Teachers who used higher-level questioning techniques had students who consistently performed better than in classrooms where this practice was not as prevalent. The researchers used Hierarchical Linear Modeling analyses of instruction and student outcome data to make connections between teacher practices and improved student scores, particularly in the area of reading comprehension.

Carr (2007) completed an Action Research study in a suburban elementary school outside of Baltimore, MD. She had a convenience sample of 37 students divided into control and treatment groups. This was an experimental pre/post test design. Student achievement pre-test data were very similar. Students in the control group were instructed in a direct instruction, basal focused classroom and the treatment group was instructed in a balanced literacy classroom. The study used the widely accepted literacy assessment known as the Developmental Reading Assessment (DRA) to collect data. The purpose of the study was to compare direct instruction and Balanced Literacy to measure the impact, if any, on student achievement in reading as measured by the DRA. Findings indicated a significant statistical difference between the two groups at the conclusion of the study. The researcher's findings were in line with finding in the larger in the body of research indicating that the balanced literacy approach resulted in higher levels of achievement.

The research in the area of Balanced Literacy is all relatively new and is growing rapidly. The strategies being implemented in classrooms are blended representations of years of various initiatives. Teachers are using their professional discretion to meet the needs of students from a variety of sources rather than one series. As with any other methods, there is no "silver bullet" and there will always be students who need more support. A critical component in any quality reading program are the presence of

systematic intervention strategies. There is a host of research in this area and several prevalent models will be explored further.

Intervention for Beginning Readers:

If appropriate interventions and support continues throughout the primary years, then the struggle to learn to read and often the propensity to misdiagnose reading disabilities could be avoided for some children. Effective intervention is essential to a beginning reader's success.

It can be difficult to determine whether a child has a reading disability or simply has not been exposed to appropriate instruction early in life; this is often the case in the primary grades. Sze (2009) addressed the topic of mislabeling students. She explained that students who have trouble learning to read do not always have a processing disorder as the root cause. Sze (2009) proposed early intervention and assessment to address individual student needs. She cited the work of former Virginia State Superintendent of Education, Dr. Cannady (2008) as he advocated for each district to adopt a clear plan for struggling young readers prior to referring them for special education evaluations. There is a wealth of research on many models for reading intervention and the following explains several that are most prevalent in body of research.

One of the oldest models of intervention known as Reading Recovery (RR) dates back to the mid 1970s. This model was created by Marie Clay as her dissertation study. It was widely accepted in the United States, Canada, Australia and New Zealand and is still used in some schools (National Data Evaluation Center, 2008). Reading Recovery (RR) is a systematic approach for kindergarten and first grade students that involves three

'rounds' of intervention, each lasting between 12 and 20 weeks. Students work for 30 minutes a day with a RR trained teacher using books and activities designed to improve their reading skills. There are no worksheets and the instruction is highly interactive. Assessments using running records are completed weekly and each day's lesson is based on observations and formative assessments of student progress.

D'Agostino and Murphy (2004) conducted a meta-analysis of 47 Reading Recovery studies. They first included 36 studies and then narrowed their focus guidelines for inclusion to include a pre and post test, a treatment and control group component, and examination of 11 additional studies that met those stricter requirements. The researchers compared both sets of analyses to determine if the quality of the study was a factor in the conclusions drawn as to the effectiveness of the Reading Recovery program. They were able to effectively evaluate the program and determine that there were positive outcomes for students in both sets of studies. The analysis showed that students who completed a greater number of weeks of instruction performed better on standardized achievement tests. D'Agostino and Murphy (2004) mentioned studies showing that socio-economically disadvantaged (SED) students who participated in RR as first graders showed a smaller achievement gap when compared to their non-economically disadvantaged peers than other SED students who did not participate in RR at the end of second grade.

Dunn (2007) conducted a study of 155 first grade students participating in the Reading Recovery program. The purpose was to analyze the assessment components of the RR model which include beginning reading level, ending reading level, and number of weeks students participated in the program. Results indicated that ending reading level

and the number of weeks a student participated were significant factors, but they accounted for only 15% of the variance. In other words, this is not a "cure all" intervention and Marie Clay (1993) commented, "Some of them remain at-risk children" (p. 59). Looking carefully at a student's beginning and ending reading levels while factoring in the number of weeks the student participated in the intervention could help support the need for further assessment in some children to determine if a reading disability exists. While there are many studies that point to positive outcomes, there are studies questioning the merits of Reading Recovery which raise several points to consider.

Reading Recovery instruction, when done with fidelity, provides thirty minutes of one on one daily instruction for 12-20 weeks per student and some have argued that the costs outweigh the benefits of this model (Dyer, 1992; Rasinski, 1995). Pinnell, Lyons, DeFord, Bryk, and Seltzer (1994) completed a comparative study of RR and three other reading intervention programs. All programs were being implemented in ten Ohio Schools. The other programs were Reading Success, Direct Instruction Skills Plan, and Reading and Writing Group. The Reading Success program is similar to RR and uses the one to one model. Cooter and Reutzel (1987) describe the Direct Instruction Skills Plan as an individual instruction model emphasizing "letters and sounds, words, text-level strategies such as sequencing, filling in the blanks, answering questions, as well as reading extended texts" (Pinnell et al., 1994). The Reading and Writing Group was also similar to the RR model and contained the same components but delivery was designed for small group instruction. The study concluded that the RR students' final scores on standardized tests were higher than the participants of the other programs.

Rasinski (1995) disagreed with Pinnell et al.'s finding. He argued that when the number of hours of instruction is considered in the comparison between RR and the Reading and Writing group specifically, the RR student's gains are not as large. He calculated that RR students were only 4% ahead of students participating in the Reading and Writing Group program which can serve more children and costs much less to implement in a school.

Another criticism of Reading Recovery is that it is a whole to part model. The lack of specific phonics drills and sight word instruction and focus on oral reading and comprehension raises questions among some reading researchers (Chapman, Tunmer, and Prochnow (2001). These skills are woven into the RR reading lessons as students struggle with particular items (Fountas and Pinnell 1999). Critics argue that phonics skills and sight word recognition should be the foundation for intervention instruction and lessons should be intentional.

The biggest area of pushback for Reading Recovery is whether or not students maintain success after completing the program. The work of D'Agostino and Murphy (2004) and Pinnell, et al.'s (1994) discussed previously found that a large number of RR students maintained their gains into second grade. Askew et al. (2002) did a study of 116 Reading Recovery students and 129 random sample children in first grade and fourth grade in 45 Texas schools. He compared standardized test scores of students completing a RR program with those who did not and found that RR students maintained gains over their peers into fourth grade. The premise of the RR model remains strong and has resurfaced as part of a newer construct known as Response to Intervention (RtI).

Since 2004, Response to Intervention, (RtI) has become one of the most widely implemented approaches to provide support for children who are demonstrating

difficulties in the area of reading. It became the alternative assessment component of the Individuals with Disabilities Education Act, (IDEA) when Congress reauthorized the law in 2004. The RtI model is a multi tiered intervention system. It begins with researched based reading instruction for all students and levels of supplemental interventions are put in place as needed based on individual student needs (Berkeley et al., 2009). Denton (2012) describes RtI as a three-tiered model detailed as follows: Tier 1 is the reading instruction in the classroom offered to all students. It has an assessment component used to monitor student progress and screen for difficulties. Tier 2 intervention is provided when students do not progress in Tier 1 and the need for supplemental instruction is needed. This is often small group instruction or additional reading instruction with a reading specialist. Tier 3 interventions are reserved for those students who do not progress even after Tier 2. These are more intense and targeted in nature. An example may be one on one tutoring for a student in addition to small group and whole group instruction. In all tiers, student progress is monitored often and students are given appropriate Tier interventions as needed.

Dunn (2010) provided a well researched study of how the newer paradigm of RtI can include the older strategies of the Reading Recovery model to truly benefit students in the primary grades. Dunn implemented a study in a first grade classroom that used the Reading Recovery model for a period between 12 to 20 weeks depending on the needs of the students. The focus of this study was to monitor each student's progress through the leveled texts and the results were positive for most of the participants. The results indicate that the Reading Recovery model can be appropriate Tier 2 and 3 interventions within the Response to Intervention framework. Dunn's concept of including Reading

Recovery as a component of RtI has not been employed in other studies. This study could be replicated but may require some research to find the appropriate training for teachers since the RR model is no longer in the forefront of reading instruction.

The critically important idea in the need for RtI is it replaced the older school of thought which was the "wait to fail" notion of not implementing interventions prior to third grade. Denton (2012) reiterates the importance of implementing early interventions because if a child is struggling to learn the mechanics of reading and this persists until third grade, it is very likely that the student will continue to have difficulties in other areas related to reading and the gap will continue to widen. The Response to Intervention framework is changing the overall "one method fits all" mindset across the United States and the practices adopted in Virginia will be discussed further.

Virginia adopted the Response Intervention construct officially in 2007. In a position paper outlining the model for all Virginia school districts to follow, the Virginia school board cites: The Board of Education's *Regulations Establishing Standards for Accreditation in Virginia (Standards of Accreditation)*, the *Standards of Quality* found in the Code of Virginia, and the *Early Intervention Reading Initiative* established by Virginia's Acts of Assembly (1997) reflect Virginia's instructional goals and ideals and provide a firm basis for RtI practices. (VA DOE, 2007) Interventions in Virginia are based on the PALS assessment given to all K-3 students. Students who perform below the benchmark are identified and begin receiving Title I or small group instruction to remediate specific skills. This is an example of RtI Tier Two. A student who is still not able to meet the benchmark and is significantly performing lower than her peers would be eligible for Tier 3 interventions which could include one on one tutorials or extra small

group instruction. When a student does not show improvement after all of these interventions, they are then referred for testing to determine if a disability exists. For some students there truly is a disability in reading but there are other factors that continue to be discussed in intervention research. The impact of poverty continues to emerge as a barrier to reading success for many students.

