A SUMMER READING PROGRAM AND ITS IMPACT ON SUMMER READING LOSS

by

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The Problem: This study was designed to evaluate a summer reading program to determine if it had impact on preventing summer reading loss for students entering second grade.

Procedure: The methodological approach for this proposed study was a descriptive study using Basic Reading Inventory (BRI) test score data and percentages to compare spring and fall test results. Results from the fall BRI testing for reading fluency rate, accuracy, and comprehension were measured for those students who attended the 2009 and 2010 summer school sessions and for those students who did not attend. In addition, fluency rate, accuracy, and comprehension for gender, ethnicity, and economic status were examined. At the conclusion of first grade, all students attending a Title I elementary school in the Ottumwa School District took the spring BRI for first grade. This data provided the baseline data for the study. The same group of students took the spring BRI for first grade when they entered second grade in September for comparison. Four hundred twenty-eight students were tested during the two year study identifying 280 as eligible. There were 124 eligible students who participated in summer school and 156 eligible students who did not participate in summer school.

Findings: The results of the study support the district summer school initiative and belief that by shortening the summer break and providing skilled reading instruction, summer reading regression can be minimized. The percent of participating students who increased or maintained fluency rate, accuracy, and comprehension ranged from 70%-77% compared to 46%-67% for non-participating students. The data analysis of all participating students showed minimal differences of success in maintaining or increasing reading skills between gender, ethnicity, or socioeconomic status. However, the study did find discrepancy in maintaining or increasing fluency rate success between Caucasian and non-Caucasian students, following the summer reading intervention. Eighty percent of Caucasian students maintained or increased fluency rates as compared to 59% of non-Caucasian students.

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Chapter 1: Introduction

This chapter provides the background and implications of summer school reading intervention programs for elementary school students with particular emphasis on a summer reading program hosted by the Ottumwa Community School District in Ottumwa, Iowa. The topic of summer reading programs and their impact on academic performance in reading is discussed relevant to the proposed study. The problem, providing the basis for the study, the statement of purpose, guiding research questions, and nature of the study are presented in this chapter. The chapter concludes with a statement of significance and a presentation of relevant terms.

Introduction to the Study

Summer break for students in a typical school calendar averages 12 weeks; this equates to a significant length of time when the educational process is interrupted. During this time away from the structure and reinforcements of the regular school day, home and family variables have shown to influence reading growth or regression in young students (Kirkland, 2008). In a 12 week layoff, early learners who lack access to print with little opportunity to read text at independent levels will often experience regression in fluency and comprehension skills (Kirkland, 2008). This regression is often seen in students from disadvantaged homes (Allington, 2003).

There is also a significant research base supporting the connection between reading ability with academic performance, persistence, and high school graduation (Toppo, 2010). Though the connection between literacy and nearly all other areas of academic success is well established, there is still much to be learned about how best to

support the early literacy and reading achievement that provide such a significant basis for future success.

Ralph Smith, executive vice president of the Annie E. Casey Foundation, noted students give clear indications of their likelihood to become high school dropouts as early as elementary school. Among the clearest signs were difficulty reading and understanding basic work requiring reading (Toppo, 2010). If educators want to shrink the number of students who drop out of high school each year, they must greatly increase the number who can read proficiently by the time they are in fourth grade (Toppo, 2010).

To combat these trends, schools have been creative with year-round academic calendars which minimize extended absences from school, or have adopted summer school programs designed to provide students with opportunities to read and experience additional instruction during the summer layoff. Though such programs have demonstrated efficacy, they are costly to run (Allington, 2003). In an age of increased budgetary challenges for public education, the future of summer programming depends largely on the ability of a school district to demonstrate the efficacy of the program and the ultimate advantage to the school district.

Since 2008, the Ottumwa Community School District has been identified as a district in need of assistance for achievement gaps with students living in poverty. The Elementary and Secondary Education Act, No Child Left Behind (2001) identifies schools with low academic achievement and administers sanctions if achievement does not meet established standards. Sanctions imposed on underperforming districts are progressive. The first year a district fails to meet the established criteria, it is assigned "School in Need of Assistance" status. Parents are notified at the expense of the home

district, along with information about alternatives available to parents who may wish to send their children to a school within the district that is not underperforming. If a school is underperforming a second year, it is mandated to provide supplemental educational services to any student who wishes to have it, and all families are notified of this opportunity. These sanctions are ongoing until such time as the district improves its performance. With this urgency, the Ottumwa District developed a reading intervention summer school program for students entering second grade to strengthen reading skills and eliminate any skill regression that may occur over the summer.

Statement of the Problem

Summer reading loss is well documented and is more persistent among students from lower socioeconomic backgrounds who are already at risk for academic failure (Allington, 2003). Allington reviewed 13 empirical studies representing approximately 40,000 students and found, on average, the reading proficiency levels of students from lower income families declined over the summer months, while the reading proficiency levels of students from middle-income families mostly improved. Access to reading materials has been consistently identified as a variable enhancing reading development, and children from low income families often lack the selection of books in the home (Rasinski, 2007). An examination of the reading declines in early elementary grades show, despite significant reading gains established in kindergarten and first grade, the summer session between first and second grade is particularly problematic for students who do not have opportunities to engage with reading during their summer recess (Rasinski, 2007). The lasting impact of low reading abilities in early grades is associated

with low middle and high school achievement, consequently the lasting implications of reading loss must be addressed (Rasinski, 2007).

In Ottumwa, Iowa, this challenge has been addressed through a summer school reading intervention program designed to provide 45 hours of reading instruction to prevent reading loss. Students are identified as eligible for summer school based on their reading ability in fluency rate, accuracy, and comprehension. The high volume of students identified as eligible is narrowed to a smaller group to maintain a 12:1 student to teacher ratio. Other factors used to select participants include family commitment to the program, socio-economic status, and overall academic need based on reading performance.

Approximately 55% of eligible students are invited to participate in the reading summer school with 45% actually attending. Student participation in the reading summer school is influenced by family commitments and teacher availability. Participating teachers are required to have participated in district K-3 professional development during the school year and one day spring training specific to reading strategies for summer school. Student data is collected on all second grade students by a trained reading inventory testing team made up of retired teachers in the district. The team remains consistent to avoid bias. A district assessment team consisting of building principals and literacy coaches analyze the student data and identify the participant list for the summer school. Each summer for the last two years the district has committed approximately $28,000 to this initiative, which has been partially funded through Title I. However, increasing program needs and additional teacher salaries have required an accompanying increase of fiscal commitment from the school district. At this point, the question is

whether the summer reading intervention program is effective enough to warrant the increased investment of school district dollars.

Purpose and Significance of the Study

The purpose of this study was to evaluate the effectiveness of the district's summer reading program in preventing summer reading loss. First grade students were intentionally targeted due to the types of interventions implemented during the school year, and the urgency to keep early readers from falling behind. Studies have shown that reading gaps widen each year between first and sixth grade if students are not provided effective intervention (Helf, 2008). Identifying the potential benefits of this program between the first and second grade year will provide guidance about how best to serve students at risk for low reading achievement.

The results of this study have practical and scholarly implications contributing to the field of elementary education and literacy education in particular. Data from the 2010 Iowa Tests of Basic Skills report showed that 28% of fourth grade students in Iowa are non proficient readers, and students in grades 3-5 showed significant differences in reading achievement when filtered for parental income level. Sixty three percent of students below the poverty level were proficient readers, while 78% of their non-impoverished peers demonstrate reading proficiency. National Assessment of Educational Progress (NAEP) (2002) showed similar data, finding that58% of fourth grade students are eligible for free or reduced lunch fell below basic reading proficiency levels. By contrast, 27% of fourth grade students from higher income brackets fell below basic reading proficiency levels.

The gaps in reading performance on the basis of income are well established. What is less clear is how this gap is most efficiently and effectively remediated. The literature suggests reading interventions in elementary grades are likely to support retention and improve graduation rates. In Ottumwa Community School District, there is significant pressure to improve the graduation rate and reduce the dropout rate. Currently, the Ottumwa Community School District trails the Iowa state average of an 87% graduation rate with a rate of only 74%. This study will assist the Ottumwa Community School District and others similar in identifying and evaluating reading intervention strategies for early readers. The results of this study will provide a basis for the improvement of educational practice and for additional scholarly research into early reading intervention programs.

Research Questions

The ultimate purpose of this study was to answer the question: "For those students who attended the 2009 and 2010 district summer school, was the district summer school effective in either maintaining or increasing their scores as measured by the Basic Reading Inventory (BRI)?" The study was guided by three additional research questions, each supported by two sub-questions.

1. Have students who attended the 2009 and 2010 district summer school either increased or maintained their rates in reading fluency as measured by the Basic Reading Inventory (BRI)?

1a.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their fluency rates (words read per minute)?

1b.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their fluency rates (words read per minute)?

1c.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their fluency rates (words read per minute)?

2. Have students who attended the 2009 and 2010 district summer school either increased or maintained their reading accuracy as measured by the BRI?

2a.When examining the accuracy of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their accuracy?

2b.When examining the accuracy of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their accuracy?

2c.When examining the accuracy of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their accuracy?

3. Have students who attended the 2009 and 2010 district summer school either increased or maintained their comprehension level as measured by the BRI?

   3a.When examining the comprehension level of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their comprehension level?

   3b.When examining the comprehension level of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their comprehension level?

   3c.When examining reading comprehension of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their comprehension level?

Nature of the Study

The methodological approach for this proposed study was a descriptive study using Basic Reading Inventory (BRI) test score data and percentages to compare spring and fall test results. Results from the fall BRI testing for reading fluency rate, accuracy and comprehension were measured for those students who attended the 2009 and 2010

summer school sessions and for those students who did not attend. In addition, the researcher examined the results for fluency rate, accuracy, and comprehension for gender, ethnicity, and economic status. At the conclusion of first grade, all students attending a Title I elementary school in the Ottumwa School District took the spring BRI for first grade. This data provided the baseline data for the study. The same group of students took the spring BRI for first grade when they entered second grade in the September for comparison.

Definition of Terms

Accuracy. The accurate decoding of words in text (Center for the Improvement of Early Reading Achievement, 2001).

Basic Reading Inventory (BRI). An assessment used to measure fluency rate, accuracy and comprehension (Center for the Improvement of Early Reading Achievement, 2001).

Comprehension. A reader's understanding of what is read, remembering what is read and communicating with others what is read (Center for the Improvement of Early Reading Achievement, 2001).

Fluency. Reading orally with accuracy, speed and proper expression (Center for the Improvement of Early Reading Achievement, 2001).

Intense Intervention. One-to-one additional reading instruction (Center for the Improvement of Early Reading Achievement, 2001).

Miscues. The number of misread words in a passage (Center for the Improvement of Early Reading Achievement, 2001).

Reading First. A federal education program in the United States mandated under the No Child Left Behind Act and administered by the federal Department of Education. The program requires that schools funded by Reading First use "scientifically-based" reading instruction (Center for the Improvement of Early Reading Achievement, 2001).

Summer Reading Loss. The decline of academic skills and knowledge that students experience over the summer months (Center for the Improvement of Early Reading Achievement, 2001).

Supplemental Intervention. Small group additional reading instruction (Center for the Improvement of Early Reading Achievement, 2001).

Title I. A federally funded program in high poverty schools that target children with low achievement (Center for the Improvement of Early Reading Achievement, 2001).

Word Wall. A strategy used to reinforce high frequency words in reading and writing (Center for the Improvement of Early Reading Achievement, 2001).

Assumptions, Limitations, and Delimitations

Assumptions

This study included several assumptions. First, there was an assumption that the BRI was a valid and reliable instrument, and the application of the BRI to this setting was appropriate and provided the data necessary to answer the identified research questions. Further, there was an assumption that students engaged fully in the BRI and performed to the best of their ability. This study also assumed teachers and students worked very hard during the summer session with a positive attitude towards learning.

Limitations

As in any research, the proposed study had some limitations. Quantitative research relies on the numerical results of relationships between variables, rather than discussing narrative results revealing why the relationships exist. As in any correlational study, this study did not determine causation or identify what forces may have exerted influence on those variables.

In addition, the testing instrument was deliberately developed to measure reading cues, fluency, and comprehension skills as determined by this publishing company; additional testing, beyond the scope of this study, may have measured additional skills. Therefore, the use of a single instrument for tracking student reading skills may not have provided a comprehensive measure of the breadth of the students' skills and abilities.

The sampling procedure also limited the ability to generalize the results of this study. This study relied on a convenience sample (second grade) within a single school district in rural Iowa. It may not be reasonable to assume that summer programs in this part of the United States will work equally well in areas with a different demographic or socioeconomic makeup. This study was also cross-sectional and provided information on retention or growth of reading skills based on a single group of students administered the test during a single time period (fall of the year).

Participation of students was determined by eligibility on a pretest and invitation. Summer school was limited based on teacher participation; therefore, not all eligible students were invited to participate in summer school. Invitations were based on reading performance, socioeconomic status, family commitment and availability of space on student rosters.

Delimitations

To accurately evaluate the effectiveness of the summer reading intervention program in Ottumwa Community Schools, the scope of the study fell within the parameters and delimitations determined largely by the curricular and programming models that were established by the district.

The delimitations that characterized this study included the following: (a) exclusive focus on students between their first and second grade years of elementary school, (b) timing of the summer session, (c) reliance on a single measure (BRI) used by the district, and (d) the emphasis on examining the effectiveness of a single elementary school summer reading intervention program.

Organization of the Remainder of the Study

Chapter 1 presented introductory remarks concerning the use of summer reading intervention programs in supporting student literacy. In addition, descriptive information pertaining to the study was provided. Included in this information were the statement of the problem, purpose, significance, and definitions of pertinent terms.

Chapter 2 provides a review of contemporary literature related to the support of reading skills and literacy, as well as the application of relevant theories to supporting learning outcomes in this area. The relationship between reading skill and other aspects of academic achievement is explored, and strategies for supporting student reading in elementary grades to support student achievement are discussed.

Chapter 3 details the methods used to examine the success of the summer reading intervention program in place for second grade students in the Ottumwa Community School District. The Basic Reading Inventory (BRI), which provided the instrumentation for the study, is also discussed. A detailed overview of the procedures for both data collection and analysis is provided.

Chapter 4 discusses the results of the study focused around the research questions and presented in tables.

Chapter 5 presents an analysis and discussion of the findings and implications of the study. Conclusions and recommendations for future studies and for practical improvements are also described.

Chapter 2: Review of the Literature

Bracey (2002) entitled a *Phi Delta Kappan* article "Summer Loss: The Phenomenon No One Wants to Deal With." Knowledge of this phenomenon is not a recent occurrence, and in fact, the earliest study on the topic dates back to 1906 (Alexander, Entwisle, & Olsen, 2001). That time frame coincides with the standardization of the educational calendar (Cooper, 2001). In reality, the 9-month school calendar is a relic of the meeting of the agrarian society with the Industrial Age at the turn of the 20th century. By the 1950s, educators were aware that the lengthy summer vacation could be used to provide instruction for students who had fallen behind their classmates or were at risk for falling behind. Half a century later, Bracey's (2002) claim that summer learning loss is most pronounced among economically disadvantaged students and is an important, persistent issue that must be addressed, is supported by a growing body of evidence (Afterschool Alliance, 2010; 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).

Virtually all authors exploring summer learning loss invoke Heyns's (1978, 1987) pioneering research on summer reading. Heyns found students' reading progress—or loss—over the summer was linked with the volume of books they read. The vast

majority of public libraries across the United States offer summer reading programs (Fiore & Roman, 2010). However, such programs are currently threatened by budget cuts. Furthermore, McGill-Franzen and Allington (2003) point out that while public libraries might seem like the ideal place for children to turn for books after schools have closed for the summer, the poor children who need libraries may have the most limited access. Libraries in low income neighborhoods are often the most affected by budget cuts (closing or limiting hours) and poor children may lack transportation to get to a library or the neighborhood might be too dangerous for children to walk even a few blocks on their own. The lack of access to books in libraries and schools compounds the disadvantage for poor children who typically come from homes with fewer books than their more affluent peers. According to McGill and Franzen, whether children read during the summer essentially hinges on whether or not they own books.

