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Improving Reading: A Case Study of the Accelerated Reader Program

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Improving Reading: A Case Study of the Accelerated Reader Program

By
Tammy K. Waters

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
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Approval Page

This dissertation was submitted by Tammy K. Waters under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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Abstract

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Fidelity of program implementation of the Accelerated Reader (AR) program in relation to fourth-grade students' achievement in reading was investigated. The relationship among students' motivation to read, the role of parental support, and the reading success of students as measured by the fourth-grade end-of-grade reading test was also examined. Implementation fidelity of the AR program was determined through researcher observations and completion of an AR Implementation Checklist by participating teachers. Motivation to read was determined by administration of the ERAS to fourth-grade students. Parental support was measured through use of a parent survey and a teacher perceptions survey. Principals and the district English language arts curriculum coordinator were interviewed to determine expectations. Reading EOG scores for third and fourth grades for the same students were examined to determine growth in reading proficiency. The results indicated that there was no significant relationship among fidelity of program implementation, motivation to read, parental support, AR scores, and EOG reading test scores.

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Chapter 1: Introduction

Researchers and theorists have come to recognize the impact of the fast-changing global economy on our definition of literacy. “The study of *literacy* has become the *study of new literacies*—the new skills, strategies and dispositions that are required to successfully communicate on the Internet” (Castek, Bevans-Mangelson, & Goldstone, 2006, p. 715). Malloy and Gambrell (2006) warned that these new literacies will soon be replaced by even newer ones on our “technological journey to the future” (p. 484).

In today’s classrooms, literacy instruction is changing in profound ways as new technologies provide opportunities to enhance and extend already meaningful literacy practices. Over the past decades, the rapid infiltration of technology has significantly affected U.S. schools and the daily lives of both teachers and students of all ages (Leu, 2002; Valmont & Wepner, 2000). In addition to more traditional literacies of paper, pencil, and books, today’s students encounter and interact with new literacies including electronic books, internet-based reading and writing, and online communication experiences. One of the possibilities of digital literacies is the potential for “bridging the new literacies with the old in ways that will gradually transform how youth express ideas and learn in schools” (O’Brien & Scharber, 2008, p. 67).

Contemporary transformations in digital technologies have prompted a reassessment of what literacy means; hence, the definition of what constitutes “text” is rapidly changing (Kress, 2003). Traditionally, text has been perceived as written messages and symbols in the forms of books, magazines, and newspapers. Today, text is recognized as much more than written words or images. Evans (2006) described a text as a unit of communication that may take the form of something written down but also a chunk of discourse, for example speech, a conversation, a radio program, a

TV advert, text messaging, a photo in a newspaper, and so on. (p. 8)

The New Encyclopaedia Britannica (Burke, 1994) defined literacy as the condition or quality of being literate, especially the ability to read and write. While the traditional definition of literacy encompasses the ability to read and write, the focal point of this study was on the ability to read.

The Problem

The problem is that elementary students continue to score poorly in reading. Although much emphasis has been placed on positively affecting reading achievement, studies reported from the National Assessment of Educational Progress indicate that no sufficient gains in reading proficiency have been made in recent years as indicated in the table below (National Center for Educational Statistics, 2015). Table 1 presents national and state proficiency level scores in reading for fourth-grade students from 2007 to 2015.

Table 1

National and State Proficiency Level Scores in Reading–Fourth Grade

	1992	2007	2011	2015
National	27%	32%	32%	35%
State	25%	29%	32%	38%

These scores are made available every 4 years. Baseline data from 1992 are also provided indicating insufficient improvement in reading scores. Nationwide, the average fourth-grade reading scores remained the same from 2007 to 2011. There was only an eight-point difference from the baseline score between 1992 and 2015. There has been a slight increase in fourth-grade students scoring at or above proficient in reading across

North Carolina since 1992, with the largest increase occurring between 2011 and 2015.

Table 2 provides data for six elementary schools researched for this study. The percentages are the weighted averages of the schools' reading proficiency scores from the 2010-2011 school year through the 2014-2015 school year.

Table 2

Six Elementary Schools' Combined Proficiency Level Scores in Reading—Fourth Grade

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
80.0%	76.7%	46.4%	57.6%	55.6%

Scores for this school district are far above those at the national and state level; however, the data still show that scores did not deviate much from year to year. A detailed description of these schools as well as their individual scores is addressed later in this study.

Clearly, educational reform concerning the improvement of reading success is a top priority. Although it is common sense that students need to read a lot to learn to read well, this is also the one single conclusion that is most supported by research. (Caulkins, 2010, p. 7).

Krashen (2006) stated that 93% of the tests on reading comprehension that collect data on volume of reading show that children who are given more time to read do better. Guthrie and Humenick (2004) found that reading volume predicted reading comprehension and that dramatic increases in reading volume are important for thoughtful literacy proficiencies. The NAEP Reading Report Card for the Nation (U.S. Department of Education, 1996) showed that at every level, reading more pages at home and at school was associated with higher reading scores. Foertsch (1992) examined the factors most

closely related to performance on the NAEP and found that the amount of reading students do in and out of school was positively related to their reading achievement and that despite extensive research suggesting that effective instruction requires moving from an emphasis on workbook pages to an emphasis on extensive reading and writing, children still spend an inordinate amount of time on workbook activities.

Allington and Johnston (2002) said that there is a synthesis of extensive research that spotlights the importance of students reading for long chunks of time. In a study Allington and Johnston conducted of effective classrooms, the sheer volume of reading time was a distinguishing feature of more effective classrooms. Students in the classrooms of more-effective teachers read 10 times as much as students in classrooms of less-effective teachers (Allington & Johnston, 2002).

Research has shown that students who read more, especially recreationally, do better on measures of reading comprehension and vocabulary (Anderson, Wilson, & Fielding, 1988; Cipielewski & Stanovich, 1992; Cunningham & Stanovich, 1990). Therefore, it is important that teachers develop in their students a reading habit that will endure and help to produce lifelong readers (Swanson, 2000).

“In order to improve the recreational reading habits of students, many schools have adopted Accelerated Reader which is a reading management software program” (Swanson, 2000, p. 1). A full description of Accelerated Reader (AR) will be presented later in this study; however, one of the components of the program is being able to choose books to read. “It is important not only that young people have access to books they can read, but that they also have access to books they want to read. Choice matters, not a little but a lot” (Caulkins, 2010, p. 9). The goal is not only to teach kids to read but to help youngsters grow up to be people who value reading.

Luring kids to be invested in reading is not a small goal. In a 2007 National Endowment for the Arts study, the research found that Americans are reading less, with children ages 15-24 spending 2 hours a day watching television and less than 7 minutes a day reading. “If we hope to bring up a nation of readers, it is crucial to allow them to choose among high-interest books that they can read” (Caulkins, 2010, p. 9).

Purpose of the Study

The purpose of this study was to evaluate fidelity of program implementation of the AR program in relation to fourth-grade students’ achievement in reading at six elementary schools located in a school district in North Carolina. Specifically, the study examined the relationship among students’ motivation to read, the role of parental support, and the reading success of students as measured by the fourth-grade end-of-grade (EOG) reading test. Teachers were surveyed to determine how they incorporate the AR program into their reading instruction and to what extent they have implemented the program. The county level curriculum coordinator and principals were interviewed to discuss the reading program expectations for the district and for the schools respectively. Teachers also provided data from the AR software program that showed individual student records as to the number of AR quizzes taken and the AR scores for these books. The importance of developing the necessary skills children must acquire in order to become lifelong readers and an in-depth description of the Renaissance Learning program known as AR were discussed in this study. Benefits and limitations were examined based on teacher perceptions and student attitudes concerning AR.

Context of Problem

The setting of this case study was six rural elementary schools located in the piedmont region of North Carolina. A paired comparison based on socioeconomic

population was utilized with these schools which divided them into three groups of two schools each. This comparison, also called pair-wise matching, is a technique used for equating groups on one or more variables (Gay, Mills, & Airasian, 2006).

Throughout the study, these schools were grouped and identified as follows: A1/A2, B1/B2, and C1/C2. Schools A1 and A2 were intermediate schools consisting of fourth and fifth grades. There were two such schools in this district. These two schools formed as a result of overcrowding in the elementary schools from which they evolved. These intermediate schools were newer to the district, with School A1's first year of operation being the 2004-2005 school year. School A2 had only been in existence since the beginning of the 2009-2010 school year. School A1 also had the distinction of having a strong AR program, according to central office personnel of the school district. School B1 had a record of implementing a strong reading program as evidenced in their EOG reading scores. School B2 was a comparable school based on its socioeconomic population with School B1. Schools C1 and C2 are Title I schools which means they are provided federal financial assistance to meet the needs of educationally at-risk students. Title I is part A of the Elementary and Secondary Education Act. The district in which these schools are located consists of 32 elementary schools, 11 middle schools consisting of Grades 6-8, 11 high schools consisting of Grades 9-12, and two alternative schools. The data in Table 3 indicate a further breakdown of the elementary schools in this district.

Table 3

Elementary Schools in the District

K-1	K-2	K-3	2-5	3-5	4-5	K-5
1	2	2	1	2	2	22

Table 4 provides data concerning student populations per school for 2014-2015.

Table 4

Student Population by Ethnicity

Schools	Student Population	White	Black	Asian	Hispanic	Multiple	% Scoring At/Above Grade Level
A1	224	184	21		18	5	59.1
A2	194	137	39		12		51.4
B1	655	302	31		8		66.3
B2	690	450	26	13	13	25	67.3
C1	489	195	19		20	6	50.7
C2	343	144	6		28	7	39.0

Table 5 provides data concerning staff per school for 2014-2015.

Table 5

Staff Information by School

Schools	Certified Staff	Non-Certified Staff	Total Staff	% With Advanced Degrees	# Nat. Board Certified	Years of Teaching Experience		Teacher Turnover Rate
A1 Grades 4-5	12	3	15	43%	3	0-3	12%	16%
						4-10	24%	
						>10	64%	
A2 Grades 4-5	15	4	19	43%	4	0-3	7%	11%
						4-10	36%	
						>10	57%	
B1 Grades K-5	37	18	55	26%	5	0-3	12%	10%
						4-10	33%	
						>10	55%	
B2 Grades 2-5	41	21	62	36%	9	0-3	14%	4%
						4-10	19%	
						>10	67%	
C1 Grades K-5	38	23	61	28%	9	0-3	15%	11%
						4-10	27%	
						>10	58%	
C2 Grades K-5	36	18	54	37%	4	0-3	27%	8%
						4-10	37%	
						>10	36%	

North Carolina has assessed student reading proficiency through use of the reading EOG exam since the 1992-1993 school year. The current scale score model has

been in effect since the 2007-2008 school year. The scale score range which allows for the comparison of a child's EOG scores by subject from one grade to the next was 216-290 from the 2002-2003 to the 2006-2007 school year. Beginning in 2007-2008 and beyond, the EOG reading scale score range is 330-370 (North Carolina Public Schools, [NCPS], 2009). Table 6 provides the current reading developmental scale scores of which a student must acquire a Level III, IV, or V in order to pass the EOG.

Table 6

2014-2015 Fourth-Grade Proficiency Levels for the North Carolina Reading EOG

Level	Scale Score
1	≤438
2	439-444
3	445-447
4	448-459
5	≤460

Prior to the 2012-2013 school year, North Carolina EOG reading comprehension tests measured the goals and objectives as specified in the 2004 North Carolina English Language Arts Standard Course of Study (Content Standards).

Common Core is currently the framework that guides classroom instruction and assessment. Sponsored by the National Governors Association and the Council of Chief State School Officers, the Common Core State Standards (CCSS) Initiative is a U.S. education initiative that seeks to bring diverse state curricula into alignment with each other by following the principles of standards-based education reform (Strauss, 2012). A letter (Appendix A) was distributed to parents in January 2013 from the school district in which the researcher's children attend school. The letter provides an explanation of the

transition from the North Carolina Standard Course of Study to Common Core.

School districts across the state experienced changes in testing beginning with the 2012-2013 school year as a result of the new CCSS for mathematics and English language arts and the North Carolina Essential Standards (ES) for science. The new curriculums are being taught for the first time in classrooms throughout North Carolina.

The first priority when implementing new assessments is to ensure the results of the test scores are valid and reliable. When new assessments are administered to students for the first time, scores are delayed while the North Carolina Department of Public Instruction (NCDPI) processes the test data and completes all of the necessary analyses. These processes and analyses took place during the summer of 2013. Due to the necessity of this critical process, students did not receive their test scores at the completion of the test administration. Instead, the scores for these assessments were delayed until October 2013. Once the State Board of Education approved the scores (achievement levels) in October 2013, schools were provided with each student's Individual Student Report.

Reading comprehension is assessed by having students read authentic selections and then answer questions directly related to the selections. Knowledge of vocabulary is assessed indirectly through application and understanding of terms within the context of selections and questions. These authentic selections are chosen to reflect reading for various purposes such as literacy experience, gaining information, and performing a task. The results of the tests are ranked by achievement levels: level V being the highest, level I being the lowest. Most of these tests are intended to gather information about the skill levels of students as a whole and for teachers and parents to evaluate how individual students are performing (NCPS, 2009).

Results of the reading EOG provide parents and educators with a child's Developmental Scale Score.

The student's Developmental Scale Score measures growth in achievement over time. Just like height in inches, on average, student scale scores are expected to go up every year. Also, like height, the rate of growth may vary from year to year. (North Carolina Division of Accountability Services, 2013, p. 3)

The reading comprehension tests are linked to the Lexile Framework for Reading. The Lexile Framework measures both reader ability and text difficulty on the same scale, the Lexile scale. Lexile scores are reported from a low of BR (Beginning Reader) to a high of 2000L. Lexile scores do not translate specifically to grade levels. Using a child's Lexile score, one can match books or other reading materials that are similar to his or her reading ability. This matching process allows for reading material that has sufficient challenge for growth but will not be so difficult as to frustrate the child (North Carolina Division of Accountability Services, 2011).

North Carolina state-level reading scores for students scoring at or above Achievement Levels III, IV, or V for the 2013-2014 school year was 51.0% and 58.8% for the 2014-2015 school year. The county-level percentages dropped slightly during the same 2 school years to 50.1% and 49.1% respectively. Figures 1-3 list the results for fourth-grade students for the state, county, and schools being studied from 2010-2015 (North Carolina Division of Accountability Services, 2015).