Poverty

One of the most widely researched topics related to reading is the achievement gap between children living in poverty and those who do not. Poverty is of great concern and it is important to have a clear understanding of the culture of poverty and the impact it is having on young children. In more realistic terms, one in six children is poor, and one in three African American children are living in poverty (U.S. Census Bureau, 2006). Extreme poverty is defined as having an income of $7,870 or less for a family of three. The most sobering finding is that of Yaqub (2000) who reports that the likelihood of a child growing up in poverty longer than four years has a 90 percent chance of becoming an adult who continues to live in poverty.

Dr. Ruby Payne is one of the most well known researchers in this field and her book, *A Framework for Understanding Poverty* (2001) has provided a common language for educators across the nation. She makes a distinction between short and long term poverty. Generational poverty is described as having its own culture, with hidden rules and belief systems. Absolute poverty is basically a family surviving with bare essentials for living with no extras. Payne (2001) defined poverty as the "extent to which an individual does without resources". She and others have shown that poverty is more complicated than simply not having enough money. Payne identified eight important

resources whose presence or absence determines the effects of long term poverty: financial, emotional, mental, spiritual, physical, support systems, relationships and role models, and knowledge of hidden rules. She claims that if a person has strong emotional relationships, especially with teachers, then the effects of poverty can be softened and students are more likely to succeed in school.

Pascopella (2006) also found evidence to support the importance of teachers as critical players providing emotional support for children in poverty. Grissmer, Flannagan, Kawata, and Williamson (2000) focused their research on practical implications to help close the achievement gap for students in poverty and suggested family support, more teacher training, and smaller class sizes in the early grades.

Further investigation into the work of Ruby Payne revealed some scholars pushing back on her widely accepted work. Paul Gorski (2008) suggests that Dr. Payne has made the problem of stereotyping people in poverty worse by creating categories and checklists that allow middle class educators to easily "pigeon hole" groups of people (Gorski 2008). Dr. Jwanaza Kunjufu (2006), a highly respected multicultural educational scholar agrees with Gorski and cautions Payne followers to be careful with stereotyping. He goes so far as to suggest that Payne's work insinuates that there is something wrong with African American children (Kunjufu 2006).

Weis, McCarthy, and Dimitriadis (2006) have also investigated the effects of Ruby Payne's teacher training as it applies to the high stakes accountability of the No Child Left Behind Act. They were concerned about teachers attending the workshops and in a day coming away with a list of reasons about why poor kids were not doing well in school. The real issues, they believe, are whether teachers attempt to implement changes

in their classrooms or dismiss student failure with excuses related to poverty. The key message from all of the critiques is that a balanced approach to educating people about the culture of poverty is a better approach than choosing a "one stop shop" as so many have done with Ruby Payne's workshops in the last decade. There is value in reading and discerning commonalities from a wealth of research.

Regardless of which school of thought one chooses to follow, there are some common core issues related to children in poverty and the implications on their education but also on their physical well being. Fairchild (2011) suggests that a child's health can be at risk in terms of nutrition when school is not in session. He cites a study conducted by The Food Research and Action Center that found that only one in seven children participates in any type of summer nutrition program. Further evidence supports increases in overall body fat and body mass indexes (BMI) for students from disadvantaged homes. Von Hippel, Powell, Downey, and Rowland (2007) studies the BMI of kindergarten and first grade students specifically and found the BMI of poor children grew faster during the summer than during the school years as compared to their more affluent peers. Further analysis revealed that the difference in growth between school term and summer was statistically larger for three at-risk subgroups: African American children, Hispanic children, and children who were already overweight at the beginning of kindergarten. While school nutrition and physical education programs may have room to improve, this research suggests that the children are somewhat healthier when they are participating in the school nutrition program (Fairchild, 2011). This information is important to consider in terms of overall planning for schools. The ten weeks students in poverty spend away from campus is having an impact on them both physically and academically. The specific

research on the skill loss that happens in the summer will serve to bring together the full picture of what happens to economically disadvantaged students when the school doors close in June.

Summer Learning Loss

Historically teachers have spent the first few weeks of each school year reviewing material students learned the previous spring. For some students, they are able to catch up and be ready to move forward after a short review, especially if they have engaged even a small amount in academic endeavors over the summer. The loss for some students is much greater and the effects have an impact on their overall educational experience. This section will explore the key research on summer learning loss, especially as it relates to elementary students and reading.

The earliest research on the phenomenon of summer learning loss was in 1906 (Alexander, Entwisle, & Olsen, 2001). That was about the same time that schools in the United States adopted a calendar that was relatively consistent from state to state (Cooper, 2001). The traditional nine month school calendar is largely still in place today. A common misconception is that it originated out of necessity for children to work on the farms during the summer months. Before 1900, most schools in the U.S. took breaks during the spring and fall but held summer sessions. This makes sense because children were not needed as much during the growing season as they were during planting and harvesting times. The nine month calendar came into being largely because wealthy families in large northern cities wanted to be able to escape the heat, diseases, and poor sanitation of the crowded areas (Fairchild, 2011). After WWII educators began to look at

the effects of such a lengthy summer break and began putting summer programs in place for students who were struggling in school.

Since that time many researchers have conducted countless studies on the effects of the traditional calendar and it seems that summer learning loss has the greatest impact on economically disadvantaged students. Such evidence can be found in the following studies which are considered to be the seminal works in this field: (Alexander et al., 2001; Alexander, Entwistle, & Olson, 2007; Allington et al., 2010; Allington & McGill-Franzen, 2003, 2008, 2009; Cooper, 2001, 2003; Cooper, Charlton, Valentine, & Muhlenbruck, 2000; Fiester & Smith, 2010; Heyns, 1978, 1987; McCoach, O'Connell, Reis, & Levitt, 2006; McGill-Franzen & Allington, 2003; Mraz & Rasinski, 2007). Almost all researchers interested in summer learning loss mention Heyns's (1978, 1987) research. These studies were the first to focus on reading and the results indicate that students' reading progress or regression during the summer could be connected with how many books they read. The study followed 3,000 middle school students in Atlanta over two school years keeping track of the number of books each child read in the summer. Factors that impacted how many books a child read over the summer included; socioeconomic status, distance from home to and overall use of the public library, and whether the child was male or female (females read more). Another key finding was that students who read at least six books over the summer either maintained or improved their reading level when they returned to school in the fall. Heyns promoted the use of the public library with, "More than any other public institution, including the schools, the public library contributed to the intellectual growth of children during the summer.

Moreover, unlike summer school programs, the library was used by over half the sample and attracted children from diverse backgrounds." (p.77)

For many years, researchers have documented summer learning loss by noting that students' fall achievement test scores in reading and math tend to be markedly lower than the scores they received just a few months earlier during the previous spring. Cooper, Nye, Charlton, Lindsay, & Greathouse (1996) conducted a meta analysis of 39 studies including data from 13 that met their research parameters. Their findings estimated that during the summer break the typical child loses the equivalent of a month's learning in math and reading combined. Cooper et al. (1996) also found that summer loss is even more pronounced in children living in poverty in the area of reading. Based on the research, middle class children's reading scores are essentially stable during the summer months. Children in poverty show reading skill levels about three months behind those of their middle-class peers at the end of the summer (Cooper et al., 1996). Compared to middle-class families, families in poverty tend to have fewer educational resources in the home and also fewer opportunities to practice reading and to learn new literacy skills (Entwisle, Alexander, & Olson, 1997).

The research of Alexander and Entwisle in Baltimore (Entwisle et al., 1997) showed that summer learning losses by children in poverty accumulated over the elementary school years. Alexander et al. (2001, 2007) used data from the Beginning School Study (BSS) and explored the effects of summer break on the achievement of students in poverty. The study included 790 first graders from in Baltimore City Public Schools, which is an urban school district with a large economically disadvantaged population. This longitudinal study began in 1982 with a group of students in first grade

and followed them, collecting data for eight subsequent years. Researchers gave students the California Achievement Test of Reading Comprehension and Math Concepts each spring and then again in the fall to measure gains or losses over the summer break. The studies demonstrated evidence such that Alexander et al. (2007), declared, ―Schools *do matter*, and they matter the most when support for academic learning outside the school is weak‖ (p. 183).

Alexander, Entwisle, and Olson (2007) did further research and analyzed the results of students' CAT Reading Comprehension progress for all eight years. The findings showed that during the school year, the economically disadvantaged students often did better than non-SES students. The study revealed an average of a five point difference in scores on the spring tests. The trend does not continue during the summer months, however. More affluent students continued to make gains over the summer while most disadvantaged students demonstrated very little growth and often skill regression. Over the nine years of the study the fall test results led to a widened gap for disadvantaged students to reveal a 73 point difference between them and their non disadvantaged peers by the time they reached high school. Some researchers claim that about one third of the point spread existed when the children were first graders and took the test as they began second grade, but that the largest portion occurred during the elementary years. Alexander and his colleagues analyzed the data to reveal close to an average of a 50 total point spread that occurred during the summers between grades one through five (Alexander et al. 2007). In other words, the cumulative effect of summer learning loss is about 10 percent per year. The researchers point towards the need to either reexamine the traditional calendar and or offer programs during the summer,

especially for disadvantaged students. The critical pieces of the research is evidence that achievement scores of students in poverty fell farther and farther behind the scores of their more advantaged peers as they progressed through school.

Alexander and his colleagues explored the faucet theory. This is the notion that while school is in session all of the students have access to resources as they are freely flowing in the classrooms. During the summer the faucet is turned off and children in poverty no longer have equal access to learning opportunities. Entwisle and colleagues in a similar study (1997) also concluded that the widening achievement gap could be greatly attributed to summer learning loss. As a result of this research, it has become apparent that what happens during the summer months is important and if we truly want to close achievement gaps for children in poverty then we need to put quality programs in place for these students (Borman, Benson, Overman, 2005).

Summer Program Design

The body of research on both poverty and summer learning loss further emphasizes the need for summer programs for students, especially those who are socioeconomically disadvantaged. The connection between what happens to children physically and academically warrants the further investigation of the types of summer programming that gives students the best opportunities to succeed when school reopens each fall.