Children begin schools at varying levels of reading development. SES is a key factor in reading performance growth (Benson & Borman, 2007; McCoach et al., 2006). Research conducted by Annie E. Casey Foundation highlights the vital importance of promoting the reading growth of economically disadvantaged children (Fiester & Smith, 2010). Demographically there are 7.9 million children age 8 and under (20% of the children in that age group) whose low income status heightens their risk for reading failure. This in turn, raises their risk for academic failure and failure in life. According to the Children's Reading Foundation, children who read below grade level in fourth grade are incapable of comprehending about half of the academic curriculum. Additionally, about 75% of the students who read poorly in third grade will read poorly in high school. An estimated 5% to 10% of middle and high school students have

reading levels as low as second or third grade. Approximately 6 million secondary school students lack grade level reading competencies (Wise, 2009). These students are at high risk for dropping out with significant costs to the individual and society.

The Casey Foundation report outlined a number of factors that disadvantage low-income children, beginning at birth with the higher probability of low birth weight, prematurity, and prenatal exposure to toxic substances that affect neurobiological development (Fiester & Smith, 2010). In early childhood, factors that influence linguistic development, including verbal interactions with adult caregivers and access to books and reading opportunities are already at play, inhibiting the vocabulary development of preschoolers, which is linked with subsequent reading growth. A home environment that is not conducive to the linguistic development of very young children is similarly detrimental to the literacy development of school-age children. This effect becomes more apparent during the summer months when children do not have access to learning resources at home. At the same time, while schools theoretically have the capacity to provide children with enriching activities that accelerate learning, poor children are more likely to be in classrooms with a curriculum that lacks stimulation, rigor, and challenge (Fiester & Smith, 2010; Teale, Paciga, & Hoffman, 2008).

Public schools with summer programs were initially designed for low-income children because affluent families could hire tutors for children in need of additional instruction (Cooper, 2001). Presently, the demand for summer programs far outweighs the need. Only 25% of school-age children are involved with summer programs (Afterschool Alliance, 2010). Although children from disadvantaged families are most likely to participate in summer programs (43%), unmet demands for summer programs

are highest among low-income and minority families. In fact, the general public endorses the need for public funding of summer learning programs (83%), with the strongest support expressed by African American, Latino, and low-income parents (more than 90%).

Some schools have adopted year-round education instead of the traditional school academic year. However, even these schools see a need to provide inter-session learning opportunities for students who struggle with reading (Jacobsen et al., 2002). There is general consensus of the vital importance of proving early intervention for young learners with reading difficulties, yet the sizable numbers of older students who read far below grade level underscore the inadequacy of past efforts to deal with this problem.

Summer Learning Loss

Bracey (2002) observed that from 1996 to 2002, there were few articles dealing with summer learning loss. One of the most widely cited articles on the topic is the meta-analysis and research synthesis published by Cooper, Nye, Charlton, Lindsay, and Greathouse in 1996 (Cooper et al., 2003). The synthesis involved 39 studies including 13 that met criteria for a meta-analysis.

> According to Cooper, the meta-analysis disclosed that "summer learning loss equaled at least one month of instruction as measured by grade level equivalents on standardized test scores—on average, children's test scores were at least one month lower when they returned to school in fall than scores were when students left in the spring" (p. 3).

Summer learning loss was most apparent for economically disadvantaged students and students at risk for school failure. Heyns (1987) had previously reached the same conclusion.

At the same time, the summer learning loss was greater for mathematics than for reading (Cooper, 2003). Helf, Konrad, and Algozzone (2008), who found no evidence of summer learning loss among low-income beginning readers, cite Cooper and his colleagues in support of their own research results. However, Cooper et al. (2000) surmised that the greater loss in mathematics achievement was probably due to more opportunities for language learning activities at home (Cooper, 2003). The researchers proposed that parents would be more sensitive to the importance of reading and thus encourage their children to read over the summer. There is a great deal of emphasis on providing children with books over the summer. In fact, Allington and McGill-Franzen (2009) note that schools have devised creative ways of providing children with books. Although Kim (2004) supported Heyns's (1978) finding that the number of books children read is a key factor in preventing summer reading loss, subsequent research demonstrated that in order to boost reading performance, children needed more support than just having access to books (Kim, 2007; Kim & White, 2008).

Alexander et al. (2001, 2007) used data from the Beginning School Study (BSS) to explore seasonal influences on the academic achievement of low-SES students. The 790 BSS participants were drawn from the Baltimore City Public Schools (BCPS), an economically disadvantaged urban school district. The California Achievement Test (CAT) was used to assess the Baltimore students on Reading Comprehension and Math Concepts at the onset of the BSS in 1982 when the participants were in first grade. The

analysis presented by Alexander et al. (2001) was based on the interaction of the students' CAT scores and sociodemographic characteristics. The findings confirmed that school and family influences are both important. Indeed, Alexander et al. (2007), declared, "Schools *do matter* [original emphasis], and they matter the most when support for academic learning outside the school is weak" (p. 183). The pattern revealed that low-income students progress capably during the school year but before they begin school and during the summer, "the out-of-school resources available to them are not sufficient to support their achievement", Alexander et al. (2001). Summer learning loss intensified the disadvantage in literacy and numeracy development with which the low-income children began school.

In subsequent research, Alexander et al. (2007) analyzed the cumulative impact of seasonal effects on the BSS participants' CAT Reading Comprehension progress. The findings showed that during the school year, the low-income students not only kept up with their more affluent peers but actually surpassed them in academic year gains, which equaled 191.3 points for the low-SES students and 187.0 points for the high-SES group. Alexander et al. acknowledged that this pattern contradicts the prevailing assumptions about learning in low-income schools (Fiester & Smith, 2010; Teale et al., 2008). The real divergence between the high-income and low-income groups occurs during the summer. While the most affluent students progress consistently over the summer, the least affluent students progress during some summers and regress in others, representing a pattern Alexander et al. (2007) labeled "summer slide" (p. 19).

Complicating their longitudinal analysis, Alexander et al. (2007) noted that the BCPSS abandoned the CAT battery after the eighth BSS project year, leaving some gaps

in the data. Nevertheless, the data showed that in year 9, the low-SES students were approximately 73 points behind their high-income peers, a difference of about 0.88 SD. According to the researchers, roughly one-third of the difference (26.5 points) was already present when the students started school in 1982. The remainder of the difference occurred at the elementary and middle school, "with the largest single component, 48.5 points, being the cumulative summer learning gap from the five elementary years" Alexander et al. (2007). In contrast, the effects of the academic year are "trivially small." The findings demonstrated that most of the achievement gap manifests during elementary school. Combined with the erratic or negative impact of summer on the poor students' achievement, there was a clearly implied need for enrichment programs during elementary school and certainly programs offered during the summer.

Funding summer and after-school programs already had overwhelming support from the parents whose children would benefit most from those programs (Afterschool Alliance, 2010). An example of an effective program is *Two Together,* an after-school literacy program offered in a disadvantaged area, which was linked with two summer programs, a 4-week program located on a college campus and a 10-day residential camp for students in the upper elementary grades (Fleming, 2005).

Helf et al., (2008) investigated the effect of summer vacation on the literacy development of students in kindergarten through second grade. The participants were 151 students drawn from six elementary schools ("treatment schools" and "control schools") from an urban school system involved in a larger study. Students considered at risk and not at risk were included in the study although most of the participants required

either “strategic” (secondary) or “intensive” (tertiary) intervention to prevent reading failure based on their performance on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). The students in the “treatment schools” received an appropriate intervention each day from trained specialists. The study focused on four DIBELS measures: Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF), Nonsense Word Fluency (NWF), and Oral Reading Fluency (ORF).

The analysis revealed no evidence of summer learning loss among the young learners. In fact, Helf et al. (2008) found that the children attending the treatment schools named roughly five more letters at the onset of first grade than at the end of kindergarten while children in the control schools named about seven more letters. Both groups of students segmented roughly eight more sounds at the beginning of first grade and showed comparable growth in nonsense fluency. The at-risk students who received specialized intervention during the school year demonstrated greater progress in early reading fluency than the at-risk students attending the control schools. Helf et al. acknowledged their findings contradict other research reporting a summer slide for economically disadvantaged students. However, they noted most studies do not focus on early literacy skills and their overall conclusion was that “young children from disadvantaged environments do not show a drop in early literacy skills over a long summer vacation” (Helf et al., 2008, p. 427).

Literacy Development

McCoach et al. (2006) used hierarchical linear modeling to map the trajectory of children’s reading development over the pivotal kindergarten and first grade years.

Based on the knowledge that children begin kindergarten with different levels of reading ability, the study was designed to illuminate individual growth patterns for the purpose of understanding and addressing the persistent gaps in reading achievement. The data were drawn from the first 4 waves of the Early Childhood Longitudinal Study—Kindergarten cohort (ECLS-K), which enabled McCoach et al. to examine the sociodemographic variables of SES, race and ethnicity, gender, and age at kindergarten entry, along with school level effects and academic achievement. A novel feature of the study is the exploration of the "Matthew effect," simply stated as the rich get richer and the poor get poorer. According to the Matthew effect, children who quickly learn reading skills become more fluent and better readers while children who struggle with early reading fall further behind over time. Although there is some evidence that disparities in reading performance increase over time, McCoach et al. note that research into the Matthew effect in early reading development is minimal and inconclusive.

The analysis was based on a 3-level growth curve model examining time, student, and school effects (McCoach et al., 2006). The ECLS-K utilizes specific items selected from an array of assessments to measure early literacy and reading including the Peabody Individual Achievement Test—Revised, the Peabody Picture Vocabulary Test—Third Addition, the Primary Test of Cognitive Skills, and the Woodcock-Johnson Psychoeducational Battery—Revised, along with additional items specific to the development of young children. The findings confirmed that individual differences are indeed present upon children's school entry. On average, children from higher income backgrounds began school with higher reading performance as did children in private schools. Conversely, children in high poverty schools had lower initial reading

performance. Although the statistical significance was small, McCoach et al. noted that in practical terms, the average reading score at the onset of kindergarten in schools where 95% of the students qualify for free meals is 2.7% lower than the average score in schools where the proportion of students receiving free meals is only 5%.

On average, girls surpassed boys on the initial reading assessment and acquired reading skills slightly more quickly during kindergarten (McCoach et al., 2006). Students from higher income families also progressed more rapidly as did Asian students and students who were older when they began school. Although African American children began school with reading scores comparable to other groups, their kindergarten reading growth lagged slightly behind other groups. An unexpected finding was that none of the school level variables (percentage of students receiving free lunch, percentage of minority students, and private or public school) significantly influenced the trajectory of reading growth.

McCoach et al. (2006) described the pattern of reading growth during first grade as a "growth spurt" (p. 23). First grade students gained an average of 2.65 points per month, averaging 17 points from the beginning to the end of the 1st grade year. Reading progress was more impressive for students who began kindergarten with lower reading ability. While this would appear to neutralize the proposed Matthew effect, evidence for the Matthew effect emerged in the analysis of summer reading growth. Specifically, children with higher reading scores made more progress during the summer months. McCoach et al. noted these children tended to be from higher income families.

The findings also showed schools where students began school as more proficient readers made more gains during the summer than schools where students began school

with lower reading skills. Detailed analysis revealed that the school level effects reflected the characteristics of the school population. As interpreted by McCoach et al. (2006), "the widening of the gap between good and poor schools may be occurring during the summer and may be best explained by differences in the clientele of the schools, rather than characteristics of the schools themselves" (p. 25). SES exerted a powerful influence on the students' reading growth and performance over kindergarten and first grade. The achievement gap between poor and more affluent students existed when children started school, expanded during kindergarten, and most significantly, grew even more over the summer. While reading growth over the summer was small on average, more affluent students made more progress. In fact, in all analyses, SES emerged as one of the foremost factors in the children's reading ability when they began kindergarten and the progress they made over the summer months.

McCoach et al. (2006) joined the many researchers who advocate the expansion of summer learning experiences for low-income students. In order to mitigate the achievement gap in reading, McCoach et al. (2006) recommended literacy programs for low-income preschool age children as well as summer enrichment activities.

Benson and Borman (2007) also utilized the ECLS-K to investigate the effects of SES and family background and neighborhood characteristics on children's reading progress across seasons. The sample was based on 4,178 students drawn from 292 schools and residing in one of 699 neighborhoods. The researchers carefully eliminated students from the original sample of 5,470 first grade students to prevent redundancies and assure that a full dataset was available for each student. A 3-level modeling technique examined individual growth, seasonal differences, kindergarten to first grade

achievement, social and demographic factors, and an analysis of school and neighborhood factors.

According to Benson and Borman (2007), "Nowhere was the effect of family SES more apparent than in students' achievement levels at school entry" (p. 28). Low-SES students began school performing about one standard deviation behind high-SES students in reading and mathematics, reflecting 4.5 months of academic year reading growth and 5 months of mathematics growth. Lower middle class students also began school at a disadvantage compared to more affluent peers. Across socioeconomic strata, all students progressed at a slower rate over the summer in both reading and math. At the same time, the findings supported the notion that low-income students experienced setbacks during the summer while high-income students progress. African American students began school at the same performance level as White students but declined over the school year, while Latino students began kindergarten behind White students but progressed at the same rate as White students during third grade. Summer did not play a role in achievement gaps between African American and Latino students and White students. Neighborhood effects, which are related to SES, played a role in reading and academic performance during the school year.

The interplay of family and neighborhood effects suggested that low-income students are often doubly disadvantaged when they start school while high-income students are doubly advantaged. SES was an overarching influence in the analysis. Benson and Borman (2007) concluded the magnitude of socially influenced achievement gaps exceeds the magnitude of socially induced achievement gaps over the summer. The school year effect was especially pronounced for reading performance.

Effective Literacy Instruction

According to Linder (2009), teachers striving to create an exemplary literacy learning environment use a broad array of instructional models to choose from. Most models are based on a balanced approach to literacy learning. For example, the Balanced Literacy Program designed by Fountas and Pinnell for children in kindergarten through grade 3 is based on the following principles: (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.

Linder (2009) portrays successful reading teachers as reflective professionals engaged in ongoing analysis and assessment of their effectiveness in the classroom. They adapt their teaching strategies in accordance with empirical research and their own experiences of what works best for their students. Effective teachers employ whole class instruction, small group instruction, and workshop models, which are all integrated in a stimulating, motivational learning environment. According to Foorman (2007), best practices in primary grade literacy instruction involved a dynamic interplay of school, teacher, and student effects. The overarching concern was tailoring lessons to the needs of individual students to maximize learning.

Exemplary first grade teaching

Pressley et al. (2001) explored exemplary teaching by comparing the classrooms of teachers cited for their outstanding literacy instruction with more typical colleagues

who taught comparable groups of students. Using observations and interviews, the researchers focused on the classrooms of excellent first grade teachers. These classrooms had a rich variety of literacy materials and the students were given opportunities to choose activities, interact with each other, and work in pairs and small groups. As Foorman (2007) recommended, the teachers' instruction was highly individualized and combined direct, explicit instruction with a holistic language arts curriculum (Pressley et al., 2001). The teachers were clear and consistent in communicating goals and expectations, thus providing a coherent structure for learning. Efficient classroom management enabled the teachers to maximize instructional time.