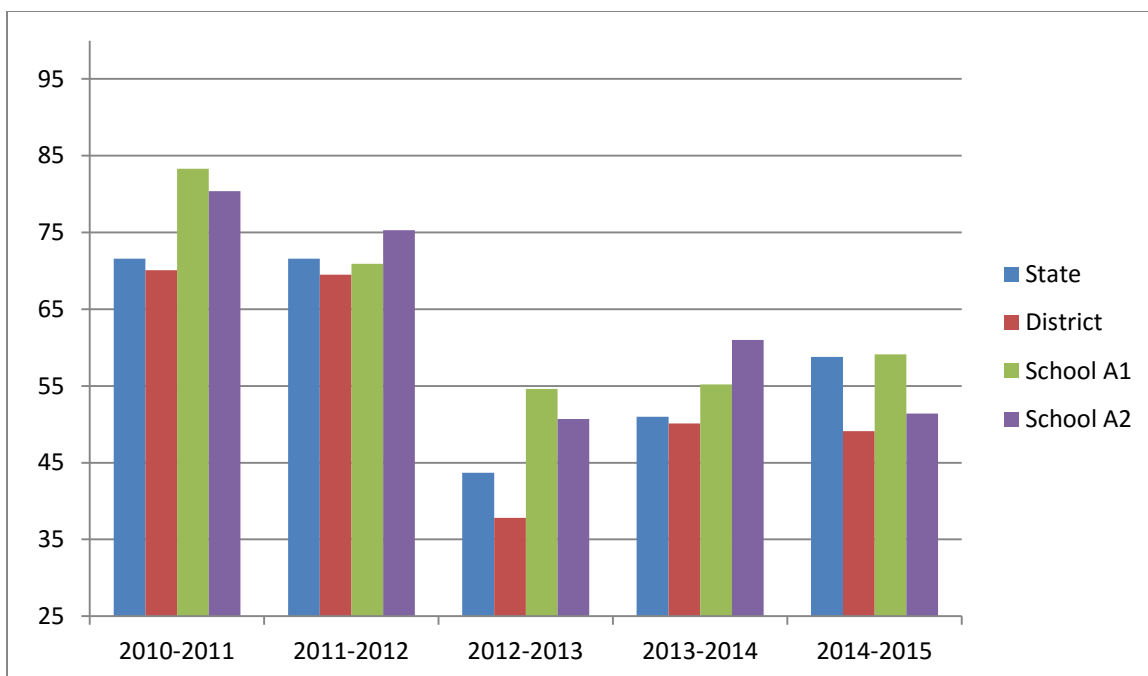


Figure 1. 2010-2015 EOG Reading Scores for Fourth Grade at Schools A1 and A2.

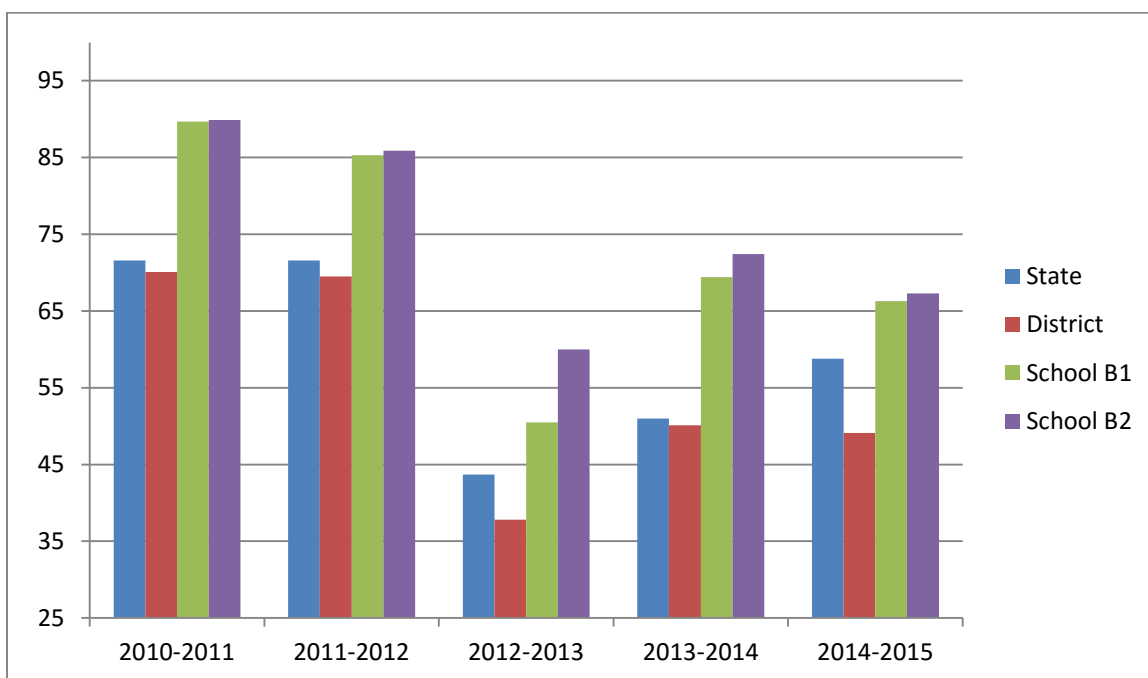


Figure 2. 2010-2015 EOG Reading Scores for Fourth Grade at Schools B1 and B2.

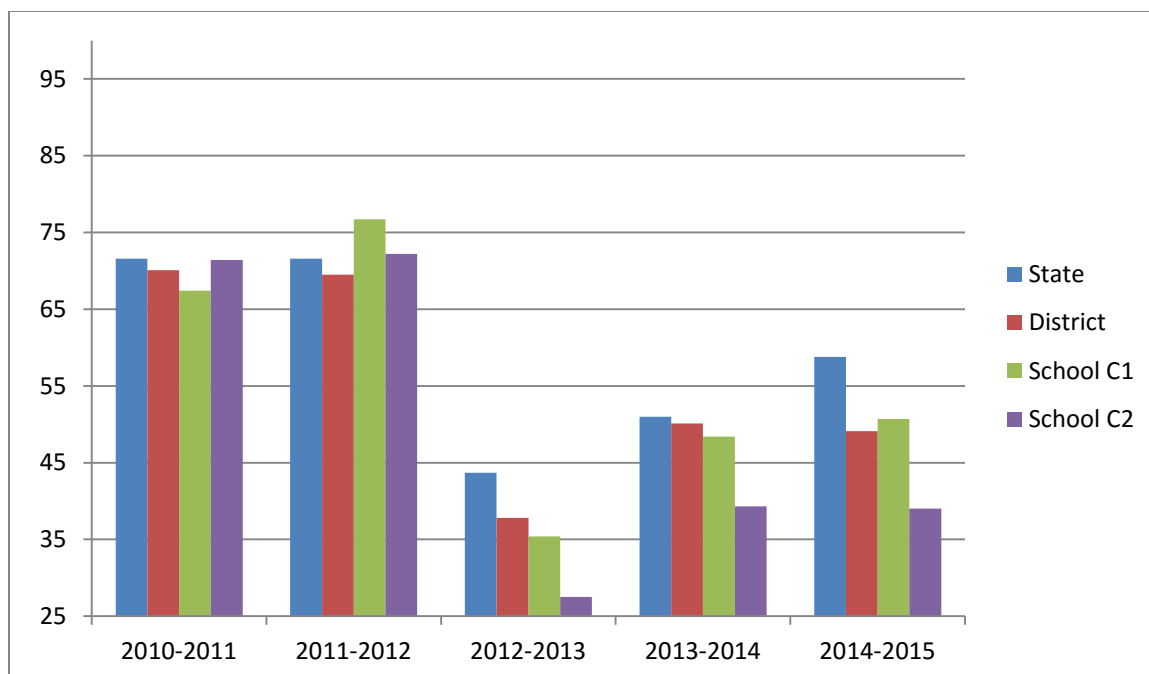


Figure 3. 2010-2015 EOG Reading Scores for Fourth Grade at Schools C1 and C2.

Due to the continued lack of significant improvement in reading achievement as evidenced in the previous figures, emphasis on developing successful reading programs throughout the state has become a priority. Educators are challenged to find ways to keep students involved in the reading process. It is frustrating because there is no precise formula enabling every student to become a successful reader (Gambrell, Block, & Pressley, 2002). Much research has been conducted showing the relationship between reading success and the motivation to read for pleasure, which will be discussed further in this study (Anderson et al., 1988; Cipielewski & Stanovich, 1992; Cunningham & Stanovich, 1990). “The successful development of reading skills involves practice” (RAND Reading Study Group, 2002, p. 10). The problem lies in finding a motivating reading program that will entice students to practice reading in order to be successful (Swanson, 2000).

The Schools' Perspectives

In order to improve the recreational reading component of the reading curriculum, a uniform program called AR was implemented at several school-based sites within the school district. This implementation occurred in the late 1980s. In 1995, the program transitioned from a standalone to a network-based system in every school in the district. This software has since evolved as technology has improved. The school district utilizes AR as a reading motivational tool and to improve reading achievement through the practice of reading.

The practice of reading skills must be personalized and coupled with instruction in order to be successful (Renaissance Learning, 2007). Personalized practice means practice matched to student ability so students are challenged but not frustrated. It also means the practice must be accountable. Teachers and students must receive frequent feedback, and teachers must intervene as necessary to assure students are successful at a high level (Ericsson, Krompe, & Tesch-Romer, 1993). High levels of success are also necessary for motivation. If students are not highly successful, they will lack the motivation to continue practicing (Brophy, 2004).

Components of the AR Program

As the National Reading Panel (NRP, 2000) stated in its report, *Teaching Children to Read*, effective reading programs are balanced: students receive direct and systematic instruction in phonemic awareness, phonics skills, and comprehension strategies; and they are given opportunities to apply their knowledge in a variety of “natural settings.” AR is designed to be part of a comprehensive reading program. It does not replace basal-reader series or other instructional materials; rather, it supports and enhances them (Renaissance Learning, Inc., 2007).

Permission to reproduce AR materials is exhibited in Appendix B with sample reports located in Appendices C-L (Renaissance Learning, Inc., 2007). The AR online system is used for organizing and tracking student development. This management system incorporates three levels of assessment information. Balajthy (2007) explained these levels.

1. The first level includes ongoing monitoring of results from the popular AR, which is designed to encourage recreational reading.
2. A second level has placement testing information from another component of AR, the Standardized Test for Assessment of Reading (STAR) reading test.
3. The third level provides for input of additional formal assessment information that the school or teacher may have available.

Developed by Judi and Terry Paul in 1984, AR is distributed by Renaissance Learning, Inc. The AR program is now used in over half of the school districts in the United States. This program provides schools with software that allows students to select a book and then take a multiple-choice comprehension quiz on the book at a computer. Students earn points based on the number of words each book contains and its reading difficulty along with the number of correct responses on each quiz. Each student is assigned a semester point goal based on his or her reading level as determined by an AR diagnostic test called STAR. STAR generates a grade equivalent (GE) score that can be used to guide students to read books at an appropriate reading level. Unlike an ordinary Silent Sustained Reading (SSR) program, the AR program also allows teachers to easily monitor the reading progress of their students based on their test-taking records and assigned reading levels. Teachers can access the software to generate a variety of reports to help identify individual student strengths and weaknesses based on the student's scores

on the quizzes, the number/reading level of books read during the semester, and progress toward their respective semester point goal (Rodriquez, 2007).

According to the developers of AR, the most important component ensuring the success of AR involves teachers' commitment to fully implementing the program in their classrooms and with their students. As a part of this study, the researcher surveyed all fourth-grade teachers in the selected six schools as to what extent they were implementing the following 10 guidelines (DuVall, 2000). Table 7 provides a list of these guidelines recommended by the AR program. These guidelines will be explained further in Chapter 2 of this study.

Table 7

AR Implementation Guideline

1. The teacher will schedule time for reading practice.
 2. The teacher will find the zone of proximal development for each student.
 3. Students will use a reading log.
 4. The teacher will take the status of the class daily.
 5. The teacher will set reading goals with each student.
 6. The teacher will check the Opportunity to Praise Students report (TOPS).
 7. The teacher will review the diagnostic report weekly.
 8. The teacher will adjust book levels so students maintain an average of 85-92% on quizzes.
 9. The teacher and/or the school will create a system of motivators (extrinsic rewards).
 10. The teacher will assess skills with literacy skills tests.
-

The purpose of AR is to help instill students' desires to read for pleasure. As

previously discussed, the more a child reads, the better reader that child will become.

The following research notes some key issues dealing with the importance of being able to read successfully as well as concerns facing those who fail to succeed in reading.

NRP (2000) stated that “reading comprehension is critically important to the development of children’s reading skills and therefore to the ability to obtain an education” (p. 8). Slavin, Karweit, Wasik, Madden, and Dolan (1994) noted that students who complete the third grade and lack reading skills are not likely to graduate from high school. Furthermore, American school children without high levels of reading comprehension face a difficult and uncertain economic future. As Bronfenbrenner, McClelland, Wethington, Moen, and Ceci (1996) noted, “In a technological society, the demands for higher literacy are constantly increasing, creating ever more grievous consequences for those who fall short and contributing to the widening economic disparities in our society” (p. 87).

Reading test scores have shown little change since the 1980s. Information found at the National Center for Educational Statistics (1999) shows a decline and stagnation in reading scores in the United States. Strauss and Irvin (2000) wrote that “effective literacy learning programs in middle grades are student-centered, flexible, and responsive to students’ needs” (p. 1).

Furthermore, the successful development of reading skills involves practice. Research shows independent reading practice is important to build vocabulary, fluency, comprehension, writing, and higher order thinking skills (Anderson et al., 1988). The problem lies in the fact that students who lack the motivation to read, for whatever reason, are in jeopardy of lagging behind their counterparts who excel in reading.

This case study sought to determine the effectiveness of the implementation of the

AR program in relation to students' motivation to read and whether it is developing better readers.

Research Questions

The researcher sought to answer the following research questions.

1. To what extent has the fidelity of the AR program been implemented at each school?
2. How does parental support, motivation to read, and implementation fidelity of AR relate to academic success in reading as measured by the North Carolina EOG reading test scores?