A critical element associated with student achievement over the summer is the quality of the program they receive. There have long been limitations to summer programs and in their meta-analysis of summer program effects Cooper, Charlton, Valentine, and Muhlenbruck (2001) highlighted several program components that were

related to improved student achievement. Some of these include: small group or individualized instruction, primary grade intervention, parent involvement, and instructional fidelity. Student attendance is also recognized as a critical component of a quality summer program.

Borman, Benson, and Overman (2005) conducted a summer reading program study including over 300 elementary students classified as living in poverty. Their findings supported that regular attendance in a summer reading program can significantly reduce summer learning loss.

Benson and Borman (2007) used data from the Early Childhood Longitudinal Study (ECLS-K), specifically designed for kindergarten students to compare groups of students from both advantaged and disadvantaged homes as they entered kindergarten. The ECLS-K includes literacy measurement assessment from the Peabody Individual Achievement Test—Revised, the Peabody Picture Vocabulary Test—Third Addition, the Primary Test of Cognitive Skills, and the Woodcock-Johnson psycho educational Battery—Revised. Other components of the assessment included socio-cultural items. The sample included 4,178 students from 292 schools. Students included in the researcher's earlier study of 5,470 first graders were eliminated to prevent overlapping of data. Researchers then collected data on student achievement between kindergarten and first grade.

Benson and Borman (2007) found that the greatest difference between students' achievement levels exists when they first enter kindergarten. Results indicate that disadvantaged students began school an average of 4.5 months in reading and 5 months in math behind their more advantaged peers. When tested at the beginning of first grade,

disadvantaged students, regardless of race, scored lower than more advantaged students. Benson and Borman (2007) concluded that socio-economic achievement gaps are compounded by achievement losses over the summer. The effects were more evident in reading performance. Their work also included the involvement of parents and found that those students whose parents encouraged their attendance had higher levels of achievement than those who had a lower level of parental support. Once the motivation factor is in place for the students to attend, the emphasis then shifts to the quality of the program being delivered.

In an experimental study, Schacter and Jo (2005) demonstrated the worth of a summer school reading program for first-grade students at risk for reading difficulties. Students were randomly assigned to an experimental group and participated in a two hour reading program five days per week for seven weeks. Instruction in both word and text-level reading skills was provided in both whole group and small group formats. The program consisted of forty minutes of small group reading instruction, fifteen minutes of whole group instruction, fifteen minutes of independent phonics practice, ten minutes of paired reading using decodable text, ten minutes of teacher read-aloud, and thirty minutes of writing activities. Results indicated significant differences between the experimental and control groups on the posttest in decoding and comprehension. These gains were still evident at three months and at the end of the following academic school year. Research suggests that summer reading programs for children in poverty tend to concentrate more instructional time on word-level reading skills with less attention to vocabulary and comprehension (Roderick, Bryk, Jacob, Easton, Allensworth, 1999).

Denton, Solari, Ciancio, Hecht, Swank (2010) conducted a study of 103 children who had just completed kindergarten. Due to attrition and other complications, the sample size became 53 students. There were 28 students randomly assigned to the treatment group and 25 students in the control group. All 53 students were enrolled in a summer reading program at four elementary schools in the southwest. The population was 50 percent African American, 48 percent Hispanic, 1 percent Caucasian, and 1 percent Asian and other ethnicities. The children were divided into four classrooms with two implementing a typical summer school curriculum of primarily whole group instruction. Teachers primarily used a basal reader with supporting worksheets. Students were also observed singing chants and reciting poems on several occasions as part of the instructional program. The other two classrooms were the treatment environments and the structure and delivery was very different. Treatment-group students had a blend of whole and small group instruction with specific emphasis on vocabulary and phonics skills. Activities were hands-on and interactive and students were taught strategies to master new concepts. A focus on comprehension included higher level questioning techniques which focused students towards identifying the main idea, sequencing, and summarizing the story. Journal writing was also a critical element of instruction and was done in a small group setting with the teacher guiding instruction and providing feedback.

Denton et al (2010) overall found the greatest gains were made by the students in the treatment group. More specifically in the areas of high frequency words and listening comprehension skills, the statistical difference was significant. Slight growth in the area of phonological awareness was evident but not enough to be considered significant once the allowance for teacher delivery difference was considered Areas including vocabulary,

fluency and oral reading showed no significant difference. The detailed analysis of this study is important as specific teaching methods were compared and found to make important differences in student achievement. This study supports the idea that simply providing a summer program is not enough. Teachers must be intentional about the instruction if children are to make significant gains.

Conclusion

The research presented here relative to reading development, literacy instruction, reading intervention strategies, poverty, summer learning loss, and effective summer programming come together to establish a clear picture of how all of these components interweave in a beginning reader's experience. The researcher will take the critical elements from each of these sub categories and based on the work of previous researchers, create a summer program for a group of rising first grade students. The intended outcomes are to enhance the learning opportunities for the students while adding to the body of research related to economically disadvantaged beginning readers and the effects of summer learning loss.

Chapter Three

Methodology

Background

In the spring of 2012, 44 percent of first grade children at a central Virginia School were identified as not meeting the benchmark score on the PALS assessment. This created a sense of urgency in the school to develop some intervention strategies for these students and also to put some preventative measures in place for the students coming to first grade in the coming years. One component of these interventions included the development of a summer school reading program for students entering first grade to enhance their beginning reading skills and attempt to reduce any skill losses related to the long summer break.

Study Setting

The study took take place at the school in June, 2013. It consisted of three hours of instruction per day for 20 days. The school is a PreK-5 school located in a school district comprised of 11 elementary, 3 middle, and 2 high schools in Central Virginia. It is an urban school with an average enrollment of 230 students. It is a magnet school with an emphasis on performing arts as well as science, technology, engineering, and mathematics (STEM). The school's population is diverse, with 62.3 percent of students reporting their race as African-American or multi-ethnic, 4.5 percent Hispanic, 1.3 percent Asian, 1 percent American Indian, and 30.7 percent Caucasian. By design, approximately 50 percent of the students attending the school live in the neighborhood attendance zone and approximately 50 percent of the students are selected from student

applications vetted through a lottery process. There is a waiting list of students in each grade level. A total of 78 percent of all students are identified as socioeconomically disadvantaged as determined by their qualification for free or reduced lunch. The school is the third highest percentage of students living in poverty in the school district. Parental involvement is relatively strong as documented by the number of parent contacts and volunteer hours at the school. Most families would be considered working poor as most are employed but still meet the criteria for free or reduced lunch. Approximately 65 percent of the students reside in single parent homes as reported in student records. Results of the school culture survey conducted in October 2012 indicated that many parents perceive the school as a special opportunity for their child due to the magnet programs and are supportive of the school. The school is a Title I school and receives funding for additional support in the area of reading. The school received a three year grant in August 2011 to create a 21st Century Learning Center. This funding provides before, after, and summer school experiences in both academics and enrichment. The school is fully accredited by the state of Virginia and has met all Federal guidelines.

Research Design

This is an action research design using pre/post test experimental design with a treatment and control group of children selected at the end of the kindergarten year of school. According to Mahani (2012) action research is usually conducted by educators looking for a solution to a problem or exploring methods to find a better approach to an instructional practice. The work is on a small scale and is relevant to improving their school. The ultimate goal is to gather and analyze data to inform decisions that bring about change (Ozanne & Saatcioglu, 2008; Young, Rapp & Murphy, 2010). This method

is appropriate for this study as it will assess the success of a specific intervention strategy and the data will be used to make decisions about instruction relative to pedagogy and calendar.

Research Question:

1. Can twenty days of intensive summer reading instruction reduce the level of summer learning loss for beginning readers?

Hypothesis: Students participating in the summer program will experience less loss in skill as measured by the PALS assessment between the completion of kindergarten and first grade than those students in the control group.

Intervention

An intervention is a planned strategy to provide additional instruction above and beyond what is provided during the traditional academic school day and or calendar year. To better understand the significance of what will be added in a supplemental program, it is important to include the components of the instruction students currently receive during the 180 day school year.

Instructional content is guided by the Virginia Standards of Learning and the school division's specific pacing guides. Students are instructed using the Harcourt Reading Series and supplemented by Benchmark guided reading. Classroom instruction includes whole and small group reading, vocabulary building, guided reading, independent reading, technology enhanced and active learning components during the daily two and one half hour language arts block. The Phonological Awareness Literacy Screening (PALS), developed by the University of Virginia is given to all K-3 students

three times per year. Students who perform below the benchmark are identified and begin receiving Title I small group instruction as an intervention to remediate specific skills. A student who is still not able to meet the benchmark and is significantly performing lower than her peers is then eligible for further interventions which could include one on one tutorials with the Reading Specialist or extra small group instruction. When a student does not show improvement after all interventions, he/she is then referred for testing to determine if a disability exists. Teachers assess students weekly and adjust instruction accordingly by maintaining fluid and flexible grouping and skill specific remediation.

Summer Program Components

Students selected for the summer program participated in twenty days of instruction for three hours per day. The focus was on reading using a balanced literacy approach emphasizing phonological awareness, phonics, fluency, vocabulary and writing. There were 17 students divided among two teachers by skill level. Within the three hours of instruction there was a daily teacher modeled whole group read aloud and skill reinforcement lesson. The next two hours included small group instruction with individualized skill work. Students not working directly with the teacher were engaged in centers to include a writing center using the Handwriting without Tears curriculum, a spelling center based on Words Their Way, and a reading center to practice independent reading skills. In addition there was a listening center where students listened to stories above their independent level to acquire reading fluency skills. Responding to literature through writing is also a critical element of this program and time was dedicated to this process each day. Teachers modeled appropriate responses and students engaged in guided and independent practice to improve their skills and confidence. Students were

also encouraged to share their work with classmates thus improving oral language and public speaking skills. The typical daily schedule was similar to the following chart as modeled after Bill Blokker (1998) and his work with the Literacy First program.