Pressley et al. (2001) discerned certain features of classroom management that are not usually given attention. The most remarkable aspect of the highly effective classrooms was the degree to which the classroom teachers coordinated instruction provided by special educators and paraprofessionals "to assure the integrity of the curriculum," especially for students requiring intensive assistance (p. 46). Another feature of the exemplary classrooms was the way teachers monitored the students' reading with the goal of helping them learn problem-solving and self-regulation strategies. Other features of the exemplary classrooms included modeling and scaffolding, explicit instruction, reinforcement and motivational strategies, and an ideal balance between basic skills instruction and holistic learning activities (Carbo, 2008).

Overall, Pressley et al. (2001) identified 11 attributes distinguishing the most effective from the least effective first grade teachers. Four major points emerged from the analysis. First, the exemplary teachers provided ample amounts of explicit instruction. Second, the exemplary teachers supported their students in becoming independent

learners. Third, the exemplary teachers provided extensive amounts of reading skills instruction. Finally, process writing was an important activity in the most effective classrooms. The teachers instructed the students in writing, guided them through the writing process, provided scaffolds when they were needed, and engaged the students in producing authentic written works of which they could be proud.

Small group instruction

Guided reading small group instruction is a central component of many models of literacy learning (Linder, 2009). Several features are common to most models. First, the learning group members read materials at their instructional level, with the teacher providing the necessary support. The students who are not involved in the small groups are engaged in reading at their independent reading level. The teacher's role is to guide the students in the zone of proximal development, where the most significant learning takes place (Vygotsky, 1978). This is best accomplished by listening to the students and providing feedback.

Flexible grouping allows the students to be organized on the basis of common interests as well as learning needs. Kuhn (2005) selected flexible grouping as a format for synthesizing fluency-oriented oral reading (FOOR), an adaptation of repeated reading, with a wide-reading strategy in which students engage in choral or echo reading without repetition. Both techniques effectively improve fluency; therefore, they have the potential to work synergistically. The participants for the study were 24 second graders divided into groups of six. The groups included a FOOR group, a wide-reading group, a listening-only group, and a control group. All the participants read at or below the 1st grade level.

The students were provided with a variety of literacy materials ranging in difficulty from late first grade through second grade reading level (Kuhn, 2005). Some passage intentionally stretched the students' instructional level. After 6 weeks, the participants in the FOOR and wide-reading groups surpassed those in the listening-only and control group conditions on word identification (Kuhn, 2005). The students in both experimental groups also increased their reading speed. However, only the students in the wide-reading group experienced gains in comprehension.

Kuhn (2005) suggested that the results might have reflected the students' perceptions of the goals of the activity. The FOOR students received explicit instruction in *expressive* reading but comprehension was not emphasized directly. On the other hand, the students in the wide-reading group read a new book in each session and might have given equal priority to fluency and comprehension. Kuhn proposed that FOOR might be more effective for students who need more intensive work on fluency while the wide-reading strategy more effectively strengthens fluency and comprehension.

Reading comprehension strategies

Block, Parris, Reed, Whitely, and Cleveland (2009) explored six popular literacy instruction strategies to determine which was the most effective for improving students' reading comprehension. An important aspect of the study was the interaction of the strategy with the time devoted to reading. Specifically, the researchers addressed the question of whether reading more per se would produce gains in comprehension or whether the effects depended upon the specific activity. The six instructional techniques selected for study were (a) workbook practice; (b) individualized schema-based learning combining silent reading with individualized instruction; (c) situated practice; (d)

conceptual learning, based on the premise that comprehension was enhanced by exploring a topic from different perspectives; 5) transactional learning, whereby students interpreted reading materials based on their personal knowledge and experience and then discussed the material in small groups; and 6) traditional reading instruction using basal readers. The participants were 660 students enrolled in grades 2-6 in four public school districts.

The results clearly demonstrated the nature of the activity was more important than just increasing the amount of time spent reading (Block et al., 2009). Spending an extra 20 minutes on basal readers did not improve the students' performance on standardized reading tests. The three techniques that produced the best results were transactional learning, conceptual learning, and individualized schema-based learning. Of particular significance, the three effective approaches proved equally beneficial for students across grade and ability levels.

Schoolwide Enrichment Reading Model

Similar to the findings of Block et al. (2009), Reis, Eckert, McCoach, Jacobs, and Coyne (2008) found an enrichment program that motivated and challenged students to be superior to a basal reader for improving the reading performance of students in grades 3-5. The Schoolwide Enrichment Reading Model (SEM-R) applied the principles of gifted education to reading instruction for all students. SEM-R is specifically designed to stimulate and sustain the learners' interest by addressing individual learning style preferences and encouraging students to build on their personal interests. The learning preferences assessed as part of SEM-R included independent study, instructional games, simulations, projects, lectures, drill and recitation, and discussion. The assessment data

went into a talent portfolio, which became a basis for selecting activities for individual students or in some schools for the entire school.

Reis et al. (2008) conducted their study of SEM-R at an urban and suburban public school. The students using SEM-R scored significantly higher on reading comprehension on the Iowa Test of Basic Skills (ITBS) and on a measure of oral reading fluency than the students who read from a basal reader (Reis et al., 2008). Notably, the impact of the creative enrichment program was much more marked for urban students. Urban students are often the least likely to be exposed to creative, enriching reading activities (Teale et al., 2008).

Williams et al. (2005) decried the relative lack of attention awarded to reading comprehension in primary grade literacy instruction, especially in expository text. The authors noted expository text presented challenges for young readers because it often contained unfamiliar material and the ideas expressed in the text tended to be abstract and complex. Additionally, there are several different types of expository text. To make expository text more accessible to young learners, Williams et al. developed a Text Structure program consisting of nine lessons that used animals as the topic. The lessons had several key components: clue words, reading and discussing trade books, vocabulary development, reading and analyzing target paragraphs, using graphic organizers to map paragraph content, compare and contrast questions, summary, and lesson review.

Williams et al. (2005) investigated the effectiveness of Text Structure in a study of 128 2nd graders. The students were assessed on comprehension and word identification at pretest and posttest, the study included classroom observations and a feedback survey of the teachers who also provided attendance data. The findings clearly

showed that the Text Structure participants not only learned and understood the material, but were able to transfer their new knowledge. The students who participated in the Text Structure program outperformed their peers in comparison classes on the assessment measures, demonstrating superior mastery of content material that was both related and unrelated to the lesson content. In order to maximize learning, Williams et al. proposed combining instruction for text structure and text content.

Readers Theatre

Rasinski, Homan, and Biggs (2009) strongly recommended Readers Theatre for developing reading fluency in struggling readers. Young and Rasinski (2009) described a classroom action project involving the implementation of Readers Theatre to improve the fluency and overall reading performance of second grade students. Young integrated Readers Theatre into the class curriculum for the first time during the 2007-2008 school year within the context of a balanced approach to literacy learning. Rasinski has considerable experience with Readers Theatre (Rasinski et al., 2009).

As part of the literacy curriculum, the students worked in pairs (or trios) in various workstations either directly related to Readers Theatre or supporting reading comprehension strategies the class had learned earlier (Young & Rasinski, 2009). In addition to Readers Theatre, the workstations included: Directed Reading-Thinking Activity (DR-TA); Creature Feature, the website links to the National Geographic Creature Feature and the Smithsonian Zoo webcam, using graphic organizers to gather information on a selected animal; Mental Images, in which the students envisioned mental images while reading; Word Study, Synthesis, an exercise in which the students synthesized the text of a new book into main ideas; Poetry, Creative Response to a book

of the student's choice; Connections, which synthesized reading with writing various forms of text; and Social Studies, where students researched and wrote about "good citizens in history" using text and hypertext (Young & Rasinski, 2009; p. 7).

Young and Rasinski (2009) used a mixed methods approach to evaluate the project. The students boasted impressive gains in prosody, word recognition, reading rate, and comprehension. Overall, the students were strong in many areas of literacy when they began the project and the teacher did not necessarily focus on specific goals. Nonetheless, the students made remarkable progress over the school year. Consistent with the orientation of Readers Theatre, the most significant gains on assessment tests surfaced in the area of fluency. Young and Rasinski noted that the introduction of Readers Theatre was the only significant departure from the literacy instruction Young had provided his students the previous year. For the 2006-2007, the students gained 29.1 words correct per minute in fluency, soaring to 54.9 words correct per minute the next year with the adoption of Readers Theatre.

The qualitative assessment showed that not only did the students enjoy Readers Theatre, but parents also commented on how their children became eager and enthusiastic readers. School staff members such as the guidance counselor, assistant principal, and school nurse were impressed by the students' markedly high levels of motivation (Young & Rasinski, 2009). The most striking effect was the powerful positive impact of Readers Theatre on struggling readers, who suddenly looked forward to "Fluency Friday" when they were involved with Readers Theatre. Confidence and motivation are the most notable psychosocial benefits of adopting Readers Theatre.

Multimedia learning

Silverman and Hines (2009) investigated the impact of multimedia learning tools on the vocabulary development of English language learners (ELLs) and native English speakers in pre-kindergarten through second grade. According to the researchers, there were few studies of vocabulary instruction for ELLs, and in general, most studies of vocabulary instruction focus on storybook read alouds. The project was driven by the theory that verbal and nonverbal information were processed by two distinct systems that supported one another and allowed for more effective recall of material. Based on that assumption, multimedia learning tools should have enhanced the verbal ability of young learners to process storybook information.

To test the theory, Silverman and Hines (2009) conducted their research in a small public school in a semi-urban community. The sample was comprised of 85 children in grades pre-K-2 and eight teachers. African American students accounted for close to half the sample (48%), White and Asian students accounted for 20% each, 7% were Latino, and 5% were classified as "other." For close to one-third of the parents (32%), English was not the primary language and their children were classified as ELLs for the study. These students were quite diverse, representing a variety of languages including Haitian Creole, Spanish, Portuguese, and Mandarin.

The students were assigned to either a multimedia or conventional lesson group that met for 45 minute daily sessions, 3 days a week for 12 weeks (Silverman & Hines, 2009). Both groups used science lessons on natural habitats for the vocabulary content. The students in each condition used the same books. However, the multimedia format included four videos representing each of the four types of habitat covered by the lessons.

An intriguing but unexpected finding was the use of multimedia made a difference only for the ELLs. The same effect emerged on a general assessment of vocabulary knowledge and an assessment devised for the study. What was especially striking was that the multimedia lessons completely eliminated the gap between the ELLs and non-ELLs on word knowledge. Silverman and Hines consider this especially significant in view of the vocabulary learning needs of students whose home language is not English. Additionally, although the substitution of traditional reinforcement with multimedia did not enhance the performance of the native English speakers, it had no negative impact on either vocabulary or science knowledge.

Silverman and Hines (2009) acknowledged that some prior studies had also supported the effectiveness of integrating multimedia into language lessons for ELLs. However, they noted the earlier studies found the multimedia enrichment did not affect the students' vocabulary skills without additional learning support. In their project, the teachers increased the students' awareness of words in the video and scaffolded their learning of words by discussing them in relation to the video. Silverman and Hines concluded, "Teachers should consider the use of multimedia to enhance, not supplant, comprehensive vocabulary instruction in the classroom" (p. 312).

Summer Reading Programs

Summer Opportunity to Accelerate Reading (SOAR) was created by the Austin Independent School District (AISD) to provide early intervention for children in kindergarten through second grade (Curry, 2001; Curry & Zyskowski, 2000). The program was designed to accelerate literacy learning for students who read below grade

level and/or at risk for being retained in grade. SOAR reflected a balanced literacy approach, which was widely advocated (Linder, 2009; Pressley et al., 2001). By the 2000 assessment, SOAR had been operating for three years, with ongoing evaluation built into the program model. The program components included reading aloud, shared reading and writing, interactive writing, guided reading, independent reading, and word study.

Funded by Title I, the Texas *Student Success Initiative* (for kindergarten), and local dropout prevention funds, the 2000 SOAR program was offered at 10 elementary school sites, half Title I schools and half non-Title I (Curry & Zyskowski, 2000). Eligibility for SOAR is determined by the students' scores on the district *Primary Assessment of Language Arts and Mathematics* (PALM). A total of 2,406 students participated in SOAR 2000, with students entering second grade in September comprising the largest segment. Ethnically, the participants were 56% Latino, 22% African American, 21% White (or other), and 1% Asian with considerable variation across sites. The Developmental Reading Assessment (DRA) was used to evaluate the students' progress in reading over the 4-week program.

On average, the participants gained 2.1 reading levels according to their DRA scores, reflecting the equivalent of about 25% to 50% of an average school year's progress (Curry & Zyskowski, 2000). The vast majority of the participants (92%) advanced at least one reading level over the course of the program. Broken down by participation levels, the average gain for students who received a full program (at least 19 days) was 2.2 reading levels. Among these students, 93% showed improvement of one or more levels. Of the 129 students who entered SOAR at the lowest reading level, only 20 (1%) did not progress beyond that. Of all the students who began SOAR reading below

grade level, 36% were reading at or above grade level by the program's end. Some 21% of the SOAR participants began the program reading at or above grade level.

Curry and Zyskowski (2000) noted that since its inception SOAR had expanded exponentially, serving six times as many students in 2000 as in 1998. With each year, the proportion of students gaining one or more levels increased. In 2001, SOAR has expanded to 12 schools but with some decline in enrollment to 2,188 (Curry, 2001). The ethnic composition of the students was roughly the same as it had been the previous summer and 70% of the students attended Title I schools. For 2001, there was some decline in the proportion of students who advanced at least one level; 87% of the students advanced compared to 92% in 2000. On average, the students advanced 1.7 text reading levels in 2001. There was one distinction between the two summers: The program lasted for 21 days in 2000 and 19 days in 2001. Among the students who had valid pretest and posttest assessments, 37.8% advanced one level, 29.3% advanced two levels, 12% advanced three levels, and 8% advanced four or more levels. Out of 142 students who began the program at the lowest reading level, only 30 students did not progress.

The segment of students who entered SOAR summer school reading below grade level and concluded the program reading at or above grade level included 75% of the kindergartners, 25% of the 1st graders, and 32% of the 2nd graders (Curry, 2001). The 2001 program included a substantial number of students who participated in SOAR for more than one year. Among this group of 781 students, 35% attending SOAR for two years were reading at or above grade level by the end of their second summer with SOAR and 28% who attended SOAR for three years (13 students) were reading at or above grade level by the end of the third summer.

The parents were overwhelmingly positive about SOAR, with 96% of the 981 parents surveyed stating that SOAR had benefited their child (Curry, 2001). One criticism leveled by the parents was that the program was not long enough. Among the educators, many expressed a need for more intensive and in-depth professional development activities. Although the program coordinators were diligent in ensuring that SOAR has a high quality curriculum and materials, the results suggested that a longer program would produce superior outcomes.

Jacobsen et al. (2002) described the accelerated summer school reading program adopted by the Visalia Unified School District (VUSD) in California to help struggling readers in grades 3-6. The school districts successfully employed Reading Recovery to advance the literacy development of the lowest performing 1st graders. Over three years the literacy team evolved to include six literacy trainers and coaches. Supported by the district, 15 highly respected grade 3-8 teachers embarked on a year-long project focused on learning and literacy theory. Two teachers from this group subsequently joined the literacy team. A prominent focus of the team was the plight of students who did not have access to Reading Recovery in 1st grade and were falling farther behind in reading, in some cases several grade levels below their peers. The pilot project for the accelerated summer learning program grew out of their work.

The pilot program was held at a school with a year-round campus whereby students attended school for three months with one month off (Jacobsen et al., 2002). The pilot program was a 13-day program held in April that took place in a "behind the glass" classroom used for observation and training. Out of 15 of the lowest performing students, 13 attended the program and 9 attended every session. This preliminary

program confirmed the effectiveness of the direct, accelerated instruction for improving the reading performance of at-risk learners. In addition to higher DRA scores, the teachers observed enhanced motivation, excitement, confidence, and enthusiasm for learning, describing the students as "empowered" (p. 153). With these promising results, the researchers began the summer school intervention.