Significance of the Study

The significance of the study to this school district was to determine how the AR program should be incorporated in the schools' overall reading program. The school system should gain a better understanding of what is involved in fully and consistently implementing the program. The developers of AR promote positive results in reading achievement if all the components of the program are utilized. From a financial standpoint, district-level administrators should determine the cost effectiveness of the program in relation to what the program promotes to accomplish. If the school district continues to invest in the AR program, teachers need to be properly trained in its full implementation and then monitored to ensure the fidelity of proper use of AR is being followed. The district should also continue to improve communication with parents as parental support relates to improved results in student achievement.

Summary

This study evaluated the implementation of the AR program in six rural elementary schools located in the piedmont region of North Carolina. The program was

evaluated based on its effectiveness on student achievement in reading. Fourth-grade students in these schools were surveyed to determine their level of reading motivation. Teachers of these students were surveyed concerning the following: how they incorporate AR into their reading instruction, to what extent they have followed the 10-step implementation process recommended by the developers of AR, and their perceptions of how involved parents are in their child's reading success. Parents of these fourth graders were surveyed to determine how involved they are in their child's reading success. Principals were asked to discuss their school's reading program. The district English language arts curriculum coordinator was interviewed to discuss the district's expectations concerning reading.

In Chapter 2, the literature review consists of discussing the following topics: the importance of reading; components of a successful reading program; aspects of being a good reader; parents' role; motivation to read; and AR, both a full description of the program and previous studies of AR.

Chapter 2: Review of Related Literature

The Importance of Reading

While children of today are growing up in a world where data are being revealed at an alarming rate and knowledge is simply a click away, reading plays an increasingly crucial role in society (Toppings & Paul, 1999). The ability to read is not only fundamental for understanding and mastery of every school subject students will encounter, but literacy also plays a critical and crucial role in students' social and economic lives (Snow, Burns, & Griffin, 1998). As a result, no other factor will have a greater impact on the success of students than their ability to read. With such an emphasis placed on the importance of reading achievement, educational leaders must clearly articulate the expectation that all students can become successful readers, while providing the most effective strategies and opportunities for students to succeed in reading and adult lifelong reading practices (Snow et al., 1998).

NRP (2000) indicated that reading comprehension is critically important to the development of children's reading skills and therefore to the ability to obtain an education. Slavin et al. (1994) noted that students who complete the third grade and lack reading skills are not likely to graduate from high school. Furthermore, American school children without high levels of reading comprehension face a difficult and uncertain economic future. As Bronfenbrenner et al. (1996) noted, "In a technological society, the demands for higher literacy are constantly increasing, creating ever more grievous consequences for those who fall short and contributing to the widening economic disparities in our society" (p. 695). Kress (2003) further argued that ways of reading are rapidly changing as multimodal communication becomes more dominant and those changes will make reading more challenging, not less. "The demands on readers, and the

demands of reading, will if anything be greater, and they will certainly be different” (Kress, 2003, p. 167).

In thinking about 21st century proficiencies and how they might relate to classroom instruction, it is important to recognize that technology alone is not the defining characteristic of such skills. As Lankshear and Knobel (2007) aptly pointed out, technology can be used to search for information, construct essays, and communicate in ways that differ very little from traditional, print-based enactments of such practices. What makes skills and literacies “new” is how “they mobilize very different kinds of values and priorities and sensibilities than the literacies we are familiar with” (Lankshear & Knobel, 2007, p. 7). As the National Council of Teachers of English (NCTE, 2007) pointed out, although technology is important to literacy in the new century, other dimensions of learning are essential. Studies of workforce readiness show that employers rate written and oral communication skills very highly; and collaboration, work ethic, critical thinking, and leadership all rank higher than proficiency in information technology. The Partnership for 21st Century Skills (2007) advocated for core academic subjects, learning and innovation skills, and life and career skills along with technology skills.

Workplace literacy in the next millennium will be synonymous with problem solving. It will involve the integration of diverse literacy dimensions including reading, writing, listening, speaking, and information skills. Twenty-first century reading skills will include proficiencies such as basic print literacy, scientific, economic, technological, visual information, and multicultural literacies as well as global awareness (North Central Regional Education Laboratory [NCREL], 2003). Although literacy at work has long been recognized as a complex, integrated activity (Sticht, 1995), the future workplace is

likely to differ from today's workplace in two ways: There will be more literacy demands, and those demands will be increasingly complex.

For a number of students, early failure is highly predictive of later failure, severely limiting the development of skilled reading. Students who do not read fluently generally do not become good readers (Allington, 1977; Chard, Ketterlin-Gillar, Baker, Doabler, & Apichatabutra, 2009). In addition, students with inadequate fluency are likely to avoid reading because of fear of failure and negative attitudes—and students who avoid reading have less exposure to ideas and vocabulary in books and may lose academic ground, causing them to be twice disadvantaged (Morgan, Farkas, & Hibel, 2008; Nathan & Stanovich, 1991; Stanovich, 1986). Students who are at risk for reading failure often require comprehensive reading instruction, as reading is the one area where children from culturally and linguistically diverse backgrounds experience some of the greatest failure (McQuistan, O'Shea, & McCollin, 2008). It seems clear that reading instruction must be expanded.

Components of a Successful Reading Program

According to the International Reading Association (2007), people become readers over time through a variety of experiences: by being read to; by identifying words and labels in their environment; by experimenting with writing; by learning about words; and by reading enjoyable rhymes, poems, and predictable stories with familiar patterns that support comprehension. Readers build meaning from texts when they actively use their background knowledge to make connections between what they already know and what they are reading. As readers gain competence, literacy activities with personal relevance contribute to their ongoing reading development.

One of the first steps in producing successful readers involves the schools' roles

in providing strategic, comprehensive reading programs that encompass all the components necessary to becoming a proficient reader. Although there has been much debate through the years as to which approach to use in the teaching of literacy, the general consensus at this time is the use of the balanced literacy model. Literacy scholars appear to have reached a consensus that a balanced approach to reading instruction holds the greatest promise for improving reading achievement among students. Following the lead of NRP (2000), curricular manifestations of a balanced reading program include instructional components in phonics or word decoding, fluency, and comprehension. In classrooms where the balanced literacy model is implemented, students spend 2 hours per day in the reading curriculum. The 2-hour block of time is divided into 30-minute segments that are devoted to self-selected reading, guided reading, word study, and writing (Shanahan, 2000). This approach was used in the course of this research.

In a supportive classroom context, several important features of good reading instruction need to be present. These include providing a great deal of time spent actually reading; experiencing reading real text for real reasons; experiencing reading the range of text genres that we wish students to comprehend; providing an environment rich in vocabulary and concept development through reading, experience, and above all, discussion of words and their meanings; using substantial facility in the accurate and automatic decoding of words, spending lots of time writing texts for others to comprehend; and including an environment rich in high-quality talk about text (Farstrup & Samuels, 2002).

In 1997, Congress authorized the formation of a panel “to assess the status of research-based knowledge, including the effectiveness of various approaches to teaching children to read” (National Institute of Child Health and Human Development [NICHD],

2000, p. 1-1). The panel was charged with providing a report that “should present the panel’s conclusions, an indication of the readiness for application in the classroom of the results of this research, and if appropriate, a strategy for rapidly disseminating this information to facilitate effective reading instruction in the schools” (p. 1-1). That group became known as NRP and the findings of that Panel had a profound effect on literacy research and practice for the first decade of the new millennium. The NRP report determined that there were five areas related to reading instruction which had sufficient research to warrant some conclusions: (1) phonemic awareness, (2), phonics, (3) fluency, (4) vocabulary, and (5) comprehension. These five areas became known as the five “pillars” of reading instruction and the cement that held these pillars up was scientific evidence-based research (Cassidy, Valadez, & Garrett, 2010).

Phonemic Awareness

Phonemes are the smallest units of sound which make up spoken language, while phonemic awareness refers to the ability to focus on and manipulate phonemes in spoken words. Phonemic awareness involves the ability to auditorily discriminate and manipulate individual sounds in words (Wasik, 2001). Adams (1990) suggested that “the child’s level of phonemic awareness on entering school may be the single most powerful determinant of the success she or he will experience in learning to read and of the likelihood that she or he will fail” (pp. 304-305). Richgels (2003) credited Adams with initiating “the decade of phonemic awareness” (p. 149). NRP (NICHD, 2000) included phonemic awareness in their review and analysis because of correlational studies that had identified “phonemic awareness and letter knowledge as the two best school-entry predictors of how well children will learn to read during their first 2 years in school” (NICHD, 2000, p. 2-1). This pillar of reading had become as Ehri and Numes (2002)

suggested, an expected part of a complete reading program.

Phonics

As children become more aware of the sounds in words, they also learn the letters that represent these sounds. This is the basis of phonics (Cunningham, 2008). Phonics was a very important and recognizable pillar in the report of the NRP (NICHD, 2000). Educators and laypeople alike could understand “sound it out.” Researchers liked phonics because the sound-symbol correspondences were easy to measure and quantify. The impact of phonics instruction was greatest in Grades K and 1, and systematic instruction was better for at-risk students and readers with disabilities (NICHD, 2000, pp. 2-92-2-95). However, the Panel warned that phonics should not become the dominant component in a reading program. It is important to evaluate children’s reading competence in many ways, not only by their phonics skills but also by their interest in books and their ability to understand what is read to them (NICHD, 2000).

Fluency

When children have a strong command of the alphabetic principle and are able to appropriately read words in a “flowing” manner, they have oral reading fluency (ORF). Fluent readers are able to draw meaning from the text (comprehension) and their reading is characterized by adequate expression and phrasing (Rasinski, 2003). Rasinski (2006a) viewed fluency—and its three components of rate, prosody, and automaticity—as the “gateway to comprehension” (p. 704). Fluency has been defined as “freedom from word identification problems that might hinder comprehension” (Harris & Hodges, 1995, p. 85). *The Literacy Dictionary: A Vocabulary of Reading and Writing* (Harris & Hodges, 1995) along with the report of the NRP (NICHD, 2000) refined further the definition of fluency as “efficient, effective word recognition skills that permit a reader to construct

the meaning of text. Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and make possible, silent reading comprehension” (Pikulski & Chard, 2005, p. 510). The link between fluency and comprehension should be emphasized because many classroom teachers have used rate as the only indicator of fluency (Rasinski, 2006b). “Due to the growing focus on fluency, teachers and administrators are cautioned to keep fluency and fluency-based assessment scores in perspective—fluency is only one of the essential skills involved in reading” (Hasbrouck & Tindal, 2006, p. 642).

Vocabulary

Vocabulary development is crucial to the development of reading: like fluency, vocabulary is essential to comprehension. If students do not understand the words they read, reading becomes meaningless decoding (Ellery, 2005).

Many researchers today agree that there is a need to define vocabulary so that it can be appropriately assessed (Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Flynt & Brozo, 2008; Pearson, Hiebert, & Kamil, 2007). They point to the three-tier model of vocabulary established by Beck, McKeown, and Kucan (2002): high-frequency words that do not need to be taught, words used by mature readers and writers, and rare words that are specific to particular content domains.

Blachowicz et al. (2006) reported that there appears to be agreement on vocabulary knowledge: it predicts comprehension, there is a gap in vocabulary knowledge between economically disadvantaged and economically advantaged children that persists through school, it is a critical factor in the success of English-language learners, and it affects comprehension differently in different types of texts.

Fluent readers understand many words, and they read more quickly and easily than those with smaller vocabularies (Bromley, 2007). One contributing factor to an

enhanced vocabulary is independent reading. Students who read for 25 minutes each day encounter approximately 1 million words of text each year. If students learn only 0.1% of the words read, that would account for 1,000 new words each year (Jitendra, Edwards, Sacks, & Jacobson, 2004).

Comprehension

Durkin (1993) identified reading comprehension as the essence of reading. Three predominant themes have been associated with reading comprehension. The first is that reading comprehension is a complex cognitive process that involves vocabulary learning, instruction, and development. Second, developing reading comprehension involves active interactive strategic processes. Third, the preparation of teachers is important to students' reading comprehension (NICHD, 2000, p. 4-1).

Reading comprehension is a multifaceted process whereby the reader is influenced by his or her background, the text, and the purpose for reading the text. Reading begets reading. "More exposure to literature develops vocabulary, a key element in reading proficiency" (Johnson, 2003, p. 92). According to Snow et al. (1998), "it is postulated that the reader's background knowledge is the key that enables the reader to understand text" (p. 62).

In spite of the great emphasis placed on comprehension, the point is often missed that comprehension cannot stand alone. One's ability to decode text cannot and should not be separated from one's ability to understand the text. Although there is a strong indication that selection of particular material or specific content may have some positive impact on comprehension, comprehension is also highly correlated to general language skills (Bradford & Harris, 2003). Comprehension is linked to one's general ability to understand not only written text but spoken words as well (Craig, Connor, &

Washington, 2003).

According to Tompkins (2001),

Teachers often view comprehension as a mysterious process of making meaning or understanding what students read. It often seems mysterious because it is invisible; some students read and understand what they read, and others seem to read just as well but don't understand what they read. For many teachers, students with reading comprehension difficulties do not appear any different than their classmates. (p. 94)

There are a number of instructional and assessment techniques that have been shown to be highly effective in enhancing reading comprehension. Tompkins' (2001) instructional strategies for teaching reading comprehension are as follows:

Microprocesses whereby readers place various ideas into phrases within a sentence; integrative processes whereby readers connect sentences through using words such as "also" and "however"; macroprocesses whereby readers visualize the structural pattern of the entire text; elaborative processes whereby readers make connections to prior inferences; and metacognitive processes whereby readers monitor their own reading techniques. (p. 93)

NRP (2000) stated that "comprehension can be improved by teaching students to use specific cognitive strategies when they encounter barriers to understanding what they are reading" (p. 93).

A combination of the following strategies is most effective in teaching children how to use comprehension strategies, according to Johnson (2003),

Comprehension monitoring, cooperative learning, using graphic and semantic organizers such as story maps, answering questions, generating questions,

structuring a story, and integrating ideas and generalizing from the text are specific pedagogical techniques that have been found to be highly effective in enhancing student reading comprehension. (p. 94)

Today's classrooms are comprised of many students from diverse populations. With diversity comes varying life experiences that influence student learning, particularly in the area of reading. Students at risk for reading failure have difficulties with the five essential components of reading (Chenoweth, 2007); and research has shown that for students to become proficient readers, their reading instruction must include phonemic awareness, phonics, fluency, vocabulary, and comprehension (NRP, 2000). Because diverse students come from a variety of life circumstances and do not achieve at an appreciable level of academic success as a result of traditional instructional techniques, as teachers plan, it is essential that they deliberately consider both their population and the content of their lessons, especially the five pillars of reading, to ensure that students receive the most appropriate instruction (Vander Zanden & Ark, 2002).