Table 1: *Balanced Literacy Components*

180-Minute Literacy Block	*Literacy component and brief description*
60 minutes	**Phonics** Direct, explicit, systematic instruction of letter-sound correspondences and spelling patterns, including phonological awareness, morphology, word relationships, and etymology according to standards. Words selected for phonics lesson can also address vocabulary needs. Multisensory activities to reinforce phonics concepts (e.g. spelling with magnetic letters, writing on dry erase boards, sorting words)
120 minutes	**Reading Instruction** Direct Reading Instruction: shared reading or interactive read-aloud with complex text, focus on specific reading strategy Small Group Instructional Time (Students should have enough time to rotate through at least two activities.) Independent Reading (daily): This station provides an opportunity to practice the day's reading strategy and complete a during-reading activity based on the mini-lesson (graphic organizers, Post-it notes, or other active reading products are recommended). Small Group Literacy Instruction: These groups are led by the teacher. Teachers should meet with at least two groups each day. The frequency that each group meets should be determined by student reading data. Literacy Work Stations: Opportunities to practice other developmentally-appropriate literacy skills. (See K-5 Literacy Work Station Norms.) Share and final check for understanding: Students share how they accomplished the reading objective during their independent reading or literacy work stations.

To fund this, a portion of a grant for school improvement was used. This school was first awarded a 21st Century Learning Center grant of 195,000 each year for three years beginning during the 2011-12 school year. Funds are designated to provide remediation and enrichment for students beyond the school day. Grant funded programs

can be implemented before or after school, weekends, or summer. The overarching goal is to improve student achievement. The school committed approximately $15,000 of grant money for a summer program for students entering first grade. The grant covered teacher salaries, additional training for teachers, specific materials and supplies, breakfast, lunch, and snack each day, and transportation.

Sample

Slightly over half of the 2012-2013 kindergarten students participated in a summer reading program and the other half did not. The selection was random and was generated using a computer lottery program. All students were invited to participate and parents were asked to commit having their child attend all twenty days if selected. The spring PALS assessment was given in May 2013 to all Kindergarten students by their Kindergarten teachers. The same test was given again in August 2013 during the first two weeks of school to the same students by their Kindergarten teacher to minimize examiner error.

Once the selection process occurred, the following data was collected and compared to students not participating in the study. There were five girls and twelve boys ranging in age from five years nine months to seven years six months. Of the seventeen participants, thirteen were identified as socioeconomically disadvantaged and four were not. The average reading level was Pre-primer and the average attendance rate was 95% during their kindergarten year. One student received special education services, including speech and language therapy. All seventeen students attended a PreK program. There was one student who repeated kindergarten and no students who remain in kindergarten for the 2013-2014 school year.

Fourteen students were not selected to participate in the summer program. Once the selection process occurred the following data was collected and compared to students participating in the study. There were seven girls and seven boys ranging in age from five years nine months to six years six months. Of the fourteen participants, eleven were identified as socioeconomically disadvantaged and three were not. The average reading level was Pre-primer and experienced an average attendance rate of 95% during the kindergarten year. Two students received special education services, including speech and language therapy. All fourteen 14 students attended a PreK program. There were no students who had repeated kindergarten and two students would remain in kindergarten for the 2013-2014 school year.

Table 2

Comparison of Participant and Control Groups

Group	%Male	%Female	Average Age	%Econ. Dis.	Average Reading Level	% SPED	% Attended Pre-K	% Kind. Repeat
Participants	71%	29%	6yrs7mth	76%	Pre-primer	6%	100%	6%
Control	50%	50%	6yrs.3mth	78%	Pre-primer	14%	100%	7%
Difference	57%	14%	4 mths	2%	Pre-primer	8%	0%	1%

Evaluation of Summer Program

Instrument

The PALS K test was designed to be a broad based instrument to help teachers identify areas of need for students. This test is a widely tested and accepted tool in Virginia and is

validated in the academic literature. It contains six sections that screen an early reader's skills across these four areas of early literacy: phonological awareness, alphabet knowledge, concept of word, and grapheme-phoneme correspondence. According to Invernizzi, Justice, Landrum, and Booker (2004) estimates of internal consistency, known as Cronbach's alpha, are considered high (alpha = .89) for Fall 2003 across demographic groups including race/ethnicity, gender, and socioeconomic status. The instrument's validity was tested over a four-year period in a larger study of reading achievement. Scoring information and specific components of each section is described in more detail below.

Benchmark Scores

PALS benchmark scores for each subtest have been verified by many groups of students participating in statewide screening. The University of Virginia has also conducted pilot studies with over 14,000 kindergarten students across Virginia. Kindergarten benchmark for letter recognition is twelve meaning that students should know 12 lower case letters by October of their Kindergarten year. Students should be able produce four letter sounds by the first screening. The overall summed score benchmark is 28 points for fall and 80 by the spring. Students not making these benchmarks are identified as needing more intensive, individualized reading support. The goal of this study was for students attending a summer reading program to maintain or improve their spring summed score when they return to school in the fall of 2013 as first graders or in the rare case, a repeating kindergarten student.

Phonological Awareness Tasks

According to Bradley & Bryant, (1983, 1985); Byrne & Fielding-Barnsley, (1991, 1993); and Yopp, (1988), the two skills that are most important for young children to acquire are rhyme awareness and initial phoneme identification. Two of the PAL subtests examine these specific skills. Both of these tests are given in a small group setting. The rhyming test is a series of pictures in the left column and three choices of pictures in the right column of words that rhyme with the identified word. There are ten of these sets and each one correct earns the student one point. The beginning sound section shows children four pictures and they have to identify the two that begin with the same sound. Students also receive one point for each correct response out of ten possible points. According to the research of Invernizzi, Justice, Landrum, and Booker (2004), the reliability for rhyme awareness have been good with inter-rater reliabilities ranging from .96 to .99 ($p < .01$). In a sample size of 473 kindergarten students assessed a second time one to two weeks after the initial administration, the test-re-test was .81. For the beginning sound subtest, the results show inter-rater reliabilities of .99 ($p < .01$). The test-retest reliability was .78 with a sample size of 470 participants. The rhyme awareness and beginning sound tests Alpha coefficients ranged from .83 to .87 for all two different groups that included over 1,000 participants each.

Alphabet Knowledge

Students are shown all twenty six alphabet letters in random order. Students are tested individually on this section and asked to name the letters and earn one point each towards their final score. This test only contains lower case letters. Inter-rater reliabilities this portion of the test have been good with ($r = .99$, $p < .01$), and the test-retest reliability is .92 according to the work of Invernizz, Justice, Landrum, and Booker (2004) .

Grapheme-Phoneme Correspondence

The next two sections work in relation to one another to show how children make connections between letter sounds and the next step of being able to spell words.

Letter-Sound Knowledge.

Grapheme-phoneme correspondence is tested using 23 upper-case letters and three digraphs (Sh, Th, Ch) making up the 26 items in this section. The letter M serves as a model for the teacher to practice the directions with the student and Q and X are not tested because they require other letters of the alphabet to make a specific sound. This section uses upper case letters only. Students earn 1 point for each correct letter sound they can produce. Invernizzi, Justice, Landrum, and Booker (2004) report inter-rater reliability scores for this subtest as being high ($r = .98$; $p < .01$), with test-retest reliability at .88.

Spelling

The spelling section requires students to write words. These words are five single-syllables, consonant-vowel-consonant (CVC) pattern words. The teacher models how to sound out the words by saying the word and demonstrating how to think about each letter sound the student hears in the word. This section earns a possible 15 points as students are given credit for phonetic approximations of the words. For example, if the word is CAT and the child spells KAT, points will be earned. If the child spells the word correctly, a bonus point is added. This section has evidenced good inter-rater reliability of

($r = .99$; $p < .01$), as well as test-retest reliability ($r = .89$). Alpha coefficients have consistently been greater than .90 (Invernizzi, Justice, Landrum, and Booker, 2004).

Concept of Word

In the Concept of Word subtest, students are asked to track words with their finger as they are read aloud. Teachers work with students to memorize a nursery rhyme. There are picture clues during the learning process. Once the student can recite the rhyme, the teacher shows the student the written words. The teacher shows the student how to touch each word as it is spoken as they recite the rhyme together. Students earn points for each line of text correctly identified. Then the teacher points to certain words within a line of text and asks the student to identify the word. Students with a basic concept of word are able to start from the beginning of the rhyme and work their way through the rhyme by memory to identify the word in question. Students earn one point for each word correctly identified in the text. The next phase of this subtest is a list of ten words from the rhyme and students are asked to read the words in isolation. Being able to identify words in a list after having only seen them in the text of a memorized nursery rhyme is considered by researchers to be the bridge for students in their development in the area of concept of word (Bear & Barone, 1997). This research has shown that students who can master the concept of word skill are then ready to learn sight words and move to the next phase of reading development. Reliabilities have been assessed for the post-test word list with a range of ($r = .81$ to $.93$; $p < .01$). Cronbach's alpha has ranged from .88 to .90 (Invernizzi, Justice, Landrum, and Booker, 2004).

Analytical Plan

Using T-Tests, the study will examine the different means between the experimental and control groups. Both the overall benchmark scores and subtests will be examined. The researcher will conduct T-Tests to compare both groups of students. Both the overall benchmark scores and subtests will be examined. Student specific data will be kept related to birth date, attendance, beginning reading levels, sub scores of PALS sections, and special education services. Students will also be tracked throughout their first grade year to monitor their success in reading as compared with the previous year cohort. This group of first grade students will serve as a control group for future study.

Limitations

This study has limitations related to time and individual student differences. Two groups of students will be compared over the span of a summer and fall term. The sample size is small for both the control and participant groups. Also, the control group may attend other summer programs and the researcher must account for those experiences in the analysis. Another weakness is the inability to control for slight differences in delivery between the teachers in the summer program. Attendance and attrition are also factors that may impact the results of the study.