The intensive accelerated program was implemented via four summer school institutes that offered teachers ongoing professional development for acceleration (Jacobsen et al., 2002). A major issue was making the transition from a conventional summer enrichment program to the intensive model. The literacy team and summer school coaches concluded that in order to be successful, there were several requisites: more extensive training for the teachers, "massive amounts of text reading" thus demanding "many, many books," and the recruitment of Reading Recovery trained teachers (p. 162). Two schools were the focus of the program evaluation. Out of 242 students involved in the program, 40% were successfully discontinued during the time extending from July to March. At the close of the first series of intersessions (August to November), 25% of the participants were deemed to be making sufficient progress to be discontinued. Students who were not making sufficient progress participated in the next intersession program where they made significant progress.

Jacobsen et al. (2002) noted that while both the summer school model and the inter-session model enabled the students to make marked gains in reading, the intersession model produced superior results. Cooper (2003) recognized the potential benefits of year-round education as an alternative to summer programs for sustaining academic progress. For educators seeking to adopt an intensive, accelerated program

model for literacy learning, the most striking finding reported by Jacobsen et al. (2002) was the difficulty many teachers experienced in making the transition from a traditional summer program to the intensive model. Ongoing collaboration and teamwork among the literacy teachers and coaches, and in particular, the support of the Reading Recovery specialists, was critical to program success.

Building Educated Leaders for Life (BELL)

The Building Educated Leaders for Life (BELL) accelerated learning summer program is a comprehensive program designed to improve academic performance, family involvement, academic self-perceptions, and social behaviors among economically disadvantaged students and their families (Capizzano, Bischoff, Woodroffe, & Chaplin, 2007; Chaplin & Capizzano, 2006). Founded in 1992 by a group of Latino and African American Harvard Law School students, BELL was a community-based organization offering supplemental learning activities to low-income students in New York, Boston, Baltimore, and Washington, DC. The assessment presented by Chaplin and Capizzano was based on the 2005 summer program, the year in which the program adopted *Summer Success Reading* and *Summer Success Math*, also used in the summer program described by Vanderhaar and Munoz (2005). BELL infuses culturally sensitive components into the academic curricula (Chaplin & Capizzano, 2006).

For evaluation purposes, the BELL program allowed the researchers to use random assignments to decide which applicants were accepted at two Boston and one New York City site, which became the focus of study (Chaplin & Capizzano, 2006). Although all students entering grades 1-7 in the host cities were eligible for the program, recruitment efforts targeted economically disadvantaged minority students with academic

difficulties. Assessment data were available for 835 applicants, representing 78% each of the program group and the control group. A somewhat smaller proportion of parents responded to the survey. The Gates-MacGinitie Reading Tests were used to assess vocabulary and comprehension. Academic self-concept was assessed via the Academic Perceptions Inventory (API) in reading and mathematics for students in grades 1 and 2 and the Perception of Ability Scale Score (PASS) for students in grades 3-7. Children's social behaviors and parent involvement were assessed via questions derived from the parent survey of the Social Skills Rating System (SSRS).

Close to two-thirds of the students selected through the random assignment lottery participated in the BELL program with high rates of attendance compared to the control group, which had minimal participation. However, during July even the control group participants were involved in a number of academic activities. Chaplin and Capizzano (2006) viewed the attendance as evidence of the high level of interest displayed by families who apply to the BELL program for enhancing their children's academic development. Children in both groups read books and engaged in academic activities during the summer although the researchers noted that the program participants increased the time spent in academic activities by 6.4 hours per week and the number of books read by 3.9, representing an increase of about 50%. Some parents reported their children read 50 books over the summer, which Chaplin and Capizzano view as very probable since many of the books were quite short.

Being accepted into the experimental group exerted a significant and relatively sizable effect on the number of books the children read. In addition, the time demands of program involvement entailed a reduction in other activities. Chaplin and Capizzano

(2006) noted the largest reductions in time involved activities such as watching television, playing computer games, and doing chores but there were also decreases for cultural activities and computer use and also smaller reductions for activities such as music, arts, and athletics. Discerning the impact of BELL based on test scores was complicated because the control group students had 16 more days of school while the BELL participants had 14 days of program participation. However, adjusting for days in school revealed an estimated significant positive impact equaling about 5.2 points on the extended Gates-MacGinitie reading test score for the program participants.

No impact was found for BELL program participation on the students' academic self-concepts or social behaviors. Chaplin and Capizzano (2006) suggested the lack of a positive impact on academic self-concept might have been due to heightened academic self-awareness. With the exception of the first graders, all the students performed far below grade level on the Gates-MacGinitie tests. The researchers suggested the program might have alerted the students to their academic problems, temporarily lowering self-concepts but possibly motivating them to invest more effort in academic improvement. According to Chaplin and Capizzano, the overall results suggest the BELL treatment group gained the equivalent of one month of progress in reading compared to the control group.

Capizzano et al. (2007) presented a detailed case study of the BELL program sites based on observations, interviews, focus group discussions, and program documents. The full weekly program consisted of 8 hours of literacy instruction, 4 hours of mathematics instruction, 12 hours of an array of enrichment activities such as music, dance, art, and gym, and 2 hours of time in the community in activities such as field trips.

The researchers noted that attendance was lowest on Friday when there were no academic activities, suggesting that the families gave precedence to academics. The teachers praised the small class size and the independence they enjoyed in organizing learning activities, which represented a welcome departure from regular public school practices for many teachers. The teaching assistants (typically interns) lauded the program's holistic philosophy of child development.

Virtually all the teachers expressed positive opinions of the Voices of Love (VLF) reading and writing curriculum, the culturally sensitive feature of the literacy program (Capizzano et al., 2007). A particular concern for the teachers was meeting the individual needs of the students. In particular, the teachers felt there should be a resource room to enable them to meet the needs of students who needed intensive remediation. According to the teachers, even with the assistants present it was difficult to accommodate students with a range of ability levels in one classroom. The observations revealed the teachers to be motivated, caring, and capable. In general, the teachers were good classroom managers who created a positive learning environment and followed the designated curricula. At the same time, the evaluation disclosed weaknesses in serving ELLs as well as students with special or remedial needs.

English language learners

Vanderhaar and Munoz (2005) described a summer program for ELLs in Kentucky, a state that has seen a dramatic increase in the immigrant population since 1990. According to the researchers, students in homes where English was not the primary spoken or written language were at particular risk for summer reading loss. Created to meet the requirements of Title III of NCLB, the summer program utilized

Summer Success, with a sound evidence base for improving students' reading and mathematics performance. *Summer Success Reading* was a 6-week comprehensive program that encompassed phonological awareness, phonics, comprehension, fluency, and vocabulary, and had five key components: *Read Aloud, Read and Write Together, Read and Respond, Read and Explore Words,* and *Assessment.* All teachers were equipped with a "kit" that included an array of materials aligned with the program components. *Summer Success,* designed to immerse students in enriching literacy learning activities and materials, provided them with intensive and individualized instruction. There was less emphasis on mathematics, with activities focused on the review and re-teaching of core mathematical concepts and skills.

Vanderhaar and Munoz (2005) utilized a mixed methods descriptive design with pretest and posttest for evaluating the impact of *Summer Success.* The qualitative analysis consisted of focus groups conducted with program teachers. The quantitative analysis employed descriptives to delineate the characteristics of the program participants and the Wilcoxin signed-rank test. The researchers chose the Wilcoxin test on the rationale that it was the most useful test for examining differences between paired means from a matched sample and was suitable for use with percentage scores. Roughly 213 elementary, middle, and high school students participated in the summer program. Of that group, about 70% had been classified as English as second language (ESL) students during the school year and 90% qualified for subsidized meals. Elementary school students comprised the largest segment of the participants, whose main first languages were Spanish, Vietnamese, or Somolian (at least eight languages were represented).

The program teachers were highly positive about the program, awarding it an "A" rating (Vanderhaar & Munoz, 2005). There was a consensus among the teachers that the program should concentrate on reading. In fact, the teachers felt that the students' poor reading skills impeded their ability to go through the mathematics program in the allotted time. Future improvements proposed by the teachers included: (a) reduce class size to allow for more individualized attention, (b) arrange classes according to reading or literacy levels as opposed to grade, (c) perform assessments on the first day and assist teachers in providing regular assessments, (d) eliminate the mathematics component and add guided reading to boost reading and assessment gains, (e) provide more support to facilitate the socialization of African students, (f) link after-school recreational activities to attendance at school, (g) ensure that the students have access to after-school programs, preferably including field trips, and (h) explore expanding the program to ESL students in communities not served by the program.

The quantitative analysis demonstrated that the students made significant gains in phonological awareness (21.46 percentage point), letter identification (3.39 percentage point), oral reading (8.57 percentage points), and retelling (17.56 percentage points). The most impressive gains were observed for the students who started out as the lowest performers. For example, on phonological awareness (only assessed in kindergarten and first grade students), children who scored from 0-20% on the pretest enjoyed a mean gain of 41 percentage points and those who began with scores of 21%-40% gained a mean of 41.94 percentage points. The students who began with the weakest mathematics performance also made the greatest gains, causing Vanderhaar and Munoz (2005) to question the wisdom of eliminating the math component entirely. However, the

researchers agreed the emphasis for the summer program should be on reading, and the results confirmed the effectiveness of *Summer Success* with ELLs of diverse cultural and linguistic backgrounds and initial performance levels.

Summer day camp programs

Schacter and Jo (2005) conducted a longitudinal randomized trial of a 7-week summer day camp reading program for low-income students who had just completed first grade. The sample consisted of 162 students, of whom 72 were assigned to the summer camp intervention (the maximum number of participants supported by the grant fund) and 90 to the control group. All of the students attended three elementary schools in South Los Angeles where 100% of the students qualified for free lunch. The students were approximately 60% African American and 40% Latino. Attrition due to high rates of student mobility in the schools resulted in a posttest sample (September of the following school year) of 51 students in the intervention group and 57 in the control group, and a final posttest (May) sample of 48 intervention students and 57 control group students.

Reading was taught by four elementary school teachers using Open Court in conjunction with an additional basal reader (Schacter & Jo, 2005). Open Court explicitly and systematically teaches the core reading skills outlined by the National Reading Panel (2000). On average, the classes had 15 students and included a variety of whole class, small group, and independent learning activities targeting phonemic awareness, phonics, vocabulary, fluency, and reading comprehension (Schacter & Jo, 2005). The children were immersed in two hours of reading instruction five days a week with the remaining time devoted to recreational day camp activities. The assessments utilized were the Gates-MacGinitie Word Decoding Levels 1 and 2 Form S, the Gates-MacGinitie

Comprehension Level 1 and 2 Form S, and the Stanford 9 Decoding and Comprehension Tests Primary 2, Form T.

Upon completing the summer reading day camp, the program participants enjoyed an increase in reading comprehension equivalent to 41% compared to the control group students (Schacter & Jo, 2005). The program participants sustained a 39% gain for 3 months and at the end of the school year, they outperformed the control group by 18%. The results for decoding skills were less impressive, diminishing over time. Immediately after the program, the day camp participants surpassed the control group by 33%, declining to 22% after 3 months, and 0% by the time of the final posttest. Schacter and Jo speculated that the effect for decoding skills might have been due to the teachers' re-teaching decoding skills in second grade, which would have enhanced the decoding skills of the control group while being redundant for the day camp participants who were already skilled in decoding.

An alternative explanation offered by Schacter and Jo (2005) was that low-income schools had a disproportionate number of emergency certified teachers, ironically placing students with the most urgent needs in the hands of teachers who often lacked the content knowledge and expertise to tailor instruction to the students' individual needs. The absence of individualized instruction would explain why the students might have been re-taught the skills they already mastered. Schacter and Jo also note the return to school after the day camp experience might have meant a return to a classroom milieu lacking the stimulation, academic rigor, and high expectations of the summer program, along with a lack of expert teachers. In fact, Teale et al. (2008) implicate overemphasis on basic elements of literacy such as decoding and word recognitions skills by teachers in

urban schools at the expense of comprehension, content knowledge, and writing as a key contributor to performance gaps in achievement based on SES.

Schacter and Jo (2005) acknowledged their study did not disclose the reasons for the decline in advantage experienced by the summer program participants. However, invoking Alexander (2001) and his colleagues who claimed the summer before or after first grade is the ideal time for reading intervention for economically disadvantaged students, Schacter and Jo (2005) surmised that by extending summer programs to include students existing second grade and extending the program over the first three years of school, it might be possible to boost the reading achievement of low-income students by 54%. In addition to expanding summer school programs, the authors also suggested other strategies for improving reading performance including: twice weekly reading tutorials, an after-school reading program, parent programs designed to increase home reading activities and expand access to reading materials, and professional development activities for elementary school teachers focused on reading.

Borman, Goetz, and Dowling (2009) presented a randomized field trial of the innovative KindergARTen Summer Camp, a 6-week summer enrichment program focused on fine arts and literacy. KindergARTen Summer Camp is designed to diminish the summer reading loss experienced by economically disadvantaged children by integrating arts and science activities in enjoyable lessons. Operating on a full-day basis under a Maryland State Department of Education 21st Century Community Learning Centers grant, the camp has places for 90 students exiting kindergarten at partnering Baltimore elementary schools. After a nutritious breakfast, the children engaged in 3 hours of literacy learning activities led by a credentialed teacher and two teaching interns.

The classes were limited to 10 students and activities were tailored to the learners' needs. Morning activities included language and word study, shared reading, interactive writing, guided reading, and independent writing, and after a lunch break, the afternoon session began with a read aloud and ended with a science and art block. An art teacher and community artist experienced in designing programs for children provided input for the art block, which includes thematic visual and performing arts and weekly field trips to places such as science museums, nature centers, and zoos.

The sample for the field trial consisted of 128 students from four high poverty Baltimore schools (Borman et al., 2009). A total of 93 students from the four school sites comprised the experimental group. The assessments used for the pretests and posttests included DIBELS (letter naming fluency and phoneme segmentation fluency), word lists, DRA, and dictation. Conducted by trained professional developers and staff, the pretests took place in late May and early June and the posttests took place between September 9 and September 16. In addition to student data, surveys were conducted with the KindergARTen Summer Camp students, parents, and teachers to examine their satisfaction and perceptions of the program. In view of a number of students who were accepted into the program but did not attend any sessions, the analysis was adjusted to control for this effect.

Utilizing an intent-to-treat analysis, Borman et al. (2009) found participation in the summer camp to have both practical and statistical significance on the students' DRA (d – 0.40) and the Word List A (d = 0.27) performance. These figures increased upon adjusting for the non-attendees to d – 0.51 for the DRA and d = 0.36 for the Word List A assessments. With respect to why the effects were not of a greater magnitude or

encompassing more areas of literacy development, Borman et al. noted that this was the first year of the KindergARTen Summer Camp and the survey results pointed to several areas for improvement. These included better communication across sites, professional development focused on resolving problems that emerged in the classrooms, clear demarcation of the responsibilities of certified teaching staff and interns, and in particular, better training for the interns. More than one-third of the interns felt their training and preparation was insufficient and 47% felt inadequately prepared to implement the reading or science curricula.

Despite the obvious room for improvement, the program elicited highly positive responses from the students and their parents across all four school sites (Borman et al., 2009). The overwhelming majority of students felt they learned a lot from the program, enjoyed the KindergARTen Summer Camp activities, felt they were better readers, and expressed their enjoyment of reading for fun. In the same vein, the parents reported the program enhanced their children's reading ability and their self-confidence as readers, as well as improved their attitudes toward school overall. The parents strongly favored the integration of enrichment and academic activities to improve reading performance. KindergARTen Summer Camp was designed to be an ongoing endeavor easily replicated in different settings. The first year findings suggested with ongoing evaluation and improvement, it should be very successful in boosting the reading performance of economically disadvantaged students.