Allington and Gabriel (2012) outlined six elements of instruction that every child should experience every day: "Each of these elements can be implemented in any district and any school, with any curriculum or set of materials, and without additional funds. All that is necessary is for adults to make the decision to do it" (p. 10).

Every Child Reads Something He or She Chooses

The research base on student-selected reading is robust and conclusive: Students read more, understand more, and are more likely to continue reading when they have the opportunity to choose what they read. In a 2004 meta-analysis, Guthrie and Humenick found that the two most powerful instructional design factors for improving reading motivation and comprehension were (1) student access to many books and (2) personal

choice of what to read. Research has demonstrated that access to self-selected texts improves students' reading performance (Krashen, 2011). By giving students these opportunities, we help them develop the ability to choose appropriate texts for themselves—a skill that dramatically increases the likelihood they will read outside school (Ivey & Broaddus, 2001; Reis, McCoach, Coyne, Schreiber, Eckert & Gubbins, 2007). When we consider that the typical fourth-grade classroom has students reading anywhere from the second- to ninth-grade reading levels (and that later grades have an even wider range), the idea that one workbook or textbook could meet the needs of every reader is absurd (Hargis, 2006).

Every Child Reads Accurately

Good readers read with accuracy almost all the time. The last 60 years of research on optimal text difficulty—a body of research that began with Betts (1949)—consistently demonstrates the importance of having students read texts they can read accurately and understand. In fact, research shows that reading at 98% or higher accuracy is essential for reading acceleration. Anything less slows the rate of improvement, and anything below 90% accuracy does not improve reading ability at all (Allington, 2012; Ehri, Dreyer, Flugman, & Gross, 2007).

Although the idea that students read better when they read more has been supported by studies for the last 70 years, policies that simply increase the amount of time allocated for students to read often find mixed results (NRP, 2000). The reason is simple: it is not just the time spent with a book in hand, but rather the intensity and volume of high-success reading, that determines a student's progress in learning to read (Allington, 2009; Kuhn, Schwanenflugel, Morris, Morrow, Bradley, Meisinger, Woo, & Stahl, 2006).

Every Child Reads Something He or She Understands

Understanding what you have read is the goal of reading. But too often, struggling readers get interventions that focus on basic skills in isolation, rather than on reading connected text for meaning. Numerous findings of neurological research have supported the conclusion that remediation that emphasizes comprehension can change the structure of struggling students' brains (Aylward et al., 2003; Keller & Just, 2009; Krafnick, Flowers, Napoliello, & Eden, 2011; Shaywitz, Shaywitz, Blachman, Pugh, Fulbright, Skudlarski, Menci, Constable, Holahan, Marchione, Fletcher, Lyon, & Gore, 2004; Zambo, 2003).

Regardless of their focus, target population, or publisher, interventions that accelerate reading development routinely devote at least two thirds of their time to reading and rereading rather than isolated or contrived skill practice (Allington, 2011).

Studies of exemplary elementary teachers further support the finding that more authentic reading develops better readers (Allington, 2002; Taylor, Pearson, Peterson, & Rodriguez, 2003). In these large-scale national studies, researchers found that students in more-effective teachers' classrooms spent a larger percentage of reading instructional time actually reading; students in less-effective teachers' classrooms spent more time using worksheets, answering low-level, literal questions, or completing before-and-after reading activities. In addition, exemplary teachers were more likely to differentiate instruction so that all readers had books they could actually read accurately, fluently, and with understanding.

Every Child Writes about Something Personally Meaningful

When students write about something they care about, they use conventions of spelling and grammar because it matters to them that their ideas are communicated, not

because they will lose points or see red ink if they do not (Cunningham & Cunningham, 2010). They have to think about what words will best convey their ideas to their readers. They have to encode these words using letter patterns others will recognize. They have to make sure they use punctuation in a way that will help their readers understand which words go together, where a thought starts and ends, and what emotion goes with it. They have to think about what they know about the structure of similar texts to set up their page and organize their ideas. This process is especially important for struggling readers because it produces a comprehensible text that the student can read, reread, and analyze (Allington & Gabriel, 2012).

Every Child Talks With Peers about Reading and Writing

Research has demonstrated that conversation with peers improves comprehension and engagement with texts in a variety of settings (Cazden, 1998). Such literary conversation does not focus on recalling or retelling what students read. Rather, it asks students to analyze, comment, and compare—in short, to think about what they have read. Fall, Webb, and Chudowsky (2000) found better outcomes when kids simply talked with a peer about what they read than when they spent the same amount of class time highlighting important information after reading.

Similarly, Nystrand (2006) reviewed the research on engaging students in literate conversations and noted that even small amounts of such conversation (10 minutes a day) improved standardized test scores regardless of students' family background or reading level, yet struggling readers were the least likely to discuss daily what they read with peers. This was often because they were more likely to be asked literal questions about what they had read rather than to be engaged in a conversation about the text.

Time for students to talk about their reading provides measurable benefits in

comprehension, motivation, and even language competence. The task of switching between writing, speaking, reading, and listening helps students make connections between, and thus solidify, the skills they use in each (Allington & Gabriel, 2012).

Every Child Listens to a Fluent Adult Read Aloud

Listening to an adult model fluent reading increases students' own fluency and comprehension skills (Trelease, 2001), as well as expanding their vocabulary, background knowledge, sense of story, awareness of genre and text structure, and comprehension of the texts read (Wu & Samuels, 2004); yet few teachers above first grade read aloud to their students every day (Jacobs, Morrison, & Swinyard, 2000). Rather than conducting whole-class reading of a single text that fits few readers, teachers should choose to spend a few minutes a day reading to their students (Allington & Gabriel, 2012).

Allington and Gabriel (2012) made a few suggestions for implementing these six research-based elements. First, eliminate almost all worksheets and workbooks. Use the money saved to purchase books for classroom libraries; use the time saved for self-selected reading, self-selected writing, literacy conversation, and read-alouds. Second, ban test-preparation activities and materials from the school day. Although sales of test preparation materials provide almost two thirds of the profit that testing companies earn (Glovin & Evans, 2006), there are no studies demonstrating that engaging students in test prep ever improved their reading proficiency—or even their test performance (Guthrie, 2002). As with eliminating workbook completion, eliminating test preparation provides time and money to spend on the things that really matter in developing readers.

Aspects of Being a Good Reader

Much work on the process of reading comprehension has been grounded in

studies of good readers. Many reading comprehension strategies being taught today come from research done on proficient readers. The literature is filled with information on what strategies proficient readers use while reading (Blachowicz & Ogle, 2001; Dole, 2000; Harvey & Goudvis, 2000; Keen & Zimmerman, 1997; Pressley & Afflerbach, 1995; Smolkin & Donovan, 2001).

Johnson (2003) believed,

If we understand what strategies good readers use, weaker readers can be taught to approach reading more like strong readers do. Teachers are using these strategies with students in the classroom. Students need to know that good readers use strategies because they can help improve their comprehension and thus make the reading event more enjoyable and meaningful. (p. 766)

We know a great deal about what good readers do when they read: good readers are active readers; they have clear goals in mind for their reading; good readers typically look over the text before they read, noting such things as the structure of the text; good readers frequently make predictions about what is to come; they read selectively, continually making decisions about their reading—what to read carefully, what to read quickly, what not to read, what to reread, and so on; good readers construct, revise, and question the meanings they make as they read; they try to determine the meaning of unfamiliar words and concepts in the text; they integrate their prior knowledge; they think about the authors of the text, their style, beliefs, intentions, and so on; they monitor their understanding of the text, making adjustments in their reading as necessary, they evaluate the text's quality and value; good readers read different kinds of text differently; when reading narrative, good readers attend closely to the setting and characters; when reading expository text, these readers frequently construct and revise summaries of what

they have read (Farstrup & Samuels, 2002).

Skilled readers bring background knowledge to the reading process that may give them advantages in better comprehending the text. According to Johnson (2003), skilled readers “differ from unskilled readers in their use of general word knowledge to comprehend text literally as well as to draw valid inferences from text, in their use of comprehension-monitoring and repair strategies” (p. 93).

According to the U.S. Department of Education, National Institute for Literacy and the Partnership for Reading (2001), a skilled reader will decide on his or her purpose for reading a particular text. Depending on their purpose, they might adjust their reading speed in order to conform to the difficulty of the text. Any comprehension difficulties that may occur are monitored and corrected. Reading more slowly, noting major sections of the text, or rereading particular sections of the text are examples of monitoring one’s reading. After completing their reading assignment, a skilled reader will read differently to understand a technical article, a magazine for pleasure, a letter from a friend, and/or a text for a letter grade.

Moreover, according to the U.S. Department of Education, National Institute for Literacy and the Partnership for Reading (2001), skilled readers are constantly thinking as they read and are actively engaged in a complicated process of attempting to make sense of what they are reading. The past experience and knowledge that the skilled readers bring to the reading process determines the strategies they will use while reading. The skilled reader brings a high level of vocabulary and language structure. Skilled readers also know when they are experiencing problems with comprehension and are able to resolve these difficulties.

Skilled readers also acquire a complex set of skills and various memory

techniques that enable them to better master concepts. As Vander Zanden (2003) noted, “As children mature cognitively, they become increasingly active agents in their remembering process” (p. 243). This mental awareness and understanding of one’s own cognitive style is defined as metacognition. Metacognitive strategies enable the skilled reader to monitor their reading techniques (Johnson, 2003).

Parents’ Role

Where do children learn to read? The obvious answer is “in school,” but children also learn to read in other venues—their homes, churches, community center, libraries and bookstores, grocery stores, and even out of doors (Pearson, 2004). Compared with schools a generation ago, most schools today serve students who are more diverse, come from a variety of life circumstances, and do not achieve an appreciable level of academic success as a result of traditional instructional techniques (Vander Zanden & Ark, 2002). Although the focus on student diversity has steadily increased, questions about difference and how different demographic characteristics may influence learning are not new. In fact, questions about the effect of culture on learning remain complex and challenging (Cartledge, Gardner, & Ford, 2009).

Specifically, culture, race, and language have been discussed as having anywhere from a small to a significant impact on what and how much is learned in schools. Whether these factors have any impact on how children learn to read is an open question (Byrnes, 2008).

Most models for balanced literacy are classroom specific; that is, they focus on reading and writing development in the classroom only. Yet, we all know that students spend the greater part of each day at home. Moreover, research into the influence of the home and parents has established beyond a doubt that the home connection is critical to

students' success in learning in general and literacy in particular (Epstein, 1984; Henderson, 1998; Padak & Rasinski, 1998). Postlethwaite and Ross (1992) found that parental involvement was the most significant predictor of student reading achievement in their worldwide survey of literacy development in Grades 2 and 8. Even simple interventions that require a small amount of time can result in substantial gains in students' literacy learning at nearly any stage of development (Rasinski, 1995; Rasinski & Padak, 2000). "Programs to promote family literacy may be an important component in a school's literacy design. School personnel need to investigate whether home environments are conducive to reading and whether parents are reading to their children" (Johnson, 2003, p. 92).

Family literacy professionals often point out that parents are their children's first and most important teachers. Indeed, research tells us that children whose families encourage at-home literacy activities have higher phonemic awareness and decoding skills (Burgess, 1999), higher reading achievement in the elementary grades (Cooter et al., 1999), and advanced oral language development (Senechal, LeFevre, Thomas, & Daley, 1998). Hart and Risley (1995) studied the early language interactions in families of varying socioeconomic status (SES). Their multiyear study involved 42 families who differed in SES; gender composition and ethnic background (African American and Caucasian) were distributed among SES categories. For an hour each month (30 hours per family), Hart and Risley observed and tape recorded family talk. They transcribed and analyzed the tapes to learn more about family conversations and children's opportunities to learn through language.

Hart and Risley (2003) found that "the 42 children [grew] more like their parents . . . in vocabulary resources, and in language and interaction styles . . . 86-98% of the

words in each child's vocabulary consisted of words also recorded in their parents' vocabulary" (p. 7). They also found a stunning difference in children's access to language, perhaps the major finding of this important study. In brief, children from the wealthiest families heard over 1,500 more words each hour, on average, than children from the poorest families (616 vs. 2,153). Over 4 years, this amounts to a 32-million-word difference! Moreover, a follow-up study of 29 of the original children showed that children's rate of vocabulary growth and vocabulary use at age three was strongly associated with their Grade 3 standardized test scores in receptive vocabulary, listening, speaking, semantics, syntax, and reading comprehension (Hart & Risley, 2003).

In a study conducted by Edmunds and Bauserman (2006), family members were mentioned often during interviews with children concerning sources of book referrals and motivation. When discussing reading in general, children were asked to share how they found out about the books they were currently reading or had recently read. While examining the ways children were exposed to books, several sources emerged such as the school library, teachers, family members, and peers (Edmunds & Bauserman, 2006). When children were asked who got them interested in and excited about reading, the interviews revealed that the children's interest in and excitement about reading was sparked by various individuals including family members—especially mothers. Once again, the children illustrated the importance of family in the area of reading (Edmunds & Bauserman, 2006).

According to the Center for the Improvement of Early Reading Achievement (CIERA), the most common home activity intended to promote literacy is storybook reading. A major concern emerging in studies of the home connection is that all children do not have the same access to books in their homes. Research on this topic has found

that although juvenile books are relatively inexpensive, households with higher income and parental educational attainment tend to purchase more books for preschoolers than households with lower income and parental education. Because books for older children are more expensive, this disparity is likely to widen over the years (Neuman, Celano, Greco, & Shue, 2001). Not surprisingly, differences in literacy materials and practices in the home have been found to be related to children's early literacy learning (Bus, van Kleeck, Stahl, & Bauer, 2003).

Looking across the entire corpus of CIERA work focused on relations with home and community, the common thread is communication. Where communication between groups is nonexistent or laden with tension, blame and low achievement are likely outcomes. Where lines of communication are open, where different groups are sensitive to and respectful of the views of others, and where resources are made available to support families in the quest to support their children and the schools they attend, achievement is more likely to be enhanced (Taylor et al., 2003).