Chapter Four

Analysis of the Data

This study was designed to evaluate the effectiveness of a summer reading program in an effort to prevent summer reading loss in beginning readers. Student eligibility in the summer reading program was determined by random selection, and all kindergarten students were eligible to participate. All students were given the PALS assessment in May 2013, and this served as the baseline for comparison as pre-test data. An overall score as well as sub category scores in letter identification, letter sounds, spelling, pointing, word identification, and concept of word were also recorded for all students. The same test was administered in the fall during the first two weeks of school to all students by the same teacher who tested them in the spring. The end of summer scores served as posttest data. The scores were compared to determine if the summer reading program was effective in preventing summer learning loss.

Demographics

Thirty-one students were given the PALS assessment in May 2013. Specific demographics of the group are summarized in Table 3. Invitations to participate in the summer program were sent to all kindergarten students and of the thirty-one eligible students, twenty-eight opted in for a spot in the random selection process yielding a ninety percent interest in the study from kindergarten parents. The gender composition of the group was twelve out of seventeen (71%) male and five out of seventeen (29%)

female. The selected group closely mirrored the racial make-up of the school as it was seventy percent African American, eighteen percent Caucasian, and twelve percent Hispanic. The control group was fifty percent male, fifty percent female. The racial make-up included forty three percent African American, forty three percent Caucasian, and fourteen percent Bi-racial. Both groups averaged seventy percent of students identified as socioeconomically disadvantaged. Table three shows the demographic make-up of both the participant and control groups.

Table 3 *Demographic Characteristics of* Participants		Control Group
African -American	12	6
Caucasian Hispanic Bi-Racial	3 2 0	6 0 2
Poverty	13	12
Non-poverty	4	3
Males	12	7
Females	5	7

Limitations

This study has limitations related to time and individual student differences. Two groups of students were compared over the span of a summer and fall term. The sample size was smaller for the control group by three students because two students moved during the summer and were no longer available to be part of the study, and one student was accepted off the waiting list to enroll in the study to replace one of the students who was moving. Therefore the experimental group had seventeen and the control had fourteen, but statistically and demographically they remained very similar. Students in both groups had opportunities to attend other summer programs at the conclusion of this

study. In the participant group, two out of seventeen attended the district summer school program. In the control group one out of fourteen attended the district summer school program. While there may have been slight differences in delivery between the teachers in the summer program, both teachers engaged in a highly effective balanced literacy classroom. Students received twenty days of high quality instruction in both classrooms. Attendance was not a factor as no student missed more than one day of the program. Attrition was not an issue as all students completed the program.

Findings

The findings for this study will be reported in the order of the research question and supporting PALS sub category results.

1. **Research Question:** Can twenty days of intensive summer reading instruction reduce the level of summer learning loss for beginning readers?

   Hypothesis: Students participating in the summer program will experience less loss in skill as measured by the PALS assessment between the completion of kindergarten and first grade than those students in the control group.

A little over half, 17 students, (55%) of the eligible kindergarten students attended the summer four week, twenty day session , with eligibility based on random selection. Using the state PALS spring assessment given to all kindergarten students, pretest scores were established. Table 4 shows the baseline comparison of overall summed scores of the participants and control group. Table 5 shows the statistical comparison of the two groups. Table 6 is a visual representation of the two groups represented on a line graph.

Table 4

Spring 2013 Pre-test Summed Scores

Spring 2013 PALS Results	Participants	Control Group
Summed Score Average	92	88

Summer Students	
Student Name	**Summed Score Spring 2013**
1	101
2	102
3	93
4	90
5	94
6	102
7	98
8	93
9	91
10	87
11	79
12	57
13	92
14	98
15	97
16	97
17	87

Non-Summer Students	
Student Name	**Summed Score Spring 2013**
18	97
19	97
20	100
21	66
22	81
23	90
24	97
25	87
26	87
27	99
28	57
29	86
30	93
31	95

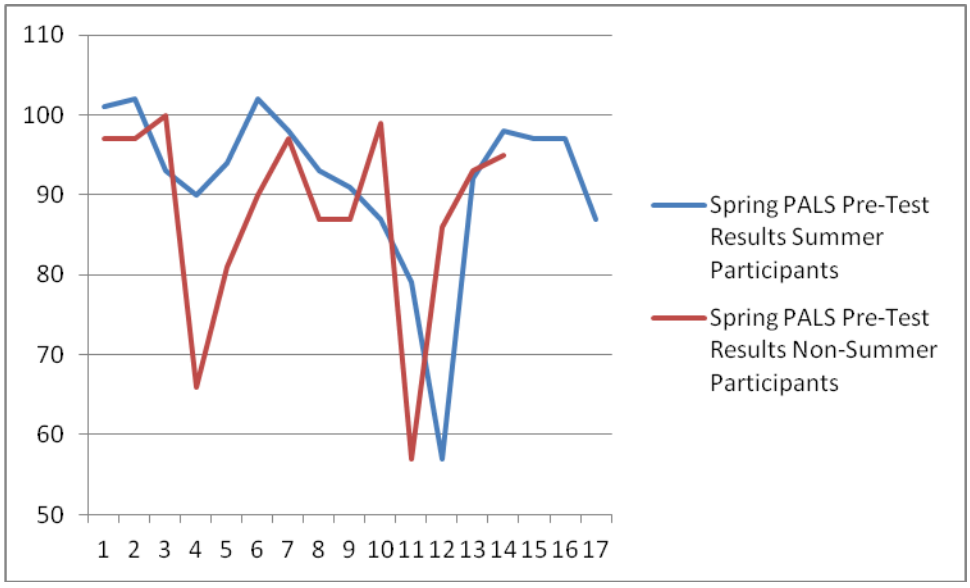
Table 5

Spring 2013 PALS statistical comparison

Summed Score	Spring 2013 PALS Test	
	Summer	*Non-Summer*
Mean	91.64	88
Variance	115.99	160.46
Observations	17	14
df	29	
t Stat	0.866757	
P(T<=t) two-tail	0.39319	
t Critical two-tail	2.04	

Table 6

Line graph of Spring 2013 PALS



The state benchmark for kindergarten is 88 so this cohort of students as a whole left kindergarten having met the state standards for reading. As each sub test is more closely examined however, the individual student weaknesses are uncovered in both groups. For comparison purposes it is important to note that this again was an experimental design study and all students were eligible to participate. The two tailed T-test indicated that the two groups as compared by their summed pre-test scores are not statistically significant as indicated by the P-value greater than .05 which provides the framework for comparison in this study. It is important to establish the parameters for comparison prior to examining post test results.

The summed scores for the fall post test are shown in Table 7 below for both groups, and Table 8 indicates the statistical comparison. Students were tested within the first two weeks of school by the same teacher who tested them in the spring. The teachers did not know which students had attended the summer program and which ones had not.

Table 7

Fall 2013 Post-test Summed Scores

Fall 2013 PALS Results	Summer Participants	Control Group
Summed Score Average	93	85

Summer Students	
Student Name	**Fall Summed Fall Score 2013**
1	101
2	96
3	91
4	85
5	101
6	101
7	94
8	96
9	90
10	92
11	93
12	63
13	91
14	99
15	100
16	97
17	97

Non-Summer students	
Student Name	**Fall Summed Fall Score 2013**
18	99
19	98
20	101
21	55
22	80
23	82
24	92
25	89
26	84
27	92
28	51
29	88
30	86
31	92

Table 8

Fall 2013 PALS Statistical Comparison

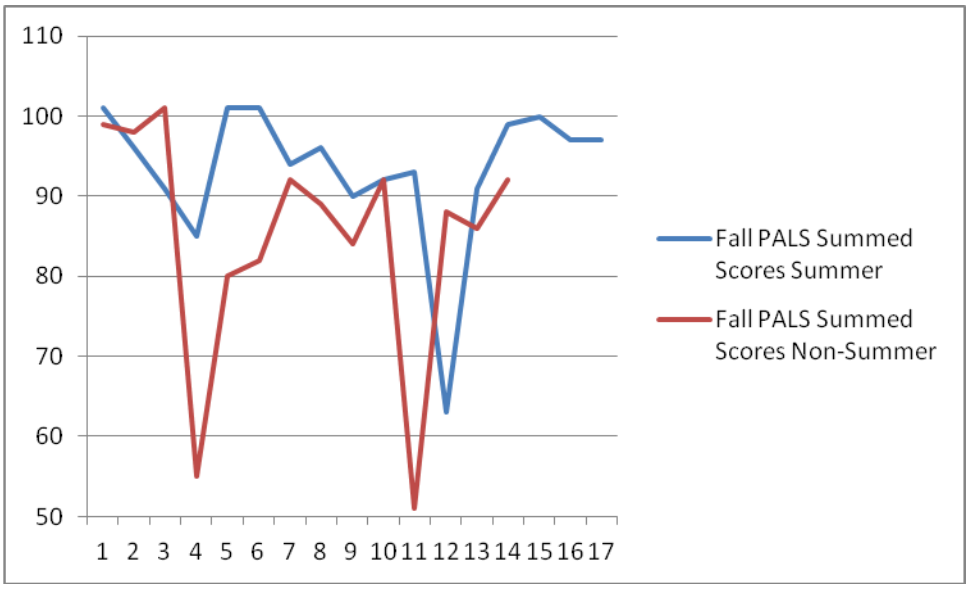
Summed Score	Fall2013 PALS Test	
	Summer	*NonSummer*
Mean	93.35	84.92
Variance	81.74	221.91
Observations	17	14
df	29	
t Stat	1.94	
P(T<=t) two-tail	0.06	
t Critical two-tail	2.04	

As a group, the students who participated in the summer program maintained their reading score and went up by one point. The average score for non participating students dropped three percentage points when they returned to school in the fall. As for individual students in each group the story is even clearer. In the participants group, ten

out of seventeen, (59%) of the students maintained or improved their score from spring to fall. The control group had five out of fourteen, (36%) of the students maintain or increase their score from spring to fall. This would indicate that the summer program was effective in reducing summer learning loss for some students. Table 9 shows a comparison of the student scores.