Students and Teachers Achieving Reading Success (STARS)

Under the auspices of the International Reading Association (IRA), education for prospective reading specialists, literacy coaches, and master reading teachers were guided

by five standards: (a) candidates are required to have knowledge of the foundations of reading and writing processes and instruction; (b) candidates have a repertoire of teaching strategies, approaches, methods, and curriculum materials to support literacy instruction; (c) candidates utilize a variety of assessment tools and methods to plan and evaluate effective reading instruction; (d) candidates create a literate environment that promotes reading and writing by integrating foundational knowledge, teaching practices, approaches and methods, curriculum materials, and appropriate assessment practices; and (e) candidates view professional development as a career-long endeavor and responsibility (Fello, 2010). According to Fello, implicit in these standards was the idea that graduate students apply these standards in their work at their respective schools. For graduate students in summer courses, however, this entailed being part of a summer reading program or summer school.

Fello (2010) invoked Heyns (1978) in support of providing students with books during the summer vacation. At the same time, Fello noted that changes to funding allocations had resulted in cuts to elementary school summer programs in favor of programs for boosting secondary school students' reading and mathematics performance on state assessments. A summer program for elementary school students offered graduate students an excellent venue for applying their course knowledge while fostering young children's literacy development. S.T.A.R.S. (Students and Teachers Achieving Reading Success) grew out of a partnership between a university and a local school district. The main focus of the program was improving students' attitudes and proficiency reading expository text. Fello concurred with Williams et al. (2005) that expository text warranted greater attention in literacy instruction. The program would

have the dual benefits of ensuring that the graduate students fulfilled their course requirements while the children engaged in an enriching learning experience designed to enhance their reading skills and vocabulary.

A set of criteria for identifying students needing help with reading comprehension, fluency, and vocabulary skills was sent to the principals of the district's elementary schools and the teachers were asked to select prospective students who could benefit from the summer program (Fello, 2010). At the time the recruitment was being conducted, the graduate students worked collaboratively to create thematic units in social studies, science, or health on which to base their instruction and secured the appropriate resources and materials. The topics were selected to appeal to students at each grade level, with insects, reptiles, and underwater creatures chosen to interest first and second graders. The graduate students planned a wide range of learning activities designed to motivate students with various interests, talents, and learning styles. Gardner's (1999) multiple intelligences (MI) theory was woven into the activities. The students were divided into learning groups based on grade level with an average teacher-student ratio of 1:4 (Fello, 2010). A technology teacher, physical educator, and librarian from the district were also involved in the project, respectively providing books for each theme, movement to be infused into vocabulary lessons, and website to support the student-centered, multisensory learning project. The 3-week program concluded with a presentation by the children attended by family members and other guests.

Feedback on the summer program was elicited through a survey given to the children, parents, graduate students, and teachers (Fello, 2010). A major theme in the parents' comments was how interesting and exciting their children found the learning

activities. As one grade parent commented, "My daughter has never shown any interest in reading books about facts until this program. We are headed to the bookstore now" (p. 25). For the first and second graders, the teachers read the survey items aloud while the older learners completed the survey on their own. The overwhelming majority (82%) of the students expressed excitement over the STARS program and 74% were certain they would participate the next summer. Virtually all the students (96%) said they learned new information. The graduate students provided a narrative evaluation. A major point of satisfaction was the opportunity to collaborate in planning and teaching the program. The graduate students felt better prepared for their specialist roles and were especially positive about the value of small group learning, the amount of information the students learned during the program, and the opportunity the program provided for struggling readers to "shine" (p. 26). An essential facet of Gardner's (1999) philosophy is MI gives all students a chance to excel. The motivational aspect of project-based learning is also intrinsic to MI.

At a time of drastic budget cuts, Fello (2010) pointed out a program like STARS was cost-efficient and bestowed benefits to all constituents. The costs to the school district were minimal, there was no cost to families, the graduate students earned credits, and the graduate students and the young learners both enjoyed a stimulating and enriching learning experience. The active learning techniques and individualized attention were two program features that were especially effective in engaging the children. The district teachers and prospective reading experts agreed STARS provided an excellent opportunity to showcase the talents of children who are frequently overlooked in a traditional classroom.

Public library reading program

Fiore and Roman (2010) noted public libraries have been offering summer reading programs for more than a decade. Currently, more than 95% of all public libraries offer summer programs, and consumer surveys attest to their popularity. However, in an environment of budget cuts and scarce resources, a growing number of library governing boards are demanding rigorous evidence of their effectiveness. Fiore and Roman of the Dominican University Graduate School of Library and Information Sciences conducted their study from 2006 to 2009 with a National Leadership Grant from the Institute of Museum and Library Services. Collaborative partners included the Center for Summer Learning at Johns Hopkins University, the State Library of Colorado and the Texas State Library and Archives Commission. According to the researchers, their project was the first national study to investigate the effectiveness of summer reading programs from the standpoint of public libraries.

The study focused on students completing third grade for several reasons (Fiore & Roman, 2010). One reason was many students were required to take state assessments at the end of third grade and those who failed to meet the requisite standards, faced the choice of going to summer school and repeating the test or else repeating the grade. The authors noted more than two-thirds of fourth graders fell below the proficiency level on the National Assessment of Educational Progress (NAEP), a figure soaring to 85% for students in high poverty schools. The overarching goal of the program was to prevent summer reading loss among economically disadvantaged students.

The sample consisted of 219 students representing 11 schools in 8 states: Ohio, Virginia, Kentucky, Mississippi, Illinois, Minnesota, Colorado, and Oregon (Fiore &

Roman, 2010). Each participating school was required to collaborate with a public library for at least six weeks. In these schools more than 50% of the students met qualifications for subsidized meals. These selected schools spanned a full range of urban, suburban, and rural areas. The Scholastic Reading Inventory (SARI) Enterprise Edition was used to assess the students' reading levels, and the academic achievement scores were augmented with survey data from students, parents, teachers, and school and public librarians. According to the students' test scores, the summer program participants showed increases of 4 Lexile points on the SRI although this gain was surpassed by 15 points among non-participants. Nevertheless, by the end of the summer, the program participants surpassed their non-participants peers by 52 Lexile points. By the end of the school year, the library program participants still had higher reading levels although the difference between the participants and non-participants was not significant.

The fourth grade teachers reported the library program participants began the school year with a positive attitude toward reading, showed more confidence in the classroom, went beyond the required classroom reading, and viewed reading as an important activity (Fiore & Roman, 2010). The teachers also observed these students were eager to learn, showed improvements in reading performance, and were more motivated and took more pleasure in reading than the students who had not been involved with the program. The parents of program participants also observed their children read more and were better prepared to learn in the fall semester. Fiore and Roman noted there were some differences between the parents of program participants and non-participants. The parents of reading program participants tended to have more books at home and

involved their children in more reading activities such as shared reading at home and library visits and were also more likely to have Internet access at home.

Demographically, more girls than boys were involved in the library reading program (53% versus 45%), roughly half the participants (49%) were Caucasian, and 61% qualified for subsidized meals (Fiore & Roman, 2010). The overall findings suggested the students who participated in the summer reading program comprised a self-selected group that already had some advantages. Fiore and Roman called on library staff to reach out to local community members. In particular, they suggested that libraries devise more activities that appeal to boys and minorities to drawn them into the summer reading programs. The researchers emphasized the vital importance of investing in summer reading programs and viewed public libraries as an excellent venue for providing such programs to underserved populations.

Voluntary summer reading

The National Reading Panel's (2000) section on independent reading drew criticism due to the National Reading Panel's conclusion that despite the intuitive merits of encouraging children to engage in more reading, there was insufficient empirical evidence to support the assumption that programs that encourage reading "reliably increase how much students read or that such programs result in improved reading skills" (p. 13). The NRP did call for future research into such strategies. White and Kim (2008) described the NRP's position on voluntary reading as "agnostic" (p. 116). They emphasized what the NRP actually criticized was the lack of rigorous research while at the same time suggesting that programs designed to promote independent reading could be made more effective. Voluntary summer reading was the focus of a series of studies

conducted by White and Kim (Kim, 2004, 2007; Kim & Guryan, 2010; Kim & White, 2008; White & Kim, 2008).

In the first study, Kim (2004) explored the effects of summer reading on reading performance among students of various ethnic backgrounds. The students attended 18 ethnically and socioeconomically diverse elementary schools that were part of the suburban Lake County Public Schools (LCPS) district. The district had recently implemented a summer reading program whereby sixth grade students were required to read at least one book during the summer and write a report or story about the book. All of the families were provided with a list of books to choose from. Student records for the spring prior to summer vacation were used to control for reading differences at the onset of summer. The study included assessment of the students' attitudes toward reading using the Elementary Reading Attitude Survey (ERAS). The sample included 970 White students (58%), 319 Asian students (18.9%), 221 Latino students (13.1%), and 177 African American students (10.5%). Among the Asian and Latino students, only a minority cited English as their home language (39% and 23%, respectively).

Consistent with (Heyns, 1978), Kim (2004) found the volume of books the students read over the summer was linked with their fall reading performance regardless of sociodemographic profiles or previous reading or writing skills. Furthermore, summer reading was equally beneficial for students of all ethnic groups. The greatest benefits were observed for "heavy readers," namely students who read 4 to 5 books (p. 184). Further analysis disclosed access to books was associated with the extent of the students' summer reading. The finding also supported the effectiveness of the summer reading assignment in encouraging students to read.

In an experimental study, Kim (2007) focused on the effects of a voluntary summer reading project on the reading skills of younger students. The sample consisted of students attending a diverse K-6 school. White students comprised 42% of the sample and 23% of the children reported Spanish as their primary language. The 331 students were randomly assigned to receive 10 books aligned with their reading levels and preferences during the summer vacation or to a control group with grade level and English language arts classroom used to match the two groups. The SAT10 reading test was administered as the pretest and posttest while the Elementary Reading Attitude Survey was used as the pretest and a survey of summer reading activities (the Literacy Habits Survey) was conducted as the posttest. The teachers encouraged the students to return a postcard after reading each book and more than 70% of the students sent in at least one postcard. The findings showed the students who received the 10 books, postcards, and letters from their teachers over the summer did more reading, averaging three more books than their peers in the control group (Kim, 2007). However, the increased volume of reading did not translate into higher scores on reading performance for the experimental students. In particular, the miniscule effect sizes for the youngest learners (grades 1 and 2) suggested beginning readers need support from adults (or perhaps older children) to derive benefit from a voluntary reading program. The findings supported the NRP's (2000) assertion that encouraging children to read per se does not necessarily improve reading performance. In subsequent research Kim and White (Kim & White, 2008) included a scaffolding strategy to maximize the benefits of summer reading.

Scaffolding involves providing students with just enough help to enable them to succeed in their learning (Kim & White, 2008). This approach is reflected in Vygotsky's (1978) zone of proximal development, which is a cornerstone of Reading Recovery (Schwartz, 2005). Kim designed and examined a summer voluntary reading intervention for fourth graders in which teachers and parents used scaffolding to advance children's reading involvement and performance (Kim & White, 2008; White & Kim, 2008). The teachers' scaffolding involved providing the students with a series of lessons at the end of the spring semester before they received the first of eight books they were given over the course of the summer. During these lessons the teachers modeled fluent oral reading and comprehension techniques for silent reading. The children then practiced the oral reading strategies in pairs and practiced using five silent reading techniques on their own. For parents, scaffolding meant listening to the child talk about a book, listening to the child read aloud, and then rereading a passage from the books, providing the child with feedback, and sending a postcard to the researchers describing the child's reading in a pointed comment.

Kim and White (2008) built on this research in an elaborate study involving students who had just completed grades 3, 4, or 5. The students were drawn from two ethnically diverse K-12 elementary schools and the students and their teachers were randomized to the experimental group or the control group. The initial sample consisted of 514 students, with 401 completing the pretest and posttest of the ITBS Total Reading. Pretesting began during the second week of June and the ITBS was followed a week later by the ERAS (Elementary Reading Attitude Survey). The Literacy Habits Survey used by Kim in prior research was administered at the September posttest along with grade

appropriate ITBS assessment and the DIBELS, which was used to assess oral reading fluency on the pretest and the posttest. The students were randomly assigned to one of four groups: books only, books with oral reading scaffolding, books with oral reading and comprehension scaffolding, and the control group. The teachers were also randomly assigned to one of the four conditions to neutralize the possibility of teacher effects on the outcomes.

All of the teachers received a 2-hour training session on the scaffolding techniques (Kim & White, 2008). The children's families received letters and postcards varying according to their specific group. The parents of children in the two scaffolding groups received letters with suggestions and postcards with questions for the parents to answer regarding the child's reading progress and add their own comments. The results revealed no reading performance differences between the students in the control group and the students who received books without scaffolding. On the other hand, the students in the group receiving books with oral reading and comprehension scaffolding significantly outperformed the control group on the ITBS and marginally outperformed the books only group. Reading with scaffolding definitely proved superior to reading with no scaffolding.

Kim and White (2008) noted their findings supported the NRP's (2000) position on voluntary reading. In fact, the NRP statement and the controversy it generated was what inspired Kim and White (2008) to undertake their work comparing the various voluntary reading strategies. The authors concluded that providing children with books was important for promoting independent reading, but in itself, it was not sufficient to improve reading performance among elementary school students. At the same time, they

acknowledged their results did not show one form of scaffolding to be superior to another. Adding comprehension scaffolding to oral reading scaffolding did not have a stronger effect on reading performance. However, Kim and White also noted their study did not have the power to discern small distinctions between the two scaffolding techniques that might be disclosed by future research.

Beyond the quantitative effects of the intervention, Kim and White (2008) emphasized the parents' comments showed the positive impact of encouragement for home reading activities on the children's attitudes toward pleasure reading. Many parents praised the reading project for fostering their child's interest and enthusiasm for reading, describing their shared reading activities and their observations of the child's heightened pleasure in books.

In a recent study, Kim and Guryan (2010) focused on economically disadvantaged Latino children from Spanish speaking families. All the participants were drawn from a California public school district serving a school population that was predominately Latino, poor, and where most parents spoke Spanish at home. The sample consisted of 370 students completing their fourth grade year. Nearly three-quarters of the students (73%) were classified as ELLs. The students were given the Gates-MacGinitie Reading Test as the pretest and posttest. The difference between each child's reading performance on the pretest and posttest was charted by a text comprehensibility score compiled by the researchers.

Although the study of linguistic minority Latino students was designed to replicate the findings reported by Kim and White (2008), the later study included a school book fair held by the teachers in June when the students selected books and a

series of three family literacy events during the summer to which the children and their families were invited (Kim & Guryan, 2010). The earlier studies did not include parent training. To encourage participation, the written invitation was followed up by a phone call the day before the event, which included dinner as well as strategies for encouraging home reading. The students were assigned to one of 3 groups: a books only group in which they received 10 self-selected books, the family literacy group, or the control group.

The findings were somewhat surprising. Contrary to the expectations of Kim and Guryan (2010), the intervention had no significant impact on reading achievement despite the fact the students who received books read more than the control group students. As explanation, Kim and Guryan pointed out that most of the students were ELLs and began the study with significantly lower reading levels than the students in the earlier research. In fact, the mean reading level was at the 24th percentile at the close of fourth grade. These findings highlight the need for programs such as the *Summer Success Reading* program for ELLs (Vanderhaar & Munoz, 2005). According to Kim and Guryan (2010), their findings reflect the results of the summer reading project involving students in grades 1-5 (Kim, 2007), which showed minimal benefits for the first and second graders who lack the decoding skills and fluency to read on their own. The authors suggest ELLs would benefit from specific scaffolding techniques.