The NCDPI Division of Accountability Services (2011) compiled the following recommendations for parents to help their child with reading at home: establish time for your child to read; provide your child with a variety of suitable reading materials; read aloud to and with your child; take time to discuss interesting books you and your child have read; model reading by reading a variety of materials yourself such as newspapers, magazines, schedules; discuss the purpose of different text types such as fiction, letters, newspaper articles, journals; share and discuss articles, diagrams, charts, illustrations, and maps with your child; ask your child open-ended questions that cannot be answered with a single word or a single phrase; and ensure that your child reads independently each day at a comfortable reading level. Reading materials should not be too hard or too easy in

terms of subject matter and content.

Motivation to Read

In the 1990s, motivation to read was designated as being as integral to reading instruction as was skill building. In poll after poll, teachers voiced the issue that motivating students was their top priority. To build motivation, one must first be able to define it. Highly motivated readers are those who generate their own literacy learning opportunities, and, in so doing, they begin to determine their own destiny as literacy learners (Colker, 2001).

When some students judge reading and literacy activities to be unrewarding, too difficult, or not worth the effort because they are peripheral to their interests and needs, they can become *nonreaders* (Strommen & Mates, 2004) or *alliterate adolescents* (Alvermann, 2003) who are capable of reading but choose not to do so.

Although school reading is based on traditional textbooks, “an expanded concept of ‘text’ must transcend print-based texts to also include various electronic media and adolescents’ own cultural and social understandings” (Phelps, 2006, p. 4). In addition, recent research on adolescent literacy reveals that adolescents are using literacy for many purposes outside of school that may bear little resemblance to traditional academic literacy purposes (Pitcher et al., 2007).

“Thus, motivation to read is a complex construct that influences readers’ choices of reading material, their willingness to engage in reading, and thus their ultimate competence in reading, especially related to academic reading tasks” (Pitcher et al., 2007, p. 379).

Research tells us that children who have interests are engaged, and that engaged thinkers and readers are better students (Guthrie & Humenick, 2004). This is because

children who are motivated to read spend more time reading than their less-motivated peers (Guthrie, Wigfield, Matsala, & Cox, 1999). Furthermore, readers who are engaged as children have a greater chance of becoming lifelong readers (Morrow, 1992), which makes it all the more critical that at an early age we capture students' imaginations with print that sustains their attention and keeps them reading into adolescence and beyond (Brozo, 2005).

Being aware of the importance of motivating students to be active readers is one thing; finding the right ways to do so is often quite another. Based on a national survey of motivation to read, a large majority of fourth graders in the United States reported that reading was not a favorite activity, and they did not read frequently for enjoyment (Donahue, Daane, & Yin, 2005).

Through the study, it was also found that most U.S. fourth graders thought they did not learn much from reading a book (Donahue et al., 2005). In another study from the National Assessment of Educational Progress, results show that the percentage of children who say they read for fun almost every day dropped from 48% at Grade 4 to 19% at Grade 8 (Rich, 2007).

The reasons for students' reluctance to read vary. Sometimes reluctance is rooted in reading difficulties, but it is often due to a lack of interest in the text or in the act of reading and may have little to do with reading ability (Worthy, Patterson, Salas, Prater, & Turner, 2002). Home backgrounds and parental influences are often a factor in determining children's interest in reading. Existing research shows that factors including gender, reading ability and confidence, sociocultural context, text availability, lifestyle factors, and many others affect reading behaviors and attitudes (Baker, Scher, & Mackler, 1996; Guthrie, 2001).

If students find the texts they are asked to read unappealing or too difficult and the teaching practices around these texts fail to engage, they may avoid reading about important topics in the content areas (Strommen & Mates, 2004), which is detrimental in two ways. First, students who do not read content texts run the risk of never acquiring critical background knowledge, which is the foundation for academic success (Hirsch, 2008). Moreover, because content text requires greater effort to process and understand, students need more, not fewer, print experiences with them. The less time students spend engaged with content area text, the more underdeveloped their reading skills will be for this type of material (Hirsch, 2008).

Two categories which appear to be vital components in children's motivation for reading and should therefore be elevated are the concepts of self-efficacy and challenge. The former is the belief that one can be successful at reading. The latter is the willingness to take on difficult reading material. When individuals believe they are successful at an activity, they are more likely to engage in it (Bandura, 1997; Schunk & Zimmerman, 1997). A third dimension in this category is work avoidance, or the desire to avoid reading activities (Bandura, 1997).

Academic self-efficacy is the belief and confidence that students have about their capacity to accomplish meaningful tasks and produce a desired result in academic settings. The evidence is clear that students who possess high, school-related self-efficacy are more engaged and motivated than students with low self-efficacy (Pajares, 1996). These engaged students, whether economically privileged or not, outperform their less-engaged peers (Guthrie & Wigfield, 2000).

Consistent with general motivation theories (Lepper & Henderlong, 2000; Stipek, 2001), students' reading is associated with both intrinsic and extrinsic motivation.

Intrinsic motivation involves engagement in an activity based on personal interest in the activity itself. For example, intrinsically motivated students are inclined to explore the world of reading and to find a variety of topics that interest them (Hidi, 2000). These students are likely to become involved in reading and to benefit from an accompanying sense of pleasure (Gottfried, 1995). They persist in coping with difficulties and want to master required skills (Deci, 1992). The conquest of challenging tasks elicits a great sense of enjoyment and advances skills in reading (Csikszentmihalyi, 1990).

Extrinsic motivation refers to participation in an activity based on external values and demands (Ryan & Deci, 2000; Deci, Valleranc, Pelletire, & Ryan, 1991). External regulation of behavior is controlled by social demands and rewards. These students desire to avoid punishment or to meet teachers' or parents' expectations; they are extrinsically motivated because their desire to read is controlled externally (Hidi, 2000). Furthermore, when students are extrinsically motivated, their reading is not initiated by their interest but rather by their desire to attain socially valued outcomes—e.g., good grades, recognition for other, or required skills (Deci et al., 1991).

Wigfield and Guthrie (1997) proposed a set of motivational constructs for reading. Wigfield and Guthrie defined each construct as the following:

Reading efficacy refers to the belief that one can be successful at reading.

Importance of reading refers to how important reading is to the reader. *Curiosity* is the desire to learn about a particular topic of personal interest. *Involvement* refers to the pleasure gained from reading a well-written book or article on an interesting topic. *Preference for challenging* reading is the satisfaction of mastering or assimilating complex ideas in text. Reading for *recognition* is the pleasure in receiving a tangible form of recognition for success. Reading for

grades refers to the desire to be favorably evaluated by the teacher. *Competition* in reading is the desire to outperform others in reading. *Social* reading refers to the process of sharing the meanings gained from reading with friends and family. *Compliance* refers to reading because of an external goal or requirement. The term *work avoidance* refers to students' dislike for reading. (pp. 22-23)

There are multi-faceted reasons as to why students lack the motivation to read. For the scope of this research, lack of interest rather than reading difficulties was addressed. Interest in reading is a key component of engagement. Children who are interested in materials can comprehend them better than children with similar skills but lower interest. Even when materials are difficult for children to comprehend, interest value is an important factor in reading success (Colker, 2001).

Intrinsic motivation has long been established as integral to reading motivation and engagement. Most reading experts believe that intrinsic motivation is imperative to lifelong reading, as this excerpt from a 2001 paper by Guthrie explained:

It is well established that a competent reader is intrinsically motivated. Across the age span from grade 3 to adulthood, proficient readers show the traits of intrinsically motivated behavior – they read for their own sake, and they read frequently for personal interest. Intrinsically motivated readers have a sense of deep immersion during the reading process, an orientation to find challenging material, and enjoyment in the experience of reading. They read for longer amounts of time, with greater cognitive proficiency, and with more positive effects than readers who are less intrinsically motivated. In quantitative studies, major aspects of intrinsic motivation for reading, consisting of curiosity (reading to learn about the world), involvement (reading to become absorbed in a text), and

preference for challenge (enjoyment in reading complex material) predict students' reading frequency and reading comprehension. (p. 162)

When children first enter school, they are excited about learning and are very motivated; however, their motivation to learn appears to decrease during the elementary school years in all academic subjects including reading (Eccles, Wigfield, & Schiefele, 1998; Guthrie & Wigfield, 2000). Children's motivation to read in the school and home environment decreases as they get older (Guthrie & Wigfield, 2000). The decline in the motivation to read appears to be greatest from first through fourth grade (Wigfield & Guthrie, 1997). This decline in motivation has been attributed to children's growing awareness of their own performance as compared to others as well as to instruction that emphasizes competition and does not address children's interests (Guthrie & Wigfield, 2000).

When adolescent resistant readers are asked why they do not read, many insist that they can read and do read in given circumstances (Baker, 2003; Bintz, 1993; Christian-Smith, 1993, cited in Guzzetti, Young, Gritsavage, Fyfe, & Hardenbrook, 2002; Hamston & Love, 2003; Reeves, 2004). Moreover, resistant readers frequently state they were strong readers in elementary school (Bintz, 1993; Reeves, 2004). Although text difficulty was cited by some student respondents as a barrier to reading (Guthrie & Davis, 2003; Reeves, 2004), lack of interest in the reading materials they are provided with was universally mentioned as a component of their resistance. "Textbook reading also has the tendency to diminish reading pleasure" (Strommen & Mates, 2004, p. 197). Worthy, Moorman, and Turner (1999) made the following observation:

Limited availability leaves students with three choices: reading something outside of their interests, obtaining their preferred materials themselves, or not reading at

all. Students who cannot afford to buy their preferred materials are more dependent on school sources and thus, their choices are even more limited. (p. 23)

Resistant readers know what it is they like to read. Their first advice to teachers is, “Choose interesting stuff. Don’t try to make us read boring stuff” (Reeves, 2004, p. 243). One way to increase children’s desire to read is to let them choose their own books. It is recommended that teachers not only give children the opportunity to choose the books they would like to read but also allot time during the school day to read them (Edmunds & Bauserman, 2006). Students are also motivated to read when people read to them and when people share what they were reading with them. It is also recommended that teachers spend time daily reading aloud to them, and that teachers allow many opportunities for them to share what they are reading (Edmunds & Bauserman, 2006).

Strommen and Mates (2004) reminded us that if literacy competence can be attained through reading for pleasure, “encouraging a child’s love of reading is a desirable goal” (p. 199). Partin and Hendricks (2002) suggested that teachers broaden their scope of what they consider acceptable reading material. Expanding the notion of text to include popular culture and music, the Internet, magazines, and other alternatives could invite opportunities for adolescents to become critical consumers of texts.

“Students are also sensitive to the fact that reading becomes something students are graded on in the educational system” (Lenters, 2006, p. 143). Guthrie and Davis (2003) observed in their student survey, the greater emphasis that is placed on performance and grades, the less students are motivated to read.

The following measures may help to make in-school reading more meaningful to resistant readers: responding to students’ personal and social literacies (Hinchman, Alvermann, Boyd, Brozo, & Vacca, 2004; Reeves, 2004); allowing time in class for

students' personal responses (Reeves, 2004); addressing student needs and desires to learn how to interpret messages from popular media (Elkins & Luke, 1999; Moje, Young, Readence, & Moore, 2000); showing students how some school-based texts connect to their lives (Reeves, 2004); making the literary canon accessible through bridging with young adult fiction (LaBlanc, 1980, cited in Sanacore, 1992; Stover, 2003); and "integrating verbal and visual imagination and the material contexts and biographies of students' lives with traditional print-based literacies" (Schofield & Rogers, 2004, p. 246).

Previous studies suggest that a reading program will not successfully develop students' intrinsic reading motivation (Biggers, 2001; Brisco, 2003; Tompson, Madhuri, & Taylor, 2008, p. 558) if it has the following characteristics:

1. It makes young adults feel that they are being forced to read.
2. It is too time consuming.
3. It lacks an adequate selection of appealing books (Krashen, 2002; Peak & Dewalt, 1993).
4. It involves passing tests that determine a sizeable percentage of their course grade (Persinger, 2001).

Clearly, motivation and engagement are basic to reading instruction. It is not enough to know how to read. If one is to become a lifelong learner, it is imperative that one have the desire to read. Skill makes reading a possibility. Motivation makes reading a reality (Colker, 2001).

AR

Coexisting with reading motivation is the issue of reading comprehension.

Reading comprehension is critically important to the development of children's reading

skills and therefore to their ability to obtain an education, yet many students still continue to struggle with acquiring the necessary skills to become successful readers (Howard, Sugarman, & Christian, 2003).

Recreational reading programs are designed to encourage the development of the “reading habit.” Reading is a skill that requires much practice to perfect. Activities to practice reading should bring both success and enjoyment of all children in order to foster an ongoing interest in reading (Van Riel, 2001).

AR is a computer reading and management program developed by Renaissance Learning and introduced to school systems in 1986. The program helps “educators monitor literature-based individualized reading for K-12 students” (Keller & Just, 2009, p. 18). Students pick books to read from the AR list and take computer quizzes on the books to earn points. The points may be turned in for prizes that are awarded and chosen by the individual school educators (Keller & Just, 2009).

The AR quizzes are designed to help the teachers in assessing reading comprehension and in diagnosing reading difficulties that could lead to intervention. School media specialists recommend books to Renaissance Learning. The goal is to produce quizzes on all books that likely would be in a school library. The quiz questions range from five to 20 depending on the complexity of the reading. The quizzes are arranged in multiple-choice questions that follow the same sequence as the reading. The questions focus on key facts and events found in the book, therefore mostly dealing with comprehension.

The student takes a computer quiz on every book read. He/she must score at least 60% in order to pass the quiz. Each book is assigned points by Renaissance Learning. The number of points a student can gain ranges from two to 20, depending on the

complexity of the story (Paul, 2005).

The computer program keeps a record of the book, reading level, date, number of questions answered correctly, and points earned. There are 21 reports of this material included within the computer program to aid teachers, students, and parents. Educators can use these for personal assessment use or for parent conferences.

The AR program (Paul, VanderZee, Rue & Swanson, 1996) is the most commonly used recreational/motivational reading program. The AR program (Paul et al., 1996) combines a literature-based reading program with the use of a computer to provide detailed reports to parents, teachers, and administrators on each child's reading progress. The purpose of this is to offer students appropriate recreational reading as a means of encouraging reading achievement gains. Students who read a sufficient number of books often receive awards such as certificates of achievement, ribbons, picture taking, or pizza parties (Paul et al., 1996).