Table 9:

Fall 2013 PALS Post Test Line Graph



More specific to the study was the performance of economically disadvantaged students. The participant group consisted of thirteen out of seventeen, (76%) students were identified as such and twelve out of fourteen,(85%) of the control group and their performances on pre and post test were compared in addition to the overall group results. The results are shown below in Table 10.

Table 10:

Economically Disadvantaged Results Comparison

Spring PALS Pre-Test: Economically Disadvantaged

	Summer	*Non-Summer*
Mean	92.3	86.2
Variance	98.92	165.84
Observations	13	12
df	23	
t Stat	1.34	
P(T<=t) two-tail	.09	
t Critical two-tail	0.19	

Fall PALS Post -Test: Economically Disadvantaged

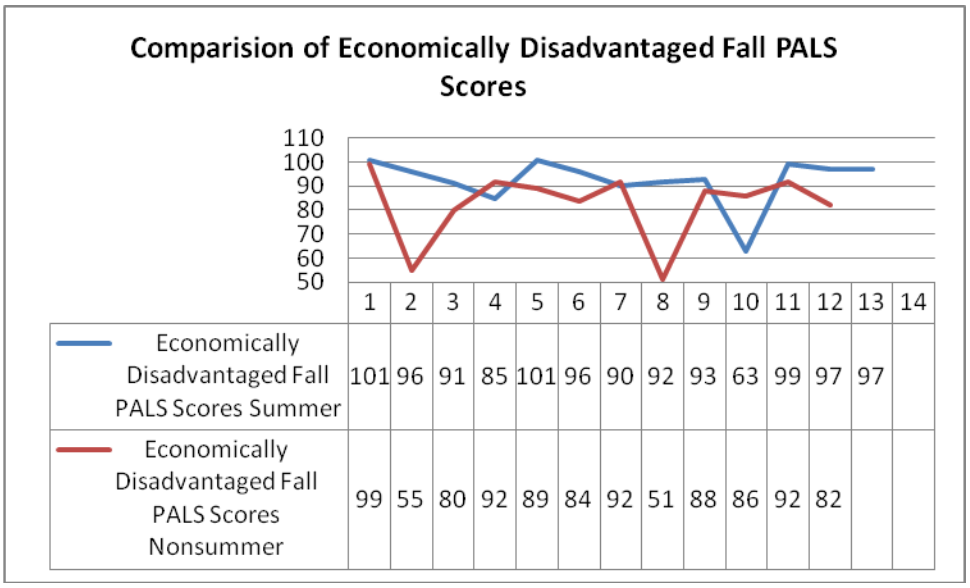
	Summer	*Non-Summer*
Mean	92.3	82.5
Variance	98.92	216.82
Df 23		
Observations	13	12
t Stat	1.98	
P(T<=t) two-tail	0.05	
t Critical two-tail	2.06	

The groups were not statistically different on the pre-test. The post test results are quite different, however. Sixty nine percent, nine out of thirteen participants identified as socio economically disadvantaged maintained or improved their score from pre to post test. The non participant group had 25% , or three out of twelve students identified as socioeconomically disadvantaged maintain or improve their score from pre to post test. The p value indicates that this comparison is statistically significant with a 95%

confidence rate that the students in the intervention group did better. The graph below displays the comparison of the two groups to show the differences quite clearly.

Table 11:

Line Graph of Fall Post Test Results: Economically Disadvantaged Students



The PALS assessment is broken into sub-categories and each of those will be compared in Tables 12-17:

Table 12:

Group Rhyme

Summer Students		
Student Name	**Group Rhyme**	**Group Rhyme**
1	10	10
2	10	10
3	10	10
4	8	9
5	10	10
6	10	10
7	10	9
8	10	10
9	10	10
10	10	7
11	3	1
12	4	5
13	10	10
14	10	10
15	10	10
16	10	10
17	10	10

Non-Summer Students		
Student Name	**Group Rhyme**	**Group Rhyme**
18	10	10
19	10	10
20	10	10
21	10	10
22	10	9
23	10	10
24	10	10
25	10	10
26	10	10
27	10	10
28	4	1
29	10	10
30	10	10
31	10	10

Spring Group Rhyme

	Summer	*Non Summer*
Mean	9.11	9.57
Variance	4.73	2.57
Observations	17	14
df	29	
t Stat	0.65	
P(T<=t) two-tail	0.50	

Fall Group Rhyme

	Summer	*Non-Summer*
Mean	8.88	9.57
Variance	5.98	2.57
Observations	17	14
df	29	
t Stat	0.90	
P(T<=t) two-tail	0.37	
t Critical two-tail	2.04	

The P value is greater than .05 which indicates that the relationship is not statistically significant in either pre or post test comparison groups. There are no measureable differences between the groups in spring or fall to indicate that the intervention had any impact in this sub category of rhyming for the students. The data indicates that fourteen out of seventeen, (82%) of students who participated in the summer program scored 10/10 in this section and thirteen out of fourteen (92%) of non participating students achieved a score of 10/10 in the fall testing.

Table 13:

Letter Recognition

Summer Students		
Student Name	**ABC Lower**	**ABC Lower**
1	26	26
2	26	26
3	25	26
4	26	26
5	26	26
6	26	26
7	26	26
8	26	26
9	26	26
10	26	26
11	24	26
12	19	21
13	26	26
14	26	26
15	26	26
16	26	26
17	26	26

Non-Summer Students		
Student Name	**ABC Lower Spring**	**ABC Lower Fall**
18	26	26
19	24	26
20	26	26
21	25	23
22	24	24
23	26	26
24	26	26
25	25	24
26	26	25
27	26	26
28	26	21
29	26	26
30	26	26
31	26	24

Spring Letter Recognition

	Summer	*Non-Summer*
Mean	25.41	25.57
Variance	3	0.57
Observations	17	14
df	29	
t Stat	0.32	
P(T<=t) two-tail	0.75	
t Critical two-tail	2.04	

Fall Letter Recognition

	Summer	*Non-Summer*
Mean	25.7	24.92
Variance	1.47	2.37
Observations	17	14
df	29	
t Stat	1.57	
P(T<=t) two-tail	0.127	
t Critical two-tail	2.04	

There is no statistically significant difference between the groups on the letter recognition sub test. The actual test results however show trends between the two groups. In the group that attended the summer program, sixteen out of seventeen, (94%) of the students scored 26/26 on the pre-test for letter recognition and the same held true for the post test results. Actually, the same student missed the mark in both instance but showed improvement from 19/26 in the spring to 21/26 in the fall. As for the students not attending the program, eleven out of fourteen (79%) scored 26/26 on the pre-test, and eight out of fourteen (57%) could recognize all 26 letters on the post-test. Looking further into this group, one student improved her score from 24/26 to 26/26 from spring to fall and five students decreased by one or more letters on the post test.

Table 14:

Letter Sounds

Summer Students		
Student Name	**Spring Letter Sounds**	**Fall Letter Sounds**
1	26	26
2	26	22
3	23	22
4	22	19
5	24	26
6	26	25
7	24	24
8	25	26
9	23	23
10	24	25
11	24	25
12	16	18
13	25	24
14	26	26
15	25	26
16	26	25
17	23	25

Non-Summer Students		
Student Name	**Spring Letter Sounds**	**Fall Letter Sounds**
18	26	26
19	26	26
20	26	25
21	15	10
22	19	19
23	21	17
24	26	23
25	23	21
26	22	21
27	26	26
28	15	14
29	24	23
30	23	21
31	25	24

Spring Letter Sounds

	Summer	*Non-Summer*
Mean	24	22.64
Variance	5.875	15.17
Observations	17	14
df	29	
t Stat	1.18	
P(T<=t) two-tail	0.25	
t Critical two-tail	2.04	

Fall Letter Sounds

	Summer	*Non-Summer*
Mean	23.94	21.14
Variance	5.93	22.9
Observations	17	14
t Stat	2.1	
P(T<=t) two-tail	0.043	
t Critical two-tail	2.04	

The comparison of groups on this sub test is statistically significant as indicated by the P-value of the post test of 0.043. Of the students participating in the summer program, eleven out of seventeen, (65%) maintained or showed improvement from spring to fall in their ability to produce all 26 beginning alphabet sounds. The control group had four out of fourteen, (29%) students maintain or increase the number of letter sounds they were able to produce between the pre and post testing events.

Table 15:

Spelling

Summer Students		
Student Name	**Spring Spelling**	**Fall Spelling**
1	20	20
2	20	19
3	20	20
4	17	15
5	15	19
6	20	20
7	19	19
8	18	19
9	18	19
10	16	17
11	15	16
12	5	8
13	19	16
14	20	20
15	20	20
16	20	20
17	15	18

Non-Summer Students		
Student Name	**Spring Spelling**	**Fall Spelling**
18	19	20
19	20	20
20	19	20
21	7	3
22	15	16
23	18	16
24	18	16
25	17	17
26	17	17
27	19	12
28	8	8
29	14	15
30	20	18
31	16	18

Spring Spelling

	Summer	*Non-Summer*
Mean	17.47	16.21
Variance	14.13	16.79
Observations	17	14
t Stat	0.89	
P(T<=t) two-tail	0.38	
t Critical two-tail	2.04	

Fall Spelling

	Summer	*Non-Summer*

Mean	17.94	15.43
Variance	9.18	23.34
Observations	17	14
df	29	
t Stat	1.76	
P(T<=t) two-tail	0.088	
t Critical two-tail	2.04	

The p-value for this comparison does not indicate statistical significance; however, the individual student data on this sub test indicates some level of significance. Of the students participating in the program, fourteen out of seventeen, (82%) maintained or improved their scores on this sub-test from spring to fall. Of the students not participating, nine out of fourteen, (64%) maintained or improved their spelling score from pre to post test.