Another issue in the reading project for the Latino students was the students chose their own books at the book fair instead of having books matched to their reading level as in the earlier studies. Kim and Guryan (2010) noted about two-thirds of the children picked out books that were actually beyond their reading ability. In fact, this was

reinforced by the children's reading comprehension and text comprehensibility scores, which revealed weaker readers were most likely to have chosen mismatched books. This in turn impeded their ability to improve their reading and comprehension skills.

According to Kim and Guryan (2010), the results of the regression analyses revealed several channels for future research. First, the students' pretest vocabulary scores and English language proficiency at the close of fourth grade accounted for 50% of the variance in the posttest performance of the Latino students, suggesting targeting these two areas might prevent summer reading loss in this population. Second, the results underscored the importance of matching text to the reading ability of the learners. Third, the number of books read was linked with reading comprehension but not vocabulary, suggesting gains in vocabulary might take additional reading (over more than one summer) to appear. Finally, the negligible effects found for the family literacy events imply a need for targeted training for parents and children together.

Allington et al. (2010) explored summer reading activities in an experimental study of students in 17 high poverty elementary schools located in two Florida school districts. The proportion of students who qualify for subsidized meals ranged from 65% to 98.5% and almost 90% of the students are African American or Latino. At the inception of the study the students were in first or second grade. Out of 1,713 students, 1,082 were randomly assigned to the experimental condition in which they would receive books each summer and 631 students were assigned to the control group. The overrepresentation of children in the experimental group was designed to compensate for attrition. For three consecutive years, the researchers operated a book fair in which the experimental students were free to choose books for summer reading. The students

selected 15 titles (to allow for potential stock shortages) and were given 12 of those books to keep. The control group students did not receive books.

The state assessment test, the Florida Comprehensive Achievement Test (FCAT), was used to gauge the students' reading performance (Allington et al., 2010). All Florida students in grades 3-8 are required to take the test. At the time of the study evaluation of all students should have been in grades 4 or 5; However, Allington et al. noted that due to grade retention, some of the students were still in grade 3. Descriptive statistics were used to compare the reading performance of the two groups. A *t*-test revealed statistically significant differences between the two groups with a significant effect size (.14). The students who received the books reported reading more often over the summer than the control group students, which was manifest in their superior reading performance. Allington et al. observed the book distribution had the most pronounced effect on the reading performance of the poorest students, possibly because these students had the most limited access to books.

Alexander et al. (2010) noted their research diverged from the work of Kim and White (Kim, 2004, 2007; Kim & White, 2008; White & Kim, 2008) due to the longitudinal span of the study, the younger age of the participants at the onset of the study, and the students' self-selection of books (Alexander et al., 2010). However, for the Spanish-speaking students, the self-selection of books proved to be a drawback (Kim & Guryan, 2010). It is possible the Florida students had a more realistic appraisal of their reading levels and chose books accordingly. Alternately, the difference highlights the importance of sensitivity to the unique literacy learning needs of ELLs.

Summary

From virtually the time that the U.S. school system adopted the current school year and long summer break, educators began raising the question of whether students experience a learning setback over the summer months. Building on Heyns's (1978) classic work, and in particular with the present attention given the persistent achievement gaps based on SES and ethnicity, researchers have been examining the effects of the summer break on economically disadvantaged students. Allington et al. (2010) and Alexander et al. (2001, 2007) found definite evidence of a summer setback among low-income students. In contrast, Helf et al. (2008) failed to find any such evidence. A consistent finding is that low-income students begin school at a disadvantage in reading (Benson & Borman, 2007; McCoach et al., 2008). Factors within the school and classroom and factors beyond the school can both affect the trajectory of young learners' reading development.

Among the general public, and low-income families in particular, there is overwhelming support for summer programs to enrich children's learning (Afterschool Alliance, 2010). There is also compelling evidence that a well-designed summer program has the capacity to boost children's reading performance. The effects are typically most pronounced for the students who enter the program at the lowest reading levels. Although support for the concept of summer learning loss is not universal, there is certainly sufficient evidence children can benefit from a program that is academically challenging, stimulating, and for children, makes reading enjoyable and fun. Summer programs provide a popular option for eradicating the reading achievement gap.

Chapter 3: Methodology

The Ottumwa School District was identified as a district in need of assistance (2008) for low achievement in reading. The Elementary and Secondary Education Act, No Child Left Behind (2001) identifies schools with low academic achievement and administers sanctions if achievement does not meet established standards. With this urgency, the district developed a reading intervention summer school program for students entering second grade to strengthen reading skills and eliminate any skill regression that may occur over the summer.

The district commits approximately $28,000 annually towards implementing this summer school for students entering second grade. This expense consists of teacher salary, additional training, material, and bussing. This age group was intentionally targeted due to the types of interventions implemented during the school year and the urgency in not allowing early readers to fall behind. Studies have shown reading gaps widen each year between first and sixth grade if students are not provided effective intervention to eliminate the gap (Helf, 2008). The purpose of this study was to evaluate the effectiveness of the district's summer reading program in preventing summer reading loss. This study addressed the critical question: Was the district's summer school effective in either maintaining or increasing scores for those students who attended the 2009 district summer and 2010 district summer school as measured by the Basic Reading Inventory (BRI)?

Participants

The Ottumwa School District has five elementary schools that qualify as Title I schools. The students who are selected to participate in the reading summer school are those students entering second grade in the fall and attend one of the five Title I elementary schools. Students are selected from the pool of second grade students based on their performance on the BRI assessment. All first grade students attending one of the five Title I elementary schools in Ottumwa were given the Spring Basic Reading Inventory first grade passage. A fluency rate, accuracy, and comprehension score was obtained on every student. A student is eligible for summer school if he or she falls below the "independent level" in one more areas (fluency rate, accuracy, comprehension). Students who do not score at independent levels are invited to participate in summer school which is 15 days (45 hours) of additional instruction beginning approximately 20 days prior to the start of the next school year. Some eligible students do not attend for family reasons (ex. vacation, family not willing to commit to everyday attendance). When the school year resumes in the fall, all second grade students are given the BRI first grade passage.

The focus for this study was on those students who were eligible and who participated in the 2009 and 2010 summer sessions. Comparisons were made between individual student spring and fall scores to determine if summer reading regression, sustainability, or growth occurred. Additionally, the researcher reviewed the data for those students who were eligible, but did not participate in the summer sessions.

Table 1 presents the data collected from the Basic Education District Survey 2010 (Iowa Department of Education) including the poverty rate as determined by the percentage of students on free and reduced lunch, the percent of students who were in the minority classification, the percentage of students who were English Language Learners (ELL), and number of second grade students in 2009 and 2010. The percentage of students considered in poverty ranged from 58% to 95%, the percent of ELL students at the elementary level ranged from 13%-38% while the minority rate range ranged from 26% to 47%.

Table 1

Ottumwa Elementary Demographics K-5

Schools	Poverty %	ELL%	Minority%	2009 2nd grade students	2010 2nd grade students
Agassiz	73%	13%	26%	38	42
Douma	69%	19%	33%	49	50
James	95%	28%	45%	38	36
Wildwood	58%	23%	34%	71	52
Wilson	85%	38%	47%	49	58

Convenience Sample

Merriam (1998) asserted there are two basic types of sampling, probability and non-probability. Probability sampling is described as obtaining a statistically representative sample from the study population. Non-probability or purposeful sampling is described as attempting to logically solve problems such as "discovering what occurs, the implications of what occurs, and the relationships linking occurrences" (Honigmann, 1982, p. 84). This type of sampling did not necessarily allow the researcher to generalize results to the population since the sample collected was not a representative sample.

Several different types of purposeful sampling are used in research: typical, unique, maximum variation, snowball, chain, network, and convenience. Convenience sampling was the type of sampling used in this study. This sampling method enabled the researcher to act within a certain period and under conditions that facilitated data collection. By its nature, convenience sampling sacrifices generalizability, and therefore, does not provide sufficient representation of the target population. This means that those selected for the study did not partially represent the population being investigated. As such, replication may be necessary to fully validate study results (Keppel & Zedeck, 2001). Despite its deficiencies, convenience sampling is the best method of obtaining a sample population when time and conditions prohibit random sampling (Neuman, 2003).

Research Questions

For those students who attended the 2009 district summer and 2010 district summer school was the district summer school effective in either maintaining or increasing their scores as measured by the BRI?

1. Have students who attended the 2009 and 2010 district summer school either increased or maintained their rates in reading fluency as measured by the Basic Reading Inventory (BRI)?

    1a.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their fluency rates (words read per minute)?

    1b.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did students of Caucasian background and

students of non-Caucasian background either increase or maintain their fluency rates (words read per minute)?

1c.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their fluency rates (words read per minute)?

2. Have students who attended the 2009 and 2010 district summer school either increased or maintained their reading accuracy as measured by the BRI?

   2a.When examining the accuracy of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their accuracy?

   2b.When examining the accuracy of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their accuracy?

   2c.When examining the accuracy of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their accuracy?

3. Have students who attended the 2009 and 2010 district summer school either increased or maintained their comprehension level as measured by the BRI?

3a.When examining the comprehension level of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their comprehension level?

3b.When examining the comprehension level of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their comprehension level?

3c.When examining reading comprehension of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their comprehension level?

Methodological Approach & Design

The methodological approach for this study is quantitative and cross-sectional. A cross-sectional design observes a subset of a population at one point in time rather than across time. A cross-sectional study is most appropriate since it facilitates examination of a sample at the point of occurrence. For example, testing students prior to intervention and then testing again after intervention.

Creswell (2003) asserted that quantitative research is confirmatory and deductive in nature. The philosophical foundation behind quantitative research was derived from a positivist perspective and put forth by Auguste Comte in the middle of the 19th century (Giddens, 1974). That is, positivism maintains that reality should be shaped by empirical data derived from the senses rather than interpreted from metaphysical constructs that

cannot be measured (Gartell & Gartell, 1996). Thus, quantitative research assumes that reality exists, it is fixed, and measurable (Creswell, 2003). According to Creswell, researchers using a positivist paradigm assume information gathered through the senses (feel, smell, hear, taste, and sight) is reality that can be measured and possibly quantified.

Since the researcher did not have complete control over the variables of interest (participants or groups are not randomly assigned) the study was suggestive (i.e., quasi) rather than rigorously causative (Rodgers & Nicewander, 1988). In addition, this research assumes that participants' attitudes are preset and cannot be influenced by the researcher.

This study is only a two year study and the researcher chose not to compare test scores and test results, but to respond to the research question.

Variables

Reading Fluency

Reading fluency in this study was defined as the number of words the student read per minute. Each student orally read to a trained assessor the same grade level passage used the previous spring. The assessor used a timer to measure the amount of time it took the student to read the passage. When the student completed reading the passage, the assessor recorded the amount of time taken and used a formula to calculate the words read per minute. The formula for determining a student's rate of reading was 6,000 (100 word passage x 60 seconds) divided by the amount of time in seconds it took the students to read the passage. For example, if a student read the 100 word passage in 70 seconds, the assessor divided 6,000 by 70, resulting in a reading fluency score of 86 words per minute. The score was measured at the interval level meaning there was an equal

mathematical relationship between observed scores. For example, the relationship between a score of 86 and 87 is assumed to be the same as the relationship between 87 and 88. In other words, the distance between any of the neighboring points on the scale was equivalent in value.

Student fluency scores range from 0 words per minute to an infinite number depending on the reading ability of the student. If a student obtained a 0 or low number it reflected low ability or a struggle with reading grade level material; however, if a student scored a higher number, it represented a stronger ability to read at grade level.

Reading Accuracy

Accuracy in reading was determined by the number of miscues made by a reader. Reading miscues were defined as oral substitutions, omissions, insertions, and mispronunciations of words when reading. For example, a miscue resulted when a student said "tree" when the word in the passage was "three." Types of miscues included substitutions, omissions, insertions, and mispronunciations. The student orally read the same grade level passage to the trained assessor used the previous spring. The assessor recorded the number of miscues (substitutions, omissions, insertions, and mispronunciations) on the assessor's copy of the grade level passage. The miscues score was measured at the interval level meaning that there was an equal mathematical relationship between observed scores. For example, the relationship between a score of 86 and 87 was assumed to be the same as the relationship between 87 and 88. Student miscue scores ranged from 0 words to 100 words, which was the number of words in the passage. Students who accurately read the entire passage with no miscues received an accuracy score of 0.

Reading Comprehension

Reading comprehension in this study was defined as a student's ability to understand text that was read, or the process of "constructing meaning" from a text. The student orally read the same grade level passage to the trained assessor used the previous spring. After the student completed the reading passage, the passage was removed and the student was orally asked 10 pre-determined questions related to the passage. The assessor used an answer bank to score the student's response as correct or incorrect. The comprehension score was measured at the interval level meaning that there was an equal mathematical relationship between observed scores. For example, the relationship between a score of 86 and 87 was assumed to be the same as the relationship between 87 and 88. Student comprehension scores ranged from 0-10 correct. The number of questions answered correctly out of 10 questions determined the student's score. If the student answered all 10 questions correctly, the student received a score of 10.

Instrumentation

The BRI is an individually administrated informal reading assessment which identifies students' strengths and weaknesses in reading. The assessment was designed by Dr. Jerry Johns in 1980 and was subsequently published by Kendall/Hunt Publishing. The assessment, consisting of grade level passages from a variety of sources is administered individually to students. The student reads the passage and then answers 10 comprehension questions related to the passage. Students are evaluated on rate, accuracy, and comprehension.

Several reliability studies have been reported that involve the BRI. Bristow, Page, and Pikulski (1983) conducted a study comparing the results of the BRI to the student's actual placement in books. The comparison revealed the BRI and book placement were identical 35% of the time, within one level 76% of the time, and within two levels 92% of the time. A second reliability study reported by Helgren-Lempesis and Mangrum (1986) randomly assigned students to a commercially-prepared reading inventory, one of which was the BRI. Pearson r coefficients were .64 for the independent level, .72 for the instructional level, and .73 for the frustration level. The generalizability analysis indicated that minimal error could be directly attributed to the forms, as the students were the source of variance. A third study by Pikulski and Shanahan (1982), at the Reading Center at the University of Delaware, compared the data collected from the BRI and a clinician constructed informal reading inventory, resulting in an excellent agreement between the two forms. Students were placed at the same instructional level 66% of the time, with the remaining 33% only one grade level apart.

Consistency of scoring of the assessment is important to the validity of the data. Johns and L'Allier (2003) evaluated the summary sheets from 31 practicing teachers. Following basic instruction in the administration, scoring, and interpretation of the BRI, teachers completed summary sheets and interpreted the results to determine student reading levels of independent, instructional, or frustration. The teachers were able to reliably complete the summary sheet, showing 98% agreement with the experts and an 89% agreement average rate determining the students reading level of independent, instructional or frustration.

Data Collection

Over the course of two years, 428 first grade students were administered the BRI assessment in the spring by a team of district trained teachers. The test was given to measure a student's fluency rate, accuracy, and comprehension of 10 questions related to the passage. All tests were administered via one-on-one, meaning that the teacher worked directly with each student during the test administration process.

This study included the data for the test results of the BRI measuring the dependent variables of fluency rate, accuracy and comprehension of those students who have been eligible for summer school for the summers of 2009 and 2010.

The basic test administration process was as follows:

1. Students read the entire passage. The students were timed to determine how long it took them to read the passage. A formula was used to determine how many words the student read per minute.
2. The number of student miscues was recorded
3. The students answered ten questions after completing the passage.
4. The questions had a predetermined answer bank that was used to score the comprehension.
5. Students were given a score for fluency rate, number of miscues, and number of questions correct out of ten.

Data Analysis

In responding to the research question, this researcher used descriptive analysis. The researcher initially determined the spring and fall scores for fluency rate, accuracy,

and comprehension. Percentages were calculated for those students who had attended the 2009 and 2010 summer school sessions and maintained or increased their scores on the administration of the spring and fall BRI. Percentages were also calculated for those students who had attended the 2009 and 2010 summer school session based on gender, socioeconomic status, and ethnicity, and if they maintained or increased their scores on the administration of the spring and fall BRI. The researcher used the student spring and fall BRI assessment data to determine if the reading summer school prevented summer reading loss for participating students.