According to Guastello (2006), the AR program is not intended to replace existing reading programs but to supplement them—its main purpose is to motivate children to read. Students enjoy the opportunity to choose books based on their interests and preferred genres. The comprehension tests administered to the students provide them with immediate feedback, thus enabling them to monitor their own progress. Students challenge and compete with themselves to gain points from the number of questions they answer correctly. By doing so, students set realistic goals for themselves and achieve benchmark levels of reading success. Teachers monitor the students' progress and adjust the reading lists as students increase their reading proficiency. The AR program is intended to motivate children to read and to read for meaning. The computerized tests train students to recall details and to think about what they have read. The points

collected for correct answers allow them to monitor their own progress.

The first component of the AR program involves students taking a computerized reading test which determines their reading achievement. Each student is assigned a point goal based on his or her reading level as determined by an AR diagnostic test called STAR. STAR generates a GE also known as a zone of proximal development (ZPD) which determines reading range. This means that a child can use any book within the reading range as a tool to enhance his or her reading ability. If a student has a reading range of 2.5-3.4, it means that he/she may select a book at the 2.5 level or 3.4 level or any level between those two, then read the book and take a test on it. Any book within this range will help the child become a proficient reader, because the vocabulary is not controlled and the level of comprehension involved varies from author to author (McKenna & Kear, 1990). The before-mentioned point goal can be reached during the course of a semester, or as in the case of the six schools studied, the point goal is used for each 9-week grading period.

STAR Reading is a computer-adaptive, norm-referenced reading assessment that provides an accurate measure of students' reading comprehension in less than 10 minutes. This computerized test uses Rasch measurement techniques to generate a scaled score ranging for 0 to 1400, which ranges across grade levels. In a 1999 norming study, split-half reliability coefficients for STAR Reading ranged between .89 and .90 for third through sixth grades (STAR Reading, 2001). STAR Reading scale scores also exhibit a moderate to strong correlation with other standardized reading tests including the California Achievement Test, the Comprehensive Test of Basic Skills, the Gates-MacGinitie Reading Test, the Stanford Achievement Test, and the Iowa Test of Basic Skills, with validity coefficients ranging from .36 to .97 in Grades 1 to 6 (Nebelsick-

Gullett, 2003). Sadusky and Brem (2002) reported that correlation coefficients between SAT-9 and STAR Reading test scores ranged between $+.65$ and $+.75$ across the elementary grades.

STAR Reading provides teachers with quick and accurate estimates of students' reading levels so they can match students with the appropriate levels of books to maximize their reading growth. STAR Reading provides sound estimates of students' reading levels relative to a nationally representative sample of 30,000 K-12 students. The results of STAR Reading are highly correlated with traditional standardized tests; but unlike these lengthy, high-stake assessments, STAR Reading can be administered several times per year to identify the reading level for a student and predict the student's performance on a high-stakes test (Advantage Learning Systems, 2000).

STAR Reading includes a bank of over 10,000 vocabulary-in-context items and over 260 authentic text passage items. When students take a test, they begin with an item at the low end of their ability level. As students answer the questions correctly, the computer presents more difficult items. When a student makes an error, the computer presents a less difficult item. This Adaptive Branching testing method is both efficient and powerful because it produces valid and reliable results in one-fifth the time of a traditional standardized test (Advantage Learning Systems, 2000). Moreover, the program can create five or six unique "forms" for the nearly 1,800 items so the same student can be tested often without encountering the same item twice (Rodriguez, 2007). Once a student has incorrectly answered several items consecutively, the computer generates a GE reading score as well as an instructional reading level for each student using the results on the test. The grade-level equivalent compares a scaled score to the median score to other students across the United States. The instructional reading level

determines the highest reading level for a class based upon the AR test passed with 80% or higher (DuVall, 2000).

Once students have completed the online STAR Reading assessment, a computerized report can be generated for each student. The Diagnostic Report (Appendix C) provides information about the student's reading level based on his or her STAR Reading test results. Included in this report is the student's GE score; a national Percentile Rank (PR), which is the average range and means that the students scored in comparison with students nationally in the same grade; the PR Range, which reflects the amount of statistical variability in a student's PR score; the student's individual reading level; the ZPD, based on a concept developed by Russian psychologist Lev Vygotsky, which is used to choose books that will provide optimal reading challenge without frustration; Estimated ORF, an estimation of the number of words a student should be able to read within a one-minute time span; and finally, a list of recommended strategies that can be incorporated into the student's personalized reading plan to promote growth (Renaissance Learning, 2009).

There are several additional reports included in the STAR Reading series. The Summary Report (Appendix D) provides research-based, reliable and valid data which enables the classroom teacher to see how the class is doing as a whole, to make critical instructional decisions. Distribution summaries included in this report give an overall picture of the class, quickly identifying those who may need intervention. The Growth Report (Appendix E), which includes graphs, is used to measure students' progress between two testing periods. The Progress Monitoring Report (Appendix F) is in line-graph form which allows a visual display of the overall direction of the students' scores as well as expected scores for students in the 25th, 50th, and 75th percentile ranks

nationally (Renaissance Learning, 2009).

Once students' GE scores are identified, the second step to using the AR program consists of setting individualized reading practice goals. Renaissance Learning has developed a guideline chart (Appendix G) for this purpose, yet the company urges teachers to use their professional judgment when setting individual student goals.

Renaissance Learning, Inc. (2007) identified three steps in determining individualized reading practice goals for students:

1. Identify the child's grade-equivalent score (using STAR Reading or another reading test).
2. Identify the suggested ZPD which is the book level range in which students will experience maximum growth.
3. Set point goals based on how much reading practice time is available.

The AR computer system provides more than 140,000 different books and tests, both fiction and nonfiction at different reading levels or zones. The AR program (Paul et al., 1996) combines a literature-based reading program with the use of a computer to provide detailed reports to parents, teachers, and administrators on each child's reading progress. The purpose of this is to offer students appropriate recreational reading as a means of encouraging reading achievement gains. This goal dovetails with the findings of *Patterns of Reading Practice* that the more students read, the better they perform on academic achievement tests in both reading and mathematics (Paul et al., 1996). Students having access to the system first choose a book in their reading zone and read the story. After reading the story at least once, the student takes a computerized multiple choice test which measures the student's knowledge and comprehension of the story. These tests usually contain 5, 10, or 20 questions depending on the book's length, reading level, and

complexity (Pavonetti, Brimmer, & Cipielewski, 2000). Questions are presented in an order that matches the chronology of the book and typically focus on the books' significant events, characters, and literary features. These quizzes are encouraging and motivating, focusing on literal comprehension. If a student has read the book, he or she should be able to pass the AR Reading Practice quiz (Institute for Academic Excellence, 1999). A student's final score is the percentage test score times the book's point value; for example, 80% x 3.0 points=2.4 points for reading *Dear Mr. Henshaw* and answering 8/10 questions correctly. Students do not receive points if their test scores fall below 60%, and they may take quizzes only once (Pavonetti et al., 2000).

After the students complete the test, they are given immediate feedback regarding their score and questions that were answered incorrectly. Students receive points according to the length and difficulty of the books they read, determined by a computer-administered readability program. Prior to 1994, these reading levels were based on the Fry Readability Index then, after January 1994, on the Flesch-Kincaid reading index (Florida Center for Reading Research, 2004). The AR formula to calculate the point value of a book using reading level and number of words is as follows:

$$\text{AR points} = \frac{(10 + \text{Reading Level}) \times \text{Words in Book}}{100,000}$$

The points accumulate to allow the students eligibility for a number of prizes (Carter, 1996) although the developers of AR do not endorse the use of extrinsic rewards (Paul, et al., 1996). AR's management system allows teachers to create reports (Appendixes H-L) to track students' progress, number of books read, number of questions answered correctly, and number of points earned (Briggs & Clark, 1997). According to AR providers, teachers can be fairly sure that students have read and basically comprehended

the story with AR test products. AR provides continuous assessment and accountability for literature based reading (Paul et al., 1996).

With the use of these computer generated reports, teachers can easily identify the students who are experiencing successful reading practice and those who are not. With this information, the teacher can intervene as needed, whether by more closely monitoring the students' book selection habits, or providing targeted instruction on a particular reading skill with which the student may be struggling (Nunnery, Ross, & McDonald, 2006).

The AR software costs \$10 per student based on 250 students (including a \$4.00 per student fee). The one-time fee for AR is \$1,499 (\$500 for an upgrade from previous versions). It includes AR software, software/technical manual, installation guide, testing instructions, and access to over 100,000 quiz titles. Cost for subsequent years is \$4.00 per student per year (\$1,000 minimum). It includes software upgrades, updates, expert technical support, district-wide management and reporting access (Renaissance Learning, 2005).

According to the Renaissance Corporation (2005), implementation is most effective when all 10 guidelines prescribed by the company are conformed to produce the desired outcomes on student achievement. These include (1) the teacher will schedule time for reading practice; (2) the teacher will find the ZPD for each student; (3) students will use a reading log; (4) the teacher will take the status of the class daily; (5) the teacher will set reading goals with each student; (6) the teacher will check the TOPS (The Opportunity to Praise Students) report, which provides the students and parents cumulative data about the Reading Practice Quiz for the marking period and for the school year; (7) the teacher will review the diagnostic report weekly; (8) the teacher will

adjust book levels so students maintain an average of 85-92% on quizzes; (9) the teacher and/or the school will create a system of motivators (extrinsic rewards); and (10) the teacher will assess skills with literacy skills tests (DuVall, 2000).

Renaissance Learning, the parent company of AR, guarantees an increase in test scores if the AR program is properly implemented in a school, specifically using the 10-step guidelines. Previous research indicates that observations of language arts/reading teachers using the program shows that there is inconsistency in how each teacher utilizes the program in their classroom. Teachers also lack appropriate training in how to correctly implement the program using the 10 guidelines suggested by Renaissance Learning (DuVall, 2000).

It is also true that even under the best conditions, initial startup of any technology-based educational system will be onerous as teachers learn software operation, work out inevitable bugs, and integrate the new data in their regular instruction (Abbott, Greenwood, Buzhardt, & Tapia, 2006). When properly implemented, however, technology can ease teachers' assessment burdens and increase efficiency and effectiveness (Roland, 2006).

Previous Studies of AR

Although AR was the first major recreational reading management system to gain popularity across the United States, review of previous studies shows mixed results as to the effectiveness of AR.

Recreational reading management systems are frowned upon by some educators (for example, Alvermann, 2003) who insist on more authentic approaches to encouraging and monitoring independent reading such as literature circles, reading workshops, and writing in response to reading (Balajthy, 2007). Pavonetti et al. (2000) found that long-

term effects of AR on motivation to read might not be particularly large. Mallette, Henk, and Melnick (2004) similarly found no improvement of attitudes toward recreational reading with use of AR. Toppings' (1999) earlier survey of 12 studies, however, found all but one to show that AR had positive effects, but he noted that the studies were not rigorously designed. He also warned that "appropriate and sufficient high-quality training and support for teachers are needed if implementation integrity is to be sustained at the level necessary to raise student attainment" (Toppings', 1999, Summary and Conclusions page). In other words, recreational reading management systems may not be effective in achieving school goals if they are simply add-ons that are not integrated with the classroom curriculum (Balajthy, 2007).

According to Thompson et al. (2008),

Most of the published research studies focus on AR in the elementary classroom. It is unclear whether this is because AR is primarily used in elementary grades or whether it is because there are limited studies regarding AR use with high school students. (p. 551).

McGlinn and Parish (2002) found that AR positively affected 10 English as a Second Language (ESL) students by improving their attitudes toward reading and increasing their time spent reading. In a study at a private K-8 catholic school in Brooklyn, the librarian noted increased library circulation when the school began using AR (Everhart & Guastello, 2002). "The only disadvantage of using AR that these researchers reported was limited book selections" (Thompson et al., 2008, p. 551).

Although the aforementioned studies suggest that AR can be successful in improving students' reading skills and attitudes about reading, other researchers have reached different conclusions (Thompson et al., 2008). For example, after measuring the

growth in Stanford Achievement Test reading scores of 30 sixth-grade students, Mathis (1996) did not find AR to have a significant effect on students' scores. Pavonetti et al.'s (2000) study found no significant difference between the amount of reading done by middle-school students who used AR in elementary school and by those who had not used the program. However, these students read less in middle school if AR was discontinued.

Along with the pressure to increase reading scores, most educators recognize that without increasing students' motivation to read, it is unlikely that they will become better readers (Gambrell, 1996; Guthrie & Wigfield, 2000). Though many schools have implemented Sustained Silent Reading programs to increase motivation and literacy skill development, studies indicate that most adolescents do not choose reading as a recreational activity (Brozo & Hargis, 2003; Guth & Heaney, 1998).

Although the creators of AR claimed that the program will "get students excited about books" (Renaissance Learning, 2005), both Persinger (2001) and Brisco (2003) questioned whether AR created lifelong lovers of reading or students who are merely addicted to earning points and prizes. After interviewing elementary students and teachers, Persinger concluded that requiring a certain number of books to be read during a specified period of time could unintentionally limit the intrinsic value of reading. "Persinger also challenged the practice of using AR as part of reading grades, which applies an academic pressure that counters the pleasurable aspects of reading" (Tompson et al, 2008, p. 551).

Biggers (2001), Brisco (2003), and Krashen (2002) wondered whether or not AR is responsible for increased reading levels. Krashen argued that there is not enough evidence that the AR tests and points are what actually help students improve as readers

and suggested that improvements may be attributed to increased access to books at students' reading levels, coupled with more time to read in school. "Biggers (2001) and Brisco (2003) maintained that AR does not have an instructional component, does not foster intrinsic motivation, and does not offer extension activities or increased interaction with the text" (Tompson et al., 2008, p. 552).

Smith (2005) studied tenth-grade students who were reading below grade level. They were put in a reading class that used small class size, AR, and cooperative learning strategies to support them in taking the Florida Comprehensive Assessment Test (FCAT). Students spent 30 minutes of class time each day reading AR books and the remainder of the 53-minute period was spent in cooperative learning groups to practice reading comprehension strategies and workbook activities to prepare for the state test. Students' mean scores increased by 7% on the Degrees of Reading Power assessment and also increased 4% on the FCAT. "Smith did not mention motivation or attitudes toward reading" (Tompson et al., 2008, p. 552).

The major advantage of these systems is their ease of management, freeing teachers to spend more time on other aspects of teaching, and simultaneously holding students accountable for reading. The management systems provide teachers with a clear picture of how many books each student is reading, the difficulty of the books, and the equality of student performance on the quizzes (Balajthy, 2007).