Table 16:

Word Identification

Summer Students		
Student Name	**Spring Word ID**	**Fall Word ID**
1	10	10
2	8	10
3	7	7
4	8	9
5	9	10
6	10	10
7	10	9
8	10	10
9	15	7
10	8	10
11	10	10
12	6	5
13	10	10
14	10	10
15	8	10
16	9	10
17	10	10

Non-Summer Students		
Student Name	**Spring Word ID**	**Fall Word ID**
18	10	9
19	7	10
20	10	10
21	3	2
22	10	4
23	5	4
24	8	9
25	10	9
26	8	1
27	10	10
28	4	8
29	5	5
30	8	3
31	10	9

Spring Word Identification

	Summer	*Non-Summer*
Mean	9.29	7.71
Variance	3.72	6.37
Observations	17	14
df	29	
t Stat	1.96	
P(T<=t) two-tail	0.05	
t Critical two-tail	2.04	

Fall Word Identification

	Summer	*Non-Summer*
Mean	9.24	6.64
Variance	2.2	10.87
Observations	17	14
df	29	
t Stat	2.91	
P(T<=t) two-tail	0.0068	
t Critical two-tail	2.04	

There was significant statistical difference in this sub category. The groups were different in the spring after the pre-test as indicated by the initial data. Of the group participating in the summer program, eight out of seventeen, (47%) students could identify all ten words on the kindergarten list in the spring. Of the non- participating students, six out of fourteen (43%) could identify all ten words on the pre-test. Post- test results indicated that twelve out of seventeen, (71%) of participating students achieved a score of 10/10 on the word identification sub test. Of the non participating students, three out of fourteen, (21%) scored 10/10 on this sub test. This group showed a loss of 22% while the participant group showed a gain of 28%.

Table 17:

Concept of Word

Summer Students		
Student Name	**Spring COW Word List**	**Fall COW Word List**
1	9	9
2	10	10
3	5	3
4	5	6
5	9	10
6	10	10
7	9	6
8	4	5
9	4	2
10	1	5
11	3	7
12	2	1
13	2	5
14	6	7
15	6	8
16	5	9
17	5	8

Non-Summer Students		
Student Name	**Spring COW Word List**	**Fall COW Word List**
18	6	7
19	7	6
20	9	10
21	0	0
22	3	2
23	6	3
24	7	7
25	3	7
26	2	2
27	7	9
28	0	1
29	3	4
30	4	1
31	8	6

Spring Concept of Word

	Summer	*Non-Summer*
Mean	5.58	4.64
Variance	8.38	8.4
Observations	17	14
df	29	
t Stat	0.9	
P(T<=t) two-tail	0.37	
t Critical two-tail	2.04	

Fall Concept of Word

	Summer	*Non-Summer*
Mean	6.53	4.64
Variance	7.76	10.25
Observations	17	14
df	29	
t Stat	1.75	
P(T<=t) two-tail	0.09	
t Critical two-tail	2.04	

The spring pre-test indicates that these groups were statistically even. The fall testing indicates that while the p-value is greater than .05, there may be some statistical significance to the comparison in this category. A deeper dive into the data shows that students participating in the summer program two out of seventeen, (12%) of students scored 10/10 on this section during the pre-test and three out of seventeen (18%) scored 10/10 on the post- test. Of non-participating students, no students scored 10/10 on the pre-test and one student, (7%) scored 10/10 on the post test. In terms of growth towards mastery, the participating group had thirteen out of seventeen students, (76%) maintain or improve their score on this sub test. Results for the control group indicated that eight out of fourteen students, (57%) maintained their score or showed growth on this sub test.

Summary

Rising first grade students were targeted for this study as they were the group showing the largest gaps in their learning as determined by the PALS assessment over the past two years. This school has a commitment to young readers to keep the momentum going and provide interventions as early as possible. The literature indicates that summer learning loss, especially in reading for children in poverty, widens each year between first and fourth grade if students are not provided effective intervention (Helf, 2008). All thirty one kindergarten students were eligible to participate in the lottery for the seventeen available slots, and the only requirement was that parents commit to having their child attend the full twenty days of the program. Twenty eight students, (90%) return rate entered the lottery, and seventeen children were selected to attend. Full explanation of the selection process is outlined in the methods chapter.

Students enrolled in the summer program had a high degree of success in maintaining or increasing their reading skills as measured by the PALS assessment. As a group, participating students improved one percentage point while non-participating students lost three percentage points. In the participants group, ten out of seventeen (59%) of the students maintained or improved their score from spring to fall. The control group had five out of fourteen (36%) of the students maintain or increase their score from spring to fall. The details for individual growth on the sub tests are even more compelling and highlight the growth for students participating in the summer program and the data is available in Tables 12-17.

Chapter 5

Conclusions, Implications, and Recommendations

A traditional nine month school calendar results in an average break of around ten weeks for students each summer. This is an extreme amount of time for students, especially young ones in the early stages of the reading process. Students who receive no instruction or do not practice their skills during the summer are likely to experience significant losses (Allington 2010). The research indicates the greatest losses occur in children during the summers of the early elementary grades and that once that gap appears, it continues to grow each year (Rasinski 2007). The implementation of a student specific, balanced literacy summer program can serve to shorten the summer break for students and reduce the amount of skill loss that occurs. The key to success is quality of instruction and not simply number of days attended. The idea of students losing skills over summer break has been an issue in education documented as far back as 1906. The topic coincides with studies related to economically disadvantaged students as the two are usually found to be contributing factors to issues related to student achievement (Alexander, Entwisle, & Olsen, 2001). It has been well established in the literature that a student's reading ability can be used as predictor of their overall academic success (National Reading Panel 2000). Schools continue to struggle with how to best maximize instructional time and where to concentrate their resources for intervention. Many have tried year round calendars with intersessions, summer schools, extensive before and after school programs, and a host of other models. Many schools

have also focused resources on upper grade levels at the elementary level because of testing and high stakes accountability

Quality programs have been shown to be effective in reducing summer learning loss for students, especially those in poverty, but typically they are expensive to run. This presents a challenge for public schools as budgetary constraints have meant that schools have had to be able to implement programs that will insure the most "bang for their buck". This is a slippery slope when the trade off is the number of young children who will have to continue to struggle to learn to read. Some districts are looking for innovative ways to help fund quality intervention programs. The National Summer Learning Association worked with 16 large urban districts around the country to partner with local non-profits to provide enrichment activities for students while the schools provide the academic piece. A good example of this is in Cincinnati Public Schools; this district created an additional four weeks of instruction for their low performing schools and called it "Fifth Quarter" (Smink 2011). This is a full day program that all students attend as a way to decrease summer losses for these students. As a result, the district scores are up and they have received passing marks from the Ohio state legislature. The program relies heavily on community partnerships for afternoon programming as the academics for "Fifth Quarter" are only in the morning. Ideas such as these are relevant to this study as in order for this type of intervention to continue, funding must be secured once 21st Century funds are no longer available. It is necessary to prove efficacy of the program and the importance of focusing on young readers.

The purpose of this action research study was to examine the effects of a summer reading program on the reading ability of students between kindergarten and first grade

as measured by the PALS assessment instrument. This study replicated methodology of larger studies on a much smaller scale in an attempt to inform local practice and add to the body of research.

The research question was:

1. Can twenty days of intensive summer reading instruction reduce the level of summer learning loss for beginning readers?

   Hypothesis: Students participating in the summer program will experience less loss in skill as measured by the PALS assessment between the completion of kindergarten and first grade than those students in the control group.

PALS spring Kindergarten test was used as the instrument for pre- and post-testing. Scores were examined for both participant and control groups in both overall summed scores and six sub categories. Overall scores were also examined for economically disadvantaged students in both the participant and control groups. The next section provides an overview of study findings, implications and recommendations for future research and instructional practice.

Summary of Findings

PALS Post Test Results

Results of the post- test indicated that 59% of the participating students maintained or increased their scores while 36% of the control group increased their scores. In the participant group, male students who attended the summer program, five out of seventeen, (29%) maintained or increased their score and five out of five, (100%) of the females maintained or increased their scores. In comparison, the control group male students had two out of fourteen, (14%) of students maintain or improve scores and the

same two out of fourteen for female students as well. The majority of the summer program participants were African American and eight out of twelve (67%) of this group maintained or increased their score, while one out of three (33%) of the Caucasian participants maintained or improved their scores. In the control group, three out of six (50%) of the Caucasian students maintained or improved their scores. The greatest gains were shown by economically disadvantaged students participating in the program. The number of participants who maintained or improved their score from pre- to post- test in this group was nine out of thirteen (69%) and the control group had three out of twelve (25%). These results indicate that students who participated in the summer program experienced less summer learning loss than those who did not attend. Another interesting fact to note: the three students in the non participant group who experienced gains from spring to fall were also not identified as economically disadvantaged. The connection between the limited resources of students in poverty and success in school continues to emerge as a critical factor and held true in this study as well.

PALS Sub-Test Results

The findings for the six sub-tests on the PALS tests indicated that the summer intervention was significant in preventing summer learning loss in the areas of letter sounds and word identification as the p values indicated a 95% confidence rate in the comparisons between the two groups. Two other sub-categories of spelling and concept of word had slightly higher p values of .08 and .09 respectively, which is higher than the .05 that is generally accepted. Upon further analysis, however, the data indicated growth for individual students in the participant group on those tests. Specific results can be seen in Tables 15 and 17. There was no statistical difference in the group rhyme or letter

recognition and students in both groups seemed to master those skills and show little loss in those areas. The results of the sub tests are really vital in making individual decisions about instruction. The pre-test data from the sub tests was used for grouping and planning for the summer program. The post- test data was used to determine immediate needs for remediation. Doing this assessment during the first two weeks of school provided teachers with working knowledge of their students. They did not have to wait to assess them or use data from the previous May that we see clearly changed over the course of the summer break. The results of this study indicate that quality summer programming can help students maintain or improve in the specific skill areas that are critical to their overall success in reading.

The faucet theory explained by Alexander and his colleagues holds true in this study as evidenced by the results (Alexander et al. 2007).Both participant and control groups were statistically equal after the spring testing with no great gaps in their achievement. After an intervention of twenty additional days of intensive reading instruction for seventeen of them and no additional intervention for twelve of the fourteen control group, significant changes occurred in the post- test results. The faucet turned off in June for the control group and the losses were clearly shown in the critical areas of letter sounds, word identification, and spelling; all skills that are easily lost without reinforcement. The sense of urgency to solve the problem of summer learning loss is best summed up by McCoach (2006) with, “The race to close the achievement gap cannot be won if we take the runners off the track for months at a time” (p.14).