Study Validity

Internal Validity

Internal validity is defined as how confidently one can conclude that the change in the dependent variable was produced solely by the independent variable and not extraneous ones (Campbell and Stanley, 1966). Accordingly, there are eight empirically identified conditions that can threaten confidence in a study. These threats to internal validity include history, maturation, testing, instrumentation, statistical regression, selection, experimental mortality, and selection interaction. Although all threats may be relevant, specific threats to this study involved just two. That is, these two threats involved selection and testing. A selection threat suggests that participants may not be functionally equivalent at time of testing. In the case of this study, efforts to mitigate this threat were addressed by gathering a sample size that was sufficient for the study and statistical technique being used. A testing threat entails testing participants at different

times or under different circumstances. That being said, the study design expects to test students at roughly the same time and under similar environmental conditions.

External Validity

The concept of external validity is defined as the extent to which the study can be generalized to the greater population (McDonald, 1999). Generally, studies that employ randomization to select participants from the study population have more external validity than those that don't. For this study, convenience sampling of participants, which does not involve random sampling, was used to sample the study population. This approach may have weakened external validity. However, this strategy was being used because random sampling of the study population was outside the scope of the researcher's resources. Thus, results do not necessarily reflect study population attitudes. In this case, where convenience sampling was being used, repeating the investigation to compare results is advised.

Ethical Consideration

Participants were asked to complete the survey on a voluntary basis. To protect their identities, guidelines for conducting research established by the Institutional Review Board was adhered to. All data collected from participants was reported in the aggregate to eliminate the possibility of revealing someone's identity.

No individually identifiable information was disclosed or published, and all results for this study were presented as aggregate, summary data. This information has been kept confidential and secure. This information will be published only for scientific purposes for this research.

There were no physical risks for being in the study. However, there are direct benefits of participating in this research. Being a part of this study may help to increase further research on the topic and may improve student performance.

Summary

This quantitative study was designed to explore the possible effect of summer school on student achievement. This chapter described the research methodology used to accomplish this purpose. Additionally, this chapter also described the participants, instrumentation, study validity, data collection procedures, and data interpretation/analysis. Finally, ethical considerations were addressed to ensure confidentiality and protection of participants.

Chapter 4 includes a description of the demographic profile of the participants, the data analysis procedures, and the results of the study as they pertain to the hypotheses and research questions. Chapter 5 discusses an overview of the study, interpretation of the findings, implications of the findings, limitations of the study, and suggestions for future research.

Chapter 4: Analysis of the Data

This study was designed to evaluate a district's summer school reading program in an effort to determine its effectiveness in preventing summer reading loss in fluency rate, reading accuracy, and comprehension. Student eligibility in the summer reading program was determined by the Basic Reading Inventory (BRI) assessment, which was used to measure fluency rate, accuracy and comprehension. If the student obtained a score below the independent level as determined by the BRI, the student was considered eligible for the summer program. A score in fluency rate, accuracy, and comprehension for each child was recorded in the spring to serve as a pretest score, and again in the fall following the summer reading session or summer break. The end of summer scores served as posttest scores. The scores were compared to determine if the summer reading program was effective in preventing summer reading loss.

Demographics

For the 2009 and 2010 district summer reading programs, 428 students were tested with the Basic Reading Inventory (BRI) to determine eligibility status. Demographics of the group are summarized in Table 2. The assessment identified 280 and invited 156 students who did not meet the district's reading benchmark in fluency rate, accuracy, or comprehension. Nearly 45% (124) of the eligible second grade students participated in the district's summer school as compared to 55% (156) of students' not participating. Almost 53% (37/70) of non-Caucasian students and 48% (72/151) of

students in poverty participated in the summer reading program. Males participating in the summer school were the dominant subgroup at 58% (72/124).

The Basic Education District Survey 2010 (Iowa Department of Education) reported over the last 10 years, the district has experienced growth in elementary poverty and minority rates. The percent of students in lower social economic status (SES) has increased from 56% to 59% and the percent of enrollment of minority students from 18% to 23%. Hispanic students make up 19% of the minority classification. The percent of English Language Learners (ELL) has increased from 3% to 11% also over the previous 10 years.

Table 2

Demographic Characteristics of Students

	Eligible Participants	Eligible Nonparticipants
Minority	37	33
Non-minority	87	123
Poverty	72	79
Non-poverty	52	77
Males	72	75
Females	52	81

Findings

The findings for this study will be reported in the order of the dissertation questions and sub questions.

Research Question 1 (RQ1). Have students who attended the 2009 and 2010 district summer school either increased or maintained their rates in reading fluency as measured by the Basic Reading Inventory (BRI)?

Nearly 45% (124) of the second grade students who were eligible for the district's summer school in 2009 and 2010 attended the three-week sessions, with eligibility based on the spring BRI scores of a student not obtaining an independent level. Using the district's fall BRI scores, reading fluency rate was measured to determine the maintenance of or increase in fluency rates for students who had been eligible and had attended summer school and those who were eligible but did not attend. Eligibility and participation data are summarized in Table 3. Approximately 75% of the students who attended the district's summer sessions either maintained or increased their levels of fluency as measured in the fall, with 70% increasing their scores. For those who were eligible but did not attend summer school (156), 46% maintained or increased their fluency scores, while 54% (84) of the second grade students who were eligible but did not attend the summer sessions decreased in their fluency levels as compared to only 26% of second graders who attended.

Table 3

Fluency Rates of Eligible Students Participating or Not Participating in the Summer Reading Program, n =

		Fluency Rate		
		Decrease	Maintain	Increase
Eligible Participant (EP)	24	32 (26%)	4 (4%)	88 (70%)
Eligible Non- Participant (ENP)	56	84 (54%)	5 (3%)	67 (43%)

The results above show that the eligible students who participated in the district's summer school were less likely to experience regression over the summer. Summer reading regression occurred in 26% of the eligible students participating and in 54% of the eligible students not participating. Seventy four percent of the students participating

did not experience regression. The summer school sessions appear to have prevented summer reading regression in fluency rate.

Research Questions 1a, 1b, 1c

1a.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their fluency rates (words read per minute)?

1b.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their fluency rates (words read per minute)?

1c.When examining the fluency rates of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their fluency rates (words read per minute)?

Using the district's fall BRI scores, reading fluency was measured to determine the maintenance of or increase in fluency rates for male and female students who had attended summer school. Fluency rate data by demographic characteristic is summarized in Table 4. Approximately 72% (52) of the male students who attended the district's summer sessions either maintained or increased their levels of fluency as measured in the fall with 69% (50) increasing their scores. Almost 77% (40) female students attending the district's summer sessions either maintained or increased their levels of fluency as measured in the fall with 73% (38) increasing their scores. A decrease in fluency rates in

students attending the summer sessions was experienced by 28% (20) of the males and by 23% (12) for females.

Approximately 30% (37) second grade students attending the district's summer school in 2009 and 2010 were non-Caucasian while 70% (87) were Caucasian. Using the district's fall BRI scores, reading fluency rate was measured to determine the maintenance of or increase in fluency rates for Caucasian students who attended summer school and non-Caucasian students who attended summer school. Approximately 59% (22) of the non-Caucasian students who attended the district's summer sessions either maintained or increased their levels of fluency as measured in the fall with 54% (20) increasing their scores. Nearly 80% (70) of Caucasian students attending the district's summer sessions either maintained or increased their levels of fluency as measured in the Fall with 78% (68) increasing their scores. A decrease in fluency rates in students attending the summer sessions was experienced by 41% (15) of non-Caucasian students and 20% (17) of Caucasian students.

Fifty-eight percent of the (72) students in a lower SES participated in the district's summer school in 2009 and 2010 as compared to almost 42% (52) of students in higher SES attending. Approximately 75% (53) of students in lower SES who attended the district's summer sessions either maintained or increased their levels of fluency as measured in the fall with 50% (69) increasing their scores. Nearly 75% (40) of the students in a higher SES attending the district's summer sessions either maintained or increased their levels of fluency as measured in the Fall with 73% (38) increasing their scores. A decrease in fluency rates in students attending the summer sessions was

experienced by 26% (19) of students in a lower SES and by 25% (13) of students in a higher SES.

Almost 76% of female students maintained or increased fluency rate as did 28% of the male students. Caucasian students were 80% successful in maintaining or increasing fluency rates while non-Caucasian students were 59% successful in maintaining or increasing fluency.

Summer reading loss is well documented and is more persistent among students from lower socioeconomic backgrounds who are already at risk for academic failure (Allington, 2003). Students in higher SES maintained or increased fluency rates at 75% and 74% with students in lower SES. The district's low SES percentage has grown during the past 10 years bringing more value to the importance of a successful summer reading program.

Table 4

Fluency rates by Demographic Characteristics, n =

		Fluency Rate		
		Decrease	Maintain	Increase
Males	72	20 (28%)	2 (3%)	50 (69%)
Females	52	12 (23%)	2 (4%)	38 (73%)
Non- Caucasian	37	15 (41%)	2 (5%)	20 (54%)
Caucasian	87	17 (20%)	2 (2%)	68 (78%)
Low SES	72	19 (26%)	3 (4%)	50 (69%)
Higher SES	52	13 (25%)	1 (2%)	38 (73%)

Research question 2 (RQ2). Have students who attended the 2009 and 2010 district summer school either increased or maintained their reading accuracy as measured by the BRI?

Using the district's fall BRI scores, reading accuracy was measured to determine the maintenance of or increase in accuracy for students who had been eligible and had attended summer school and those who were eligible but did not attend. Table 5 provides a summary of accuracy data by participant group. Approximately 87% of the students who attended the district's summer sessions either maintained or increased their levels of accuracy as measured in the fall with 80% increasing their scores. For those who were eligible but did not attend summer school, 52% (80) maintained or increased their accuracy scores, while 48% (76) of the second grade students who were eligible but did not attend the summer sessions decreased in their accuracy levels. This is further compared to only 30% (37) of second graders who attended.

Regression in accuracy occurred in 30% of the eligible students participating and in 48% of the eligible students not participating. The summer school sessions appeared to have prevented summer reading loss in 70% of the students participating. Overall, the results indicate the district's summer school was effective for eligible students maintaining or increasing accuracy rates during the summer break.

Table 5

Reading Accuracy of Eligible Students Participating or Not Participating in the Summer Reading Program, n =

		Accuracy		
		Decrease	Maintain	Increase
Eligible Participant (EP)	24	37 (30%)	7 (5%)	80 (65%)
Eligible Non- Participant (ENP)	56	76 (48)	23 (15%)	57 (37%)

Research Questions 2a, 2b, 2c.

2a.When examining the accuracy of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their accuracy?

2b.When examining the accuracy of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their accuracy?

2c.When examining the accuracy of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their accuracy?

Using the district's fall BRI scores, accuracy was measured to determine the maintenance of or increase in accuracy rates for male students who had attended summer school and female students who had attended summer school. A summary of accuracy data by demographics is provided in Table 6. Approximately 71% (51) of the male students who attended the district's summer sessions either maintained or increased their levels of accuracy, as measured in the fall with 64% (46) increasing their scores. Almost 69% (36) female students attending the district's summer sessions either maintained or increased their levels of accuracy as measured in the fall with 65% (34) increasing their scores. A decrease in accuracy rates in students attending the summer sessions was experienced by 29% (21) of the males and by 31% (16) of females.

Roughly 79% (29) of the non-Caucasian students who attended the district's summer sessions either maintained or increased their levels of accuracy as measured in the fall with 76% (28) increasing their scores. Nearly 67% (58) Caucasian students attending the district's summer sessions either maintained or increased their levels of

accuracy as measured in the fall with 60% (52) increasing their scores. A decrease in accuracy rates in students attending the summer sessions was experienced by 8% (21) of non-Caucasian students and for 33% (29) of Caucasian students.

Of students with lower SES, 76% (56) who attended the district's summer sessions either maintained or increased their levels of accuracy as measured in the fall, with 72% (52) increasing their scores. Nearly 61% (31) students in higher SES attending the district's summer sessions either maintained or increased their levels of accuracy as measured in the fall, with 54% (28) increasing their scores. A decrease in accuracy rates in students attending the summer sessions was experienced by 22% (16) of students in lower SES, and by 40% (21) of students in higher SES.

These data indicate that summer school had an impact in maintaining or increasing reading accuracy for the following participants: students in low SES (76%), minorities (79%), higher SES students (60%), and non-minority counterparts (67%).

Table 6

Reading Accuracy by Demographic Characteristic, n =

		Accuracy		
		Decrease	Maintain	Increase
Males	72	21 (29%)	5 (7%)	46 (64%)
Females	52	16 (31%)	2 (4%)	34 (65%)
Non-Caucasian	37	8 (21%)	1 (3%)	28 (76%)
Caucasian	87	29 (33%)	6 (7%)	52 (60%)
Low SES	72	16 (22%)	4 (4%)	52 (72%)
Higher SES	52	21 (40%)	3 (6%)	28 (54%)

Research Question 3 (RQ3). Have students who attended the 2009 and 2010 district summer school either increased or maintained their comprehension as measured by the BRI?

Approximately 77% (95) of the students who attended the district's summer sessions either maintained or increased their levels of comprehension as measured in the fall, with 69% (85) increasing their scores. For those who were eligible, but did not attend summer school, 67% (105) maintained or increased their accuracy scores, while 33% (51) of the second grade students who were eligible, but did not attend the summer sessions decreased in their fluency levels. Approximately 23% (29) second graders who attended decreased in their fluency levels. The results illustrate that eligible students' participating in the district's summer school experienced little regression over the summer. Regression in comprehension occurred in 23% of the eligible students participating, and with 33% of the eligible students not participating. Overall, the results indicate the district's summer school was effective for eligible students maintaining or increasing comprehension levels during the summer break. Table 7 provides a summary of reading comprehension scores by participant group.

Table 7

Reading Comprehension of Eligible Students Participating or Not Participating in the Summer Reading Program, n =

		Comprehension		
		Decrease	Maintain	Increase
Eligible Participant (EP)	24	29 (23%)	10 (8%)	85 (69%)
Eligible Non- Participant (ENP)	56	51 (33%)	16 (10%)	89 (57%)

Research Questions 3a, 3b, 3c

3a. When examining the comprehension level of those who attended the 2009 and 2010 district summer school did males and females either increase or maintain their comprehension level?

3b. When examining the comprehension level of those who attended the 2009 and 2010 district summer school did students of Caucasian background and students of non-Caucasian background either increase or maintain their comprehension level?

3c. When examining reading comprehension of those who attended the 2009 and 2010 district summer school did students who are in the lower SES and students in a higher SES either increase or maintain their comprehension level?

Nearly 77% (56) of the male students who attended the district's summer sessions either maintained or increased their levels of comprehension as measured in the Fall with 69% (50) increasing their scores. Almost 75% (39) female students attending the district's summer sessions either maintained or increased their levels of accuracy with 67% (35) increasing their scores. A decrease in comprehension in students attending the summer sessions was experienced by 22% (16) of the males and with 25% (13) of females.

Approximately 84% (31) of the non-Caucasian students who attended the district's summer sessions either maintained or increased their levels of comprehension, as measured in the Fall with 73% (27) increasing their scores. Nearly 74% (64) of Caucasian students attending the district's summer sessions either maintained or increased their levels of accuracy with 67% (50) increasing their scores. A decrease in

comprehension in students attending the summer sessions was experienced by 6% (16) of non-Caucasian students and by 26% (33) of Caucasian students.