There is consensus among three key federally funded agencies (What Works Clearinghouse, National Center on Student Progress Monitoring, and Florida Center for Reading Research), as well as several peer-reviewed journal articles that review research on educational products, that AR has met high standards of scientific rigor with positive effects and no contrary evidence (Krashen, 2006).

Two letters defending AR appeared in the fall 2007 issue of *Education Next*. In one, Renaissance Learning President Steven Schmidt defended his product, saying that three federally funded agencies agree that AR has positive effects. One of these is the National What Works Clearinghouse. Schmidt does not mention that The Clearinghouse reviewed 35 studies of AR, and dismissed 34 of them as not meeting its standards in methodology. The only one accepted by the Clearinghouse was the first half of the first study in Ross, Nunnery, and Goldfeder (2004), a study of children in Grades K through 3. The core of AR is independent reading; but in this case, because of the age of the children, the focus was on reading to and with the children, not independent reading. Also, strong gains only appeared with the 61 children in kindergarten, and no information about comparison group activities was provided (Krashen, 2006).

Ross et al. (2004) noted that before their study appeared, “there have been no published, well-controlled evaluation of (AR’s) effectiveness” (p. 1), and they claimed that their study reported “significant positive results” (Krashen, 2006, p. 1). Ross et al. do not mention that an incomplete version of AR was used, with tests but without rewards. In addition, the results were unimpressive: AR students were better in Grade 3 with a moderate effect size of .36, but the effect size for Grade 4 was a low .16, and an even lower .09 for both Grades 5 and 6 (Krashen, 2006).

A great deal of previous research tells us that more reading generally results in greater gains in literacy development. This was not the case in Ross et al. (2004). While comparisons did an undisclosed amount of sustained silent reading, Ross et al. reported that 80% of the AR teachers said they devoted at least 45 minutes per day to reading, and 95% said reading time was at least 30 minutes, considerably more than is done in typical sustained silent reading programs (Krashen, 2006).

It is possible that the use of AR tests emphasizing low-level, literal facts focused students on retaining small details of the books they read in order to get higher test scores. This means shallower involvement in reading, less of a chance of being absorbed in the text, less time in what Nancie Atwell called “The Reading Zone,” a state of mind that may be optimal for language acquisition and literacy development (Krashen, 2006).

Two studies that met What Works Clearinghouse’s evidence standards and eligibility screens investigating the effects of AR or some subset of its components are as follows. The first study was conducted by Ross et al. (2004) involving a randomized controlled trial that included 45 teachers and 572 students in Grades K-3. The study took place in 11 schools in Memphis, TN. Within each school, a minimum of two teachers within one grade volunteered to be randomly assigned to implement either the intervention, AR, or the comparison, a commercially available basal reading program used across all schools. The study examined student outcomes during the first year of implementation. The findings of this study confirmed that there was no significant effect of AR on third-grade student performance on the STAR Reading test. In What Works Clearinghouse computations, this positive effect was not statistically significant but was considered substantively important according to What Works Clearinghouse criteria (an effect size greater than 0.25). The study also showed that AR has positive and statistically significant effects on a measure of general reading achievement (STAR Early Literacy test) when results are combined across kindergarten, first-, and second-grade students. When analyzed separately for each grade level, the effects are substantively important (greater than 0.25) but not statistically significant (What Works Clearinghouse, 2009).

A second study meeting the approval of What Works Clearinghouse was one

conducted by Bullock (2005). Bullock was a randomized controlled trial that included 32 students from two third-grade classrooms in 1 school near Eugene, OR. The students were randomly assigned to the intervention group or the control group. The intervention group implemented AR for 10 weeks, spending at least 90 minutes a week independently reading trade books in the classroom and taking AR quizzes on each book. The control group also spent at least 90 minutes a week reading independently, choosing any book available in the school library, and not using the AR software. This study found no significant effect of AR on third graders when measured using the ORF subtest of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Bullock reported, and the What Works Clearinghouse confirmed, no significant effect of AR on third graders when measured using the STAR Reading tests. However, What Works Clearinghouse calculations show the effect to be negative and substantively important according to What Works Clearinghouse criteria (an effect greater than 0.25) (What Works Clearing House, 2009).

The renowned linguist Dr. Stephen Krashen (2011), an expert in reading comprehension and its effects on language acquisition, has noted that there is consistent evidence that those students who have access to books read more, and those students who are provided with more time to do recreational reading show better gains in reading achievement than comparison students. “The AR Program emphasizes such reading time and access to books” (Rodriguez, 2007, p. 192).

Nunnery et al. (2006) conducted a study researching the effectiveness of AR on the reading achievement of students attending urban, high-poverty elementary schools. Study participants included 978 students in Grades 3-6 and 44 teachers in a large urban school district in the southern United States. Of the students, 90% were African

American, 83% were eligible for free or reduced-priced lunch, and more than half were female. Teachers were either randomly assigned to either a treatment group, meaning they would implement AR, or a control group that would not implement the program (Nunnery et al., 2006).

AR and control students were administered the STAR tests during the same time periods in September (pretest), January (midterm), and April (posttest). Students in AR classrooms had significantly higher growth rates in reading compared to students in control classrooms. In summary, the implementation of AR had consistently positive effects on the reading achievement of at-risk students across Grades 3 to 6, with larger effects in the earlier grades and small effects in the upper grades. Surprisingly, fidelity of program implementation at the classroom level did not predict achievement any better than simple knowledge of whether the classroom was implementing the program, although children with learning disabilities in high-implementation classrooms had significantly higher achievement gains than children with learning disabilities in either control or low-implementation classrooms (Nunnery et al., 2006).

The results of another study conducted by Johnson and Howard (2003) suggest that the AR program can be effective if the participating students are willing to do supplemental reading. Students who read below grade level and would benefit most from the AR program had the least participation in his investigation. “No supplemental reading program will be effective if students do not participate. The presence of an AR program, without actual daily usage by students, is not helpful in improving reading comprehension and vocabulary” (Johnson & Howard, 2003, p. 92).

Practical issues designed to increase student participation in recreational reading using the AR program should concern school administrators and teachers. Time in

school for recreational reading must be considered when scheduling curriculum. Perhaps a before-school and after-school AR program would provide uninterrupted quiet time for students to have recreational reading. In addition, administrators can ensure that proper support personnel are hired and trained to manage the AR computer labs and keep them in good working order. Moreover, teacher training and student-parent orientations are essential to promoting optimal AR program use. Teachers must monitor the appropriate choice of books to ensure that selections are neither too easy nor too challenging. Incentive on an individual, classroom, and school-wide basis should be instituted and monitored by the building administrator as well as by the central administration (Johnson & Howard, 2003).

The home environments of these students also need to be investigated. School personnel need to investigate whether home environments are conducive to reading and whether parents are reading to their children. Programs to promote family literacy may be an important component in a schools' literacy design. Research in the area of family literacy for the population should be considered. If the students' home environments are not promoting reading, the implementation of before-and-after school literacy programs may be indicated (Johnson & Howard, 2003).

A drawback of the AR program is the nature of the comprehension questions. Most AR questions are concerned with literal rather than inferential reading comprehension. Teachers tell us that in order to quickly gain the maximum points (and earn prizes), some proficient readers will choose to read at a low level. That is, they will choose short and easy books rather than being challenged by longer and more difficult books that are more likely to emphasize inferential reading comprehension (Johnson & Howard, 2003).

“Because AR is used in thousands of schools throughout the United States and the number continues to grow—despite the fact that research on AR is contradictory—there is clearly a need for more studies to be conducted about this program” (Tompson et al., 2008, p. 552).

Despite the number of studies that do exist as to whether or not the AR program is effective and what that effectiveness means in the long run are questions that still have no definitive answers. One response to this question is that of the Florida Center for Reading Research (2004): “its effectiveness depends on its implementation” (p. 2).

According to Balajthy (2007),

Too often, we limit our efforts to improve reading and literacy instruction to simply substituting one new “hot” strategy for an older one that served much the same purpose. Such changes at best yield only incremental improvements in the quality of our service to students. (p. 246)

Use of technology in schools can be costly and time consuming, eating up limited resources. At its best, however, when appropriately considered and planned, new technology can scaffold teaching and learning so as to bring about significant change in both efficiency and effectiveness, and even to redefine ways in which we use and make meaning of text (Jacobs, 2006). New assessment technologies can improve teachers’ abilities to encourage more time on task in reading and writing. They can provide teachers with current information about their students. New technologies can help teachers organize and interpret data in ways that directly affect the teaching and learning processes. Finally, and perhaps most important, they can provide the flexibility that is key for meeting the needs of the diverse population in U.S. schools (Balajthy, 2007).

Summary

The significance of this study was that although there have been many advances made in the area of reading instruction, no sufficient gains in reading proficiency have been made in recent years. According to reports from the National Assessment of Educational Progress, during the 2014-2015 school year, only 35% of fourth-grade students scored proficient on tests measuring reading proficiency (National Center for Educational Statistics, 2015). This research sought to determine such issues as to what extent motivation to read, parental support, and full implementation of the AR program have on reading achievement.

Chapter 3: Methodology

Introduction

The purpose of this study was to evaluate fidelity of program implementation of the AR program in relation to fourth-grade students' achievement in reading at six elementary schools located in a school district in North Carolina. Specifically, the study examined the relationship among students' motivation to read, the role of parental support, and the reading success of students as measured by the fourth-grade EOG reading test.

This chapter provides the necessary methodology to answer the following research questions.

1. To what extent has the fidelity of the AR program been implemented at each school?
2. How does parental support, motivation to read, and implementation fidelity of AR relate to academic success in reading as measured by the North Carolina EOG reading test scores?

The methodology included sections that addressed the participants, research design, instruments, procedures, data collection, data analysis, and limitations to the study.

Research Design

This study utilized a mixed-methods design consisting of both quantitative procedures and qualitative procedures. Qualitative data were gathered as a result of surveys administered to students, teachers, and parents. In addition, quantitative data were collected from performance instruments currently used in the school district. Qualitative data were gathered through observational checklists and teacher interviews to

establish perceived fidelity of the AR implementation and perceptions of parental support. Correlational analysis was used to determine the relationships among motivation to read, parental support, and fidelity of AR program implementation with academic achievement.

Quantitative methods included beginning-of-year and mid-year Benchmark scores as well as EOG reading test scores. These scores were collected from the schools and the county testing coordinator. AR records were collected from the media circulation software program that documents student reading preferences. The researcher collected data to determine whether, and to what degree, a relationship existed between the implementation of AR and the reading EOG test scores of fourth graders in six schools.

Participants

This study utilized a matched-pair scenario based on socioeconomic demographics. Participants in the study included all fourth-grade students with parental consent, teachers, and parents of these students. In addition, principals and media specialists from the six elementary schools located in the piedmont region of North Carolina participated. Fourth-grade students were chosen as the population due to consistently low student achievement in reading at both the national and state level (National Center of Educational Statistics, 2010). These six schools were selected based on a paired comparison of socioeconomic population. One school was selected because of high EOG scores in reading. Another school was selected due to strong school-wide AR program implementation.

All fourth-grade students who received parental consent participated in a survey that measured their motivation to read. The sample population was the students who had consent and who responded to the motivation survey. The researcher sought a response

rate of 40%.

There were 22 fourth-grade teachers who participated. These teachers were asked to complete two surveys: one to determine extent to which they have implemented the AR program and the extent they have incorporated AR into their reading program; and the second asked them to provide their perceptions of their students' parents' involvement in their child's reading success.

All fourth-grade students whose parents gave consent for their child to participate in the study were asked to participate in a survey measuring parental involvement in their child's reading achievement. There were approximately 20-25 students per classroom. The target population was 500 with a response rate of 40% anticipated. These survey results were compared with the teachers' perception data of parental involvement.

Principals were interviewed about their school's overall reading program. They were also asked to describe the extrinsic motivators, if any, their school provides for participation in the AR program.

Finally, the English language arts curriculum facilitator for the district was interviewed to provide the district's overall expectations for the reading program at the elementary level. All fourth-grade teachers, media specialists, principals, and the English language arts curriculum facilitator participated in this study.

Instruments

There were nine instruments utilized in this study to gather data. This section describes each instrument and gives the validation information for each.

The Elementary Reading Attitude Survey (ERAS) was used to measure student attitude toward reading (McKenna & Kear, 1990). The purpose for use of this survey was to determine the relationship between motivation to read and student participation in

the AR program. Permission to administer the ERAS and a copy of the instrument are exhibited in Appendices M and N.

The ERAS was developed in a pictorial format because of its natural appeal for children and because of its comprehensibility by the very young. The comic strip character Garfield was selected because it was more apt to be recognized by children in elementary grades. The creator of Garfield, Jim Davis, along with his publisher, agreed to supply four black-line, camera-ready poses of Garfield ranging from very happy to very upset and to permit the resulting instrument to be copied and used by educators. Each item is assigned 1, 2, 3, or 4 points, with a “4” indicating the happiest Garfield. The survey consists of two item sets (recreational and academic) which were selected on the basis of inter-item correlation coefficients. There are 10 questions for each category. Estimates of reliability as well as evidence of validity were based on a national sample of over 18,000 children in Grades 1-6 (McKenna & Kear, 1990).

Evidence of construct validity for the ERAS was gathered by several means. For the recreational subscale, students in the national norming group were asked (a) whether a public library was available to them and (b) whether they currently had a library card. Those to whom libraries were available were separated into two groups (those with and without cards), and their recreational scores were compared. Cardholders had significantly higher ($p < .001$) recreational scores ($M = 30.0$) than noncardholders ($M = 28.9$), evidence of the subscales validity in that scores varied predictably with an outside criterion (McKenna & Kear, 1990).

A second test compared students who presently had books checked out from their school library versus students who did not. The comparison was limited to children whose teachers reported not requiring them to check out books. The means of the two

groups varied significantly ($p < .001$), and children with books checked out scored higher ($M = 29.2$) than those who had no books checked out ($M = 27.3$) (McKenna & Kear, 1990).

A further test of the recreational subscale compared students who reported watching an average of less than 1 hour of television per night with students who reported watching more than 2 hours per night. The recreational mean for the low televiewing group (31.5) significantly exceeded ($p < .001$) the mean of the heavy televiewing group (28.6). Thus, the amount of television watched varied inversely with children's attitudes toward recreational reading (McKenna & Kear, 1990).