Conclusions and Implications

It is essential to understand the impact that summer vacation has on early readers. Even students who were attaining skills rapidly during the school year will show some loss if they are not exposed to print and encouraged to practice while school is not in session. In this urban school division, poverty is a significant factor in every school. The division average is close to 60%, and the number is growing each year with some schools close to 90%. Children make great gains in kindergarten in the area of reading, and it is critical to find a way to maintain those skills and carry them forward into the following school term. Not every student will participate in a summer program, but a recent study by Kim (2011) looked at several studies on summer reading loss that involved sending books home with students for the summer. The levels of required interactions with the texts in the studies varied but the underlying premise of all of them was that students who read over the summer lost less ground than those who did not read at all. Allington (2010) conducted a study in three high poverty schools in Florida over three summers where students were allowed to choose 12 books from the school book fair to take home and read. The results showed small but statistically significant growth over all three summers. In another similar study, Kim (2007) also sent books home with students but matched the books with student interests by giving them a 20 question survey. The results were inconclusive. A third study by Kim (2011) looked at scaffolding summer learning by providing not only books but specific tasks for comprehension, vocabulary, and reading strategies for both students and parents. The results of this study produced the same level of growth in one summer as the Allington (2010) study did over three summers. The conclusion is that it is not enough to send books alone. Children and

parents must know how to interact with the text in order for it to make a difference when school reopens. Schools have to find ways to use what limited resources they have to help students maintain as much as they can over the summer break.

The findings from this study highlight the importance of quality summer instruction on maintaining and improving reading skills for beginning readers, and especially for economically disadvantaged students.

Recommendations for Future Study

The potential to expand the research in this area is great. A natural extension would be to continue to follow this cohort of children and repeat the study next summer. Keeping with the same pre- and post- test design and using the spring first grade PALS data and lottery system to select the groups, the researcher would have a framework to continue. It would be interesting to compare the results of children who may be included in the next participant group that were formerly part of the control group and vice versa. Another recommendation includes this cohort of kindergarten students, however remove the random selection process and invite students to attend based on academic need. One additional consideration for future study is to adjust the timing of the summer program in relation to the start of the school year. This study was conducted close to the end of the kindergarten school year and lasted for twenty days. Students then went home for approximately eight weeks which is still a long break. Future studies may want to look at weeks closer to the opening of the new school year if possible to restart student thinking and keep the momentum going.

It would be interesting to look at other demographic factors as part of this study outside of the typical gender, age, race, and socioeconomic status. Other things to consider could be summer daycare arrangements as that could certainly impact whether or not a child is exposed to any educational resources in the summer. Family dynamics are also important to consider and may be a contributing factor to a student's success in reading. Another suggestion for future research is to replicate the study first in the other schools in the local school division, and compare results to see if it is possible to generalize the findings.

This study also captured only a single summer for a selected group of students. It has the potential to grow into a longitudinal study. The results of this study could be extended if additional data were gathered throughout the school year and if similar summer programs were put in place as these children matriculate through the school. It would be interesting to see if the gains are maintained while school is in session or if the control group students catch up and level out. In essence, when is the faucet completely turned back on?

Another interesting aspect to this study was the intangible benefits of having the first grade teachers spend the summer getting to know the students who would be in their classes in the fall. There is much to be learned about the importance of student-teacher relationships and the critical role that plays in student achievement. A qualitative study on both student and teacher perceptions after a summer program would be another direction to launch from this core study.

In addition to research, the application of this study also shows potential for improving educational practice in reading instruction, more specifically in balanced literacy. Further research in the five areas of phonics, phonemic awareness, comprehension vocabulary, and fluency to determine which if any is impacted the most by summer programming. This final section summarizes the key points from this study and suggests recommendations for best practices based on the results of this action research.

Summary

Based on the PALS post- test results of the participant group in this study, the reading intervention program was effective for the majority of students in the participant group in helping reduce the effects of summer learning loss. This program was designed as a true balanced literacy experience, and the teachers implemented twenty days of instruction. The critical findings of the study were found in the PALS sub test data for individual students. It is important to note that teachers used the pre-test data to plan for summer instruction. The summed scores did not provide enough information to accurately meet the needs of students as the details of their learning needs become evident in the sub-test results.

One change in practice as a result of this study as this school moves forward will be to assess summer loss in the primary grades during the opening weeks of school each year. The post-test data gathered for this study was valuable for first grade teachers as it was more accurate than the spring data. Teachers were able to use it to create flexible groups that more closely matched student needs and to provide interventions sooner. The PALS assessment has never been used as a pre-test/ post-test design in this manner before

at this school, and the results created a wealth of information for instructional purposes. Students entering first grade are given the first grade PALS in late September, so being able to compare a student's growth or loss using the same instrument at the opening of school has allowed them to really focus on individual needs.

Another change in practice will be in the use of available summer resources. Teachers at this school have for many years sent books and learning packets home with all students each summer. As a result of this study, resources will be reallocated to include as many students as possible in a summer reading program. Additional funds for take home resources will include specific interactive tasks and training for parents to hopefully maximize the learning for students.

A large shift in practice at the division level will allow this study to continue next summer. As of June 2014, each school will be providing summer remediation for their students as opposed to one centrally operated summer school program. The potential exists for this reading program model to be replicated in other schools throughout the division. This school will be able to continue with the rising first grade program, and add a class of rising second graders by combining funding from the district and remaining 21st Century Learning Center grant funds.

This school and school district will need to continue to look at summer programming and more specifically, reading programs for students in poverty in the primary grades. The results of the previous research and the data from this study indicate that summer learning loss continues to have an impact on student achievement, and an even greater impact on students in poverty. This school needs to continue its commitment to teaching young children to read on grade level and provide interventions and

acceleration opportunities for students from kindergarten forward to close the achievement gap for children in the early years.

Appendix

Student Name	Summer	Fall Group Rhyme	Fall Group Rhyme	Fall Group Beg. Sound	Fall Group Beg. Sound	Fall ABC Lower	Fall ABC Lower	Fall Letter Sounds	Fall Letter Sounds	Spring Spelling	Fall Spelling	Spring Word ID	Fall Word ID	COW Word List	Fall COW Word List	Spring 2013	Fall Score 2013
1	**Y**	10	10	10	10	26	26	26	26	20	20	10	10	9	9	101	101
2	**Y**	10	10	10	9	26	26	26	22	20	19	8	10	10	10	102	96
3	**Y**	10	10	10	6	25	26	23	22	20	20	7	7	5	3	93	91
4	**Y**	8	9	10	10	26	26	22	19	17	15	8	9	5	6	90	85
5	**Y**	10	10	10	10	26	26	24	26	15	19	9	10	9	10	94	101
6	**Y**	10	10	10	10	26	26	26	25	20	20	10	10	10	10	102	101
7	**Y**	10	9	10	10	26	26	24	24	19	19	10	9	9	6	98	94
8	**Y**	10	10	10	10	26	26	25	26	18	19	10	10	4	5	93	96
9	**Y**	10	10	10	10	26	26	23	23	18	19	15	7	4	2	91	90
10	**Y**	10	7	10	9	26	26	24	25	16	17	8	10	1	5	87	92
11	**Y**	3	1	10	4	24	26	24	25	15	16	10	10	3	7	79	93
12	**Y**	4	5	6	7	19	21	16	18	5	8	6	5	2	1	57	63
13	**Y**	10	10	10	10	26	26	25	24	19	16	10	10	2	5	92	91
14	**Y**	10	10	10	10	26	26	26	26	20	20	10	10	6	7	98	99
15	**Y**	10	10	10	10	26	26	25	26	20	20	8	10	6	8	97	100
16	**Y**	10	10	10	10	26	26	26	25	20	20	9	10	5	9	97	97
17	**Y**	10	10	10	10	26	26	23	25	15	18	10	10	5	8	87	97
18		10	10	10	10	26	26	26	26	19	20	10	9	6	7	97	99
19		10	10	10	10	24	26	26	26	20	20	7	10	7	6	97	98
20		10	10	10	10	26	26	26	25	19	20	10	10	9	10	100	101
21		10	10	7	9	25	23	15	10	7	3	3	2	0	0	66	55
22		10	9	10	10	24	24	19	19	15	16	10	4	3	2	81	80
23		10	10	9	10	26	26	21	17	18	16	5	4	6	3	90	82
24		10	10	10	10	26	26	26	23	18	16	8	9	7	7	97	92
25		10	10	10	10	25	24	23	21	17	17	10	9	3	7	87	89
26		10	10	10	9	26	25	22	21	17	17	8	1	2	2	87	84
27		10	10	10	9	26	26	26	26	19	12	10	10	7	9	99	92
28		4	1	1	3	26	21	15	14	8	8	4	8	0	1	57	51
29		10	10	9	10	26	26	24	23	14	15	5	5	3	4	86	88
30		10	10	10	10	26	26	23	21	20	18	8	3	4	1	93	86
31		10	10	10	10	26	24	25	24	16	18	10	9	8	6	95	92

Institutional Review Board:

Date: September 13, 2012

Your request for an expedited review of your research project: "Summer Learning Loss Screening / Kinder Camp Provides Reading Ramp" has been completed. The proposal and related study comply with the standards set by the U.S. Department of Health and Human Services, Code of Federal Regulations, Title 45 CFR Part 46, Protection of Human Subjects, effective as of July 14, 2009. The study is therefore approved.

Please remember that if any modifications are necessary, these changes need to be approved by this committee. Approval for this proposal is for one year. If necessary, re-approval must occur prior to September 12, 2013. Please feel free to give me a call at X8962 if you have any questions.

Sincerely,

Beth McKinney PhD, MPH, CHES Chair,

Human Subject Research Committee (IRB)

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