Of students with lower SES, 76% (56) who attended the district's summer sessions either maintained or increased their levels of comprehension with 72% (52) increasing their scores. Nearly 75% (39) students in higher SES attending the district's summer sessions either maintained or increased their levels of comprehension as measured in the fall with 64% (33) increasing their scores. A decrease in comprehension in students attending the summer sessions was experienced by 22% (16) of students in poverty and by 25% (13) of students not in poverty. Table 8 summarizes the reading comprehension scores according to demographic characteristics.

Table 8

Reading Comprehension by Demographic Characteristics, n =

		Comprehension		
		Decrease	Maintain	Increase
Males	72	16 (22%)	6 (8%)	50 (69%)
Females	52	13 (25%)	4 (8%)	35 (67%)
Non-Caucasian	37	6 (16%)	4 (11%)	27 (73%)
Non-Caucasian	37	6 (16%)	4 (11%)	27 (73%)
Low SES	72	16 (22%)	4 (4%)	52 (72%)
Higher SES	52	13 (25%)	6 (11%)	33 (64%)

Eligible participating student success in maintaining or increasing comprehension levels over the summer break ranged in percentages from 75% to 84%, regardless of individual characteristics.

Summary

Over the course of two years, 428 first grade students were assessed to determine eligibility for summer school. First grade students were intentionally targeted due to the types of interventions implemented during the school year, and the urgency to keep early readers from falling behind. Studies have shown that reading gaps widen each year between first and sixth grade if students are not provided effective intervention (Helf, 2008). Two hundred-eighty students missed district benchmarks in fluency rate, accuracy, or comprehension, making them eligible to participate. One hundred fifty-six students were invited and encouraged to attend. Invitations were determined by reading performance, socioeconomic status, family commitment, and recommendation by the assessment team. As a result 124 participated in the summer reading program.

Eligible students who participated in summer school had a high degree of success in maintaining or increasing fluency rate, accuracy, and comprehension. The percent of participating students who increased or maintained fluency rate, accuracy, and comprehension ranged from 70%-77% compared to 46%-67% of non-participating students maintaining or increasing fluency rate, accuracy, and comprehension.

Chapter 5: Conclusions, Implications, and Recommendations

Summer break for students in a typical school calendar averages 12 weeks; this equates to a significant interruption in the educational process. In a 12-week layoff, early learners who lack access to print with little opportunity to read text at independent levels will often experience regression in fluency and comprehension skills (Kirkland, 2008). An examination of reading declines in early elementary grades show that despite significant reading gains in kindergarten and first grade, the summer session between first and second grade is particularly problematic for students who do not have opportunities to engage with reading during their summer recess (Rasinski, 2007). A rigorous and engaging summer reading program can shorten the summer break for students, providing them access to print and direct reading instruction from qualified teachers that can minimize the decline in reading skills that often results over the summer break.

A review of the literature showed the phenomenon of summer reading loss is not a recent occurrence (Bracey 2002). The earliest studies on the topic date back to 1906 (Alexander, Entwisle, & Olsen, 2001). From the time that the U.S. school system adopted the current school year and long summer break, educators began raising the question of whether students experienced a learning setback over the summer months. Allington et al. (2010) and Alexander et al. (2001, 2007) found evidence of a summer setback among low-income students. Among the general public, and among low-income families in particular, there is overwhelming support for the role summer programs play in enriching children's learning (Afterschool Alliance, 2010). There is also compelling

evidence that a well-designed summer program has the capacity to boost children's reading performance (Allington 2003). A significant research base supports the connection between reading ability with academic performance, persistence, and high school graduation (Toppo, 2010). Though the connection between literacy and nearly all other areas of academic success is well established, there is still much to be learned about how best to support early literacy and reading achievement. To maximize instructional time for literacy content, schools have been creative with year-round academic calendars that minimize any extended absences from school, or have adopted summer school programs designed to provide students with opportunities to read and experience additional instruction during the summer layoff.

Though such programs have shown benefit, they are expensive, and in an age of increased budgetary challenges for public education, programming depends largely on the ability of a school district to demonstrate the efficacy of the program (Allington, 2003). In Ottumwa, Iowa, a summer school reading intervention program designed to provide 45 hours of reading instruction to prevent reading loss has been offering students summer literacy enrichment. For seven years the district has committed approximately $28,000 per year to this initiative, which has been partially funded through Title I monies. Approximately 525 students have participated in the district's summer reading school. However, increasing program needs and additional teacher salaries have required an accompanying increase of fiscal commitment from the school district. To this point, researchers have overlooked an examination into the effectiveness of summer reading enrichment programs on the Basic Reading Inventory (BRI) scores of early readers. With approximately 124 second grade students attending the summer sessions for 2009 and

2010, the question directing this research was whether the summer reading intervention program (BRI) was effective enough to warrant the increased investment school district dollars.

The purpose of this study was to evaluate the effectiveness of the district's summer reading program in preventing summer reading loss among its first grade enrollees. The research questions that framed this study included:

Have students who attended the 2009 and 2010 district summer school either increased or maintained their rates in reading fluency as measured by the Basic Reading Inventory (BRI)?

Have students who attended the 2009 and 2010 district summer school either decreased or maintained their reading accuracy as measured by the BRI?

Have students who attended the 2009 and 2010 district summer school either increased or maintained their comprehension level as measured by the BRI?

Using the BRI results, scores were examined for those who were eligible and participated in Ottumwa's summer program and for those who were eligible and who did not provided the points of rate, accuracy, and comprehension. The following section provides an overview of conclusions, implications and recommendations for future study and practice.

Summary of Findings

Reading Fluency Results

Results of fluency rate indicated that 75% of the participating students maintained or increased their fluency scores while 46% of students not participating increased their scores. Approximately 72% of the male students who attended the district's summer school sessions maintained or increased their levels of fluency, and 77% of the females maintained or increased fluency levels. Roughly 30% of the summer school participants were non-Caucasian, and 59% of this group maintained or increased their fluency levels, while nearly 80% of Caucasian students maintained or increased fluency rates. Equivalent gains of 75% were found in students of lower and higher socioeconomic status from spring to fall. These results indicate fluency practices used in core instruction during the school year and summer school impact fluency rate. However, additional practices should be explored for supplemental instruction within our ELL intervention program. A significant percent of our non-Caucasian students are identified ELL in the district, which could explain the difference in summer school success with Caucasian and non-Caucasian. Different practices to teach and practice fluency will need to be explored to address these results.

Reading fluency has been identified as a key component in reading. Students who experience difficulty in reading manifest difficulties in reading fluency that contribute to overall difficulties in reading (Rasinski 2009).

Reading Accuracy Results

The findings for reading accuracy resulting in a similar percentage margin indicated the summer reading school had an impact on preventing regression. Eighty-

seven percent of students who attended the summer school session maintained or increased reading accuracy, and 52% of non-participating students maintained or increased accuracy levels. Roughly 71% of male students and 69% of female students who participated in summer school experienced no regression over the summer. The non-Caucasians at 79% and Caucasians at 67% maintained or increased accuracy levels, while 76% of the lower SES students and 61% of the higher SES students maintained or increased accuracy. These data indicate that summer school had an impact on students in low SES (76%), and non Caucasian (79%) in maintaining or increasing reading accuracy, and for students with higher SES (60%) and the non-Caucasian (67%) students.

The achievement gap between poor and more affluent students existed when children started school, expanded in kindergarten, and most significantly, grew even more over the summer (McCoach et al., 2006). The district saturates kindergarten, first and second grade students with supplemental reading intervention during the school year. Students make impressive reading gains during the year with core and supplemental support. The results of the study indicate the importance of continuing the support during the summer break for students in lower socioeconomic homes. The summer school continues the supports these students receive during the school year and can help them increase or sustain the progress already made.

Reading Comprehension Results

The comprehension levels of eligible students participating in summer school ranged from 75%-84%, regardless of individual characteristics. These data signify the district's summer reading program to be successful in preventing summer reading loss with the emphasis on direct instruction for students.

The results of the study support the district summer school initiative and belief that by shortening the summer break and providing expert reading instruction, summer reading regression can be prevented. The results also indicate that 23% to 30% of participating students still experience summer reading loss in fluency rate, accuracy or comprehension. This is disturbing for a district with high poverty rates in elementary schools. An examination of the reading declines in early elementary grades show despite significant reading gains established in kindergarten and first grade, the summer session between first and second grade is particularly problematic for students who do not have opportunities to engage with reading during their summer recess (Rasinski, 2007).

Conclusions and Implications

Understanding the impact of the extended summer break on early readers is important because early readers can experience regression resulting from a long break from direct instruction and access to print. Poverty is a significant sub group in the Ottumwa District, which accounts for approximately 60% of students. Summer reading is more critical for students from lower socioeconomic backgrounds who are already at risk for academic failure (Allington, 2003). Many of the gains students in kindergarten and first grade experience during the academic year are lost over the summer break, and the summer session between first and second grade is particularly problematic for students who do not have opportunities to engage with reading during their summer recess (Rasinski, 2007).

The data from this study highlight the effectiveness of summer instruction on maintaining and improving reading rate, accuracy, and comprehension for this population

as a whole and for students of low SES in particular. Results showed that 73% to 78% of the students in low SES attending summer school maintained or improved their reading in rate, accuracy, or comprehension, while low SES students who did not participate in the summer program showed lower maintenance and progress at only 43% to 65%.

These findings speak to the work of Allington (2003), who highlighted the critical role that summer instruction, could play in the academic continuity for students, specifically children of low SES. Allington recommended extensive practice to become a skilled reader, which the summer break hinders. Providing continued instruction or even access to text by putting books into the hands of students over the summer can reduce the risk of regression over the summer months.

Recommendations for Further Study

Several recommendations for future research in this area are suggested. Specifically, there are five recommendations that might be considered as a natural extension to this study, and hold the potential to further advance findings in this area. The first adjustment to the study in future research is to consider the timing of the summer program in relation to the administration of the assessments. Currently, summer school is 3.5 weeks prior to the start of the school year with 45 hours of instruction. Given the strong improvements shown in such a limited period of time, it would be worthwhile to consider exploring the impact of a longer period of instruction to see if outcomes continue to improve or if a plateau effect emerges after a set period of summer supplementation.

This study focused exclusively on students moving from first grade into second

grade. Replicating the study to examine the impact of summer instruction on students of varying ages may offer additional opportunities to improve summer programs and gain support for the expansion of offerings. Similarly, this study focused only on the selected demographics of socioeconomic status, gender, and race. Additional variables might also be considered in the future such as where students spend their summer (at home with a parent, in a formal daycare setting, with a babysitter, etc.) to better understand how summer instruction supplements different summer childcare scenarios. Family structure might also be considered in future studies by examining the number of siblings in the home and whether the family is single or two parents. Further, this study focused only on the students in the Ottumwa, Iowa school district. Replicating this study in other districts would provide evidence about how well these results might generalize to other populations.

This study also captured only a single moment in time for the selected population, therefore, lacks any longitudinal focus. The results of this study could be extended if additional data were gathered after subsequent summer recesses to see if the maintenance and gains found in this study persist over time with a cohort group. This might also offer additional implications for providing continuity of summer offerings at all grade levels. In addition to the focus on longevity, the future study could explore gain scores and differences in scores and test results between the different subgroups using inferential analysis.

Beyond research, the application of this study also shows potential for improving educational practice and reading education. The final section of the paper provides recommendations for improving practice based on the results of the research.

Recommendations for Practice

Summer reading loss is most pronounced among economically disadvantaged students and is an important, persistent issue that must be addressed (Bracey 2002). This study reflects both the urgency of this need and the clear benefits that summer instruction can provide to these students. Reading progress or loss over the summer has been linked to the number of books students read over a given period of time (Heyns 1978, 1987), and the establishment of summer instructional programs with a reading emphasis provide a direct and fairly straightforward opportunity to provide a guaranteed reading volume for students who participate. Providing students access to text can also be obtained by partnering with a local public library. Based on findings from the Dominican University's Graduate School of Library and Informational Studies, students who take part in their local library's summer reading programs significantly improve their reading skills (Fiore & Roman 2010). Summer reading programs have been in place for almost a century with 95% of public libraries now offering such programs for children during the summer session. A collaborative partnership between schools and public libraries could ensure the opportunity for children to read during the summer. If educators want to shrink the number of students who drop out of high school each year, they must greatly increase the number who can read proficiently by the time they are in fourth grade (Toppo, 2010), and summer programming provides a clear opportunity to support this goal.

While it is understood that summer programs require financial resources, it should be noted that many schools are struggling with high dropout rates and declining tests scores, both of which also impact the financial welfare of any public school district. The

U.S. Department of Education, National Center for Education Statistics (2010) reported 8% of the nation's high school students dropped out of school in 2008. That same year, almost 9% of Ottumwa High school students dropped out of school. If educators want to reduce the number of students dropping out of high school, they must increase the number of students reading proficiently by the end of 3rd grade. Though it can be argued that not all students need the support over the summer break, Allington (2003) found that only those of low economic status failed to show gains, while students of middle and upper socioeconomic classes showed improvements. The provision of summer instruction is likely to benefit the vast majority of students in Ottumwa and is likely to benefit the majority of students in other districts as well.

Where it is not possible to offer comprehensive summer program, schools must find a way at minimum, to provide all children access to print (text) and if possible direct instruction. Parents must be educated about the importance of reading over the summer months and encouraged to take an active role in reading with their children by providing instructional support with texts and offering incentives for participation.

School administrators should look to existing models for summer instructional programs and adapt them as appropriate to their own school setting. Though funding is a consistent challenge, the pursuit of funds for such initiatives is supported by strong statistical data that shows the benefit of such programs. Summer reading loss accounts for at least 80 percent of the reading achievement gap by 9th grade. Yet almost no federal or state programs or school district initiatives target summers as key to closing the achievement gap (Allington 2009). School boards should use data from this study and those of other researchers as a basis for endorsing such efforts by their schools.

Summary

Ottumwa School District's summer school was effective in either maintaining or increasing scores for those students who attended the 2009 district summer and 2010 district summer school as measured by the Basic Reading Inventory (BRI).

The district spends approximately $28,000 annually on summer school to prevent reading loss over the summer in an effort to close the achievement gap with SES and minority sub groups. In the study 280 students over a two year period were identified eligible from the BRI assessment achievement scores and 156 were invited to participate based on reading performance, socioeconomic status, family commitment, and teacher participation. Many students were unable to attend summer school for various reasons, but 124 participated. Seventy-four percent of the eligible students who participated maintained or increased reading scores in at least one of the reading components assessed, rate, accuracy, or comprehension. In comparison, only 46% of the eligible students who did not attend summer school maintained or increased at least one component of reading. Non-Caucasian and lower SES students had the highest percentages of regression of all students who participated in the reading summer school. The district will need to continue to evaluate the reading strategies, number of contact hours, and the summer time frame to determine how to accomplish a greater impact on non-Caucasian and lower SES students. Ottumwa continues to exert great effort in reducing the dropout rate that has plagued the district for decades. The number reached single digits in 2008 (9%) and continues to decrease, but approximately 6% continue to dropout. Students give very clear indications of their likelihood to become high school dropouts as early as elementary based on reading proficiency as reported by the Annie E.

Casey Foundation (2010).

As a result of previous research and the data from this study, the district is well advised to continue its commitment to offer the summer reading program to students entering the second grade to reduce and even eliminate the dropout rate. The district must also examine the structure and strategies used to address the nearly 30% of the participating students it did not impact.

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Drake University Institutional Review Board
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Date: March 8, 2011
From: Christine Marchand, IRB Assistant
To: Davis Eidahl
Re: IRB **2010-11024**

Your Exempt application for research titled "A Summer Reading Program and Its Impact on Summer Reading Loss" has been reviewed and **approved**.

The approval period starts **3/8/2011 and has no expiration date.**

However, if any changes are made to the protocol, informed consent, or other study-related processes after approval, the IRB must be notified.

Please feel free to contact me if you have any questions.

Christine Marchand