The validity of the academic subscale was tested by examining the relationship of scores to reading ability. Teachers categorized norm-grouped children as having low, average, or high overall reading ability. Mean subscale scores of the high-ability readers ($M = 27.7$) significantly exceeded the mean of low-ability readers ($M = 27.0$, $p < .001$), evidence that scores were reflective of how the students truly felt about reading for academic purposes (McKenna & Kear, 1990).

Reliability for the ERAS was determined using Cronbach's alpha, a statistic developed primarily to measure the internal consistence of attitude scales (Cronbach, 1951).

Two quantitative instruments utilized in this study were the North Carolina EOG reading test and STAR Reading. Validity and reliability information on the two are as follows.

Content validity was built into the North Carolina EOG test during the development process. All test items are currently in the process of being aligned with Common Core Standards which replaces the North Carolina Standard Course of Study. The original items were written and reviewed by North Carolina teachers (NCPS, 2009).

To determine the reliability of the North Carolina EOG tests, alternate-form reliability was used to examine the extent to which two equivalent forms of a test yield the same results. In research done in one North Carolina school system, when a second form of the Grade 7 reading comprehension test was administered to three classes of students 1 week apart, the reliability estimate was 0.86 (NCPS, 2009).

The STAR Reading computer-adaptive, norm-referenced reading test and database is a periodic progress-monitoring system that incorporates state-of-the-art testing technology including item response theory to provide teachers with accurate reading scores for students in Grades 1-12. The test was normed in the spring of 1999 using a nationally representative sample of 30,000 students from 269 schools in 47 states across the U.S. The reliability of STAR Reading was established with three reliability studies: test-retest ($N=2,095$), alternate forms ($n=4,551$), and generic reliability ($n=20,169$). The grade-level reliability estimates from all three studies are extremely high, ranging from 0.79 to 0.92, with most estimates greater than 0.85. An additional study ($n>12,000$) demonstrated the validity of STAR Reading to other popular standardized tests such as the California Achievement Test and the Iowa Test of Basic Skills. The high correlation (most are above 0.70) between STAR Reading scores and scores on other tests establishes both the validity of STAR Reading for measuring reading achievement and its ability to predict performance on other tests (Renaissance Learning, 2012).

The following section describes other instruments that were used in the course of this study. The AR Implementation Checklist (Appendix O) is a 10-item instrument developed by AR that was self-administered by the teachers in the form of a Likert scale, with choices ranging from “never” to “other” and was used to determine the extent to

which teachers implemented the AR program with fidelity in their classrooms.

The Teacher Observation Checklist (Appendix P) mirrored the previous instrument and was used by the researcher when observing teacher implementation of the AR program in their classroom. This enabled the researcher to gather the same data to check for consistency and fidelity of implementation.

Student Record Report (Appendix Q) is a computer-generated AR report that is used to provide information about student reading preferences. This report can be generated for both individual students and as a class summary. These data were analyzed to determine the number of AR books checked out of the schools' libraries by the targeted population. Scores on AR tests taken were available through these data.

The Parent Survey (Appendix R) was used to determine parental involvement in their child's reading success. This survey was an eight-item Likert scale instrument with categories ranging from "never" to "other." There were also five open-ended questions including two which asked for the name of the child's school and teacher. Although student information remained anonymous, this information assisted the teachers in completing the survey described below.

The Teacher Perception Survey (Appendix S) coincided with the previously described parent survey and was used to determine teachers' perceptions of parents' involvement in their child's reading success. It consisted of eight Likert scale questions, with choices ranging from "never" to "other."

The Principal and ELA Curriculum Facilitator Interview Questions (Appendices T and U) consisted of questions requesting information describing each school's reading program for fourth grade and the school district's expectations for the reading program for the same grade level respectively. Principals were asked to describe the extrinsic

motivators that were in place in their schools to promote student participation in the AR program.

The previous instruments used to gather data were tested for reliability and validity by using content validity. Two experts in the area of reading were asked to examine the checklists and surveys to determine if they were appropriately constructed and if they provided the data to answer the research requirements for this study.

Procedures

Three sets of matched-pair schools were selected on the basis of socioeconomic data. Two of the matched-pair sets were determined by recommendations from school district administrators involved directly in the reading program.

One school recommended had the highest EOG scores in reading in the district; a similar school with matching socioeconomic data completed the pair. The second matched pair was based on a school with a strong history of AR implementation. The matching school to complete this pair was matched on socioeconomic data. The third set of schools was constructed by random selection of the remaining schools in the pool that qualified on the basis of socioeconomics.

The English language arts curriculum facilitator was interviewed to discuss the district's expectations for reading instruction on the elementary level, particularly fourth-grade reading curriculum and pacing and the role AR should play in the program. She was aware of this research and was receptive to being interviewed.

The superintendent of the school district and principals of the six schools being studied were interested in the results of the research and were therefore willing to participate (Appendix V). They were made aware of what was involved in participating in this research and planned to discuss this with their fourth-grade teachers. Although the

teachers were not required to be participants, the researcher also sent them a letter of consent (Appendix W) via email explaining what their involvement would be and assuring them that their effort and time involved would be kept to a minimum. Benefits to them of this study were also addressed in that being made aware of the full potential of the AR program could help them in planning the most effective reading instruction possible for their students. The letter sent to teachers requested a return response within a week indicating their agreement to participate in the study. The letter was resent after 1 week to those who did not respond.

A letter of parental consent (Appendix X) asking permission for their child to complete the ERAS survey was sent home in a packet with each fourth-grade student of the six schools involved in the study. Teachers were asked to distribute these to their students to take home. Teachers who declined to be participants were asked to at least send these packets home and to collect them as they were returned. Along with the consent letter, there was a survey sent to the parents to voluntarily complete addressing the level to which they were participants in their child's reading success. The ERAS was sent along with the consent letter so that students could complete these at home, if parental permission was granted. In the packet, there was a request for the parental letter of consent, the parent involvement survey, and the ERAS completed by the child to be returned within 1 week. Another packet was sent home 1 week later to those parents who did not return the original packet. The researcher was seeking a final response rate of 40%.

Data Collection

The researcher interviewed the district-level English language arts curriculum coordinator to discuss the district's expectations for fourth-grade reading instruction.

Each of the six principals was also interviewed to determine what was involved with each school's reading program. What kind of extrinsic reward system was in place to encourage student participation in the school AR program was also discussed. These participants were personally interviewed either during the school day or after school, whichever was most convenient for them. Notes were taken during these interview sessions and were compiled using the codes assigned to each school. Principals were given the opportunity to see the results of these interviews.

Fourth-grade teachers who consented to be participants were asked to complete a questionnaire in order to determine to what extent they had implemented the AR program according to the 10-step implementation process recommended by Renaissance Learning. The researcher hand delivered these questionnaires when she interviewed the principal at each school. Teachers were asked to complete the questionnaire by the end of 1 week at which time the researcher returned to the schools to collect them. The teachers who had not completed the questionnaire within 1 week were asked to send them via courier to the researcher's school.

Along with the previous instrument, there was an observation checklist which was used to verify that teachers were implementing AR with fidelity. The researcher observed participating teachers at least twice during their literacy block. In order to complete this task, the researcher needed to review the following data from each participating teacher: teacher's daily schedule, lesson plans, personal observation, principal input, student reading logs and reading notebooks, reading conference notebooks, and AR-generated reports. All of these should have been readily available if AR was an integral part of classroom reading instruction and therefore imbedded in the daily literacy block. These were analyzed during visits to the schools by the researcher

after responses to the above questionnaires were compiled. These artifacts were reviewed mostly during literacy blocks, although some data were perused by the researcher at the teachers' convenience, either during their planning time or after school hours.

The packet containing parental consent for their child's participation along with the parent involvement survey and the ERAS survey was given to teachers for distribution at the same time the researcher was in the schools interviewing principals and observing teachers. The researcher personally collected the returned packets. A numbered coding system was used to determine which students returned the packets. Once it was determined how many packets needed to be redistributed, the researcher gave them to teachers to resend and then collected those that were returned after another week.

The survey for teachers' perceptions of parental involvement was given to the teachers once a second round of packets was returned. Again, there was a 1-week deadline at which time the surveys were collected and a second copy was given to those participating teachers who did not complete one. Another personal visit to collect late responses took place a week later.

Quantitative data were collected during one of the visits to the schools. These included the reading checkout data which were obtained by help from the schools' media specialists. STAR Reading results were generated by the teachers, and North Carolina EOG test results were made available from the principals.

Data Analysis

Quantitative and qualitative methodologies were used to answer the research questions for this study. For the quantitative data analysis, results of the North Carolina EOG reading test for fourth grade during the past 3 years were compared to determine the

percent of increase or decrease in scores during those years. These scores also showed a comparison among test results for the schools being studied with scores from the school district and the state.

Further data analysis was addressed for each research question.

1. To what extent has the fidelity of the AR program been implemented at each school?

This research question was answered using two instruments. First, responses from interviews conducted with the principals and the district-level English language arts curriculum coordinator were compiled. The questions asked on both of these instruments were essentially the same, except one instrument was concerned with district-level expectations and opinions while the other instrument involved school-level expectations and opinions. Content analysis was utilized to determine common themes among the schools' reading programs and to determine the level of importance placed on the AR program at each school. These data helped to determine to what extent the participating schools were in compliance with county expectations. It also compared district-level opinions with those of the participating principals.

Second, the AR Implementation Checklist data gathered from the participating fourth-grade teachers were analyzed to determine to what extent teachers were implementing the AR program with fidelity in their classrooms. The data from this Likert scale survey showed a comparison of the schools' fidelity of AR implementation, specifically in the fourth grade. Frequency distribution, variability, and central tendency statistics were compiled to organize this data. Statistics showed to what extent and how often teachers implemented the 10-step guidelines recommended by Renaissance Learning to ensure that the AR program was being used to its full potential in these

classrooms.

2. How does parental support, motivation to read, and implementation fidelity of AR relate to academic success in reading as measured by the North Carolina EOG test scores?

This research question was broken down into several sections which involved various instruments for each. First, parental support was addressed using two instruments—the parent survey and the teacher perception survey.

The parent survey was used to determine parental involvement in their child's reading success. There were five open-ended questions and eight Likert scale questions on this survey. Data collected from the open-ended questions were analyzed using content analysis. Common themes were organized to determine if they coincided with what previous research has gleaned from similar surveys concerning parental involvement. Data collected from the Likert scale questions were used to help determine if there was a correlation between the extent of parental involvement and student success in reading as measured by the North Carolina EOG test scores. Frequency distribution, variability, and central tendency were utilized to compile these data.

Questions from the teacher perception survey coincided with the eight Likert scale questions used in the parent survey. This survey helped to determine teachers' perceptions of how involved they felt their students' parents were in the reading success of their children. Ideally, teacher perceptions and parent answers to the survey questions showed similar results in that parents who were more involved in their child's reading success had children who were more motivated to read and scored higher on instruments such as the reading EOG that measure reading proficiency. Again, distribution statistics were used to compile these data.

Motivation to read was measured using the ERAS, more commonly known as the Garfield survey. These survey data were used to measure student attitudes toward reading. For purposes of this research, the survey was used to determine the relationship between motivation to read and student participation in the AR program. Answers from these survey questions were organized using frequency distribution statistics. The ERAS included a scoring sheet which was used to score the survey. To score the survey, four points were counted for each leftmost (happiest) Garfield circled, three points were counted for each slightly smiling Garfield, two points for each mildly upset Garfield, and one point for each very upset (rightmost) Garfield. Three scores were obtained: the total for the first 10 items, the total for the second 10, and a composite total. The first half of the survey related to attitude toward recreational reading; the second half related to attitude toward academic aspects of reading (McKenna & Kear, 1990). Composite scores were compiled for each participating student. Classroom scores were determined by combining the scores for each teacher's participating students. Finally, each school's ERAS scores were compiled by determining the composite scores using the data from participating student's scores from each fourth-grade classroom.

Data interpretation involved noting where the score fell in regard to the four nodes of the scale. For example, a total score of 50 indicated an overall indifferent attitude toward reading as the score would fall midway between the slightly happy and slightly unhappy Garfield (McKenna & Kear, 1990).

Results from participating students' reading EOG test scores were compared with data collected from the various instruments used in this research to determine the relationship among reading success, parental support, motivation to read, and proper implementation of the AR program.

Limitations

One limitation concerned several of the questions that were included in the parent survey, particularly the question, “How often do you listen to your child read?” Had the students who participated in this research been younger, this would have been an appropriate question. Having a parent listen to the child read is usually a daily homework assignment in the early childhood grades. However, the student participants were fourth graders; therefore, most parents indicated that they no longer listen to their child read. This was an oversight on the researcher’s part. Another limitation involved the Teacher Perception Survey. This survey was used for the purpose of determining how accurately teachers felt parents responded to the Parent Survey; however, this was a purely subjective instrument. Time constraints also posed a major problem as there were 22 classrooms and several hundred participants involved in the data collection. In addition, there was limited information at the county level of the school district involved in the study concerning exactly when, why, and how AR was implemented across the school district.

Delimitations

This study was limited to collecting data from only six elementary schools located in one school district. Also, the study only involved one grade level in each of these six schools. Participants included teachers who have used AR as part of their reading curriculum and were familiar with the program. All quantitative scores were used because only six schools were being studied. Initial principal response as well as interest shown from the district superintendent to the researcher was favorable.

Summary

This study sought to determine what strategies were involved in being a

successful, lifelong reader. An in-depth discussion of where AR fit into a successful reading program was included in the study as well as the implementation process of the program. Parental support and student motivation to read was also addressed in this study. Finally, reading comprehension as measured by EOG scores was researched.

Chapter 4: Results

Introduction

The purpose of this study was to evaluate fidelity of program implementation of the AR program in relation to fourth-grade students' achievement in reading at six elementary schools located in a school district in North Carolina. Specifically, the study examined the relationship among students' motivation to read, the role of parental support, and the reading success of students as measured by the fourth-grade EOG reading test.

Both qualitative and quantitative methods of data collection were used to answer the following research questions.

1. To what extent has the fidelity of the AR program been implemented at each school?
2. How does parental support, motivation to read, and implementation fidelity of AR relate to academic success in reading as measured by the North Carolina EOG reading test scores?

Participants who aided in providing the data for these questions included the English language arts curriculum facilitator, the principals, fourth-grade students along with their parents, and the 22 fourth-grade teachers from six elementary schools of a school district located in the piedmont region of North Carolina.

Data Analysis

Results for the study are reported based on information gathered for each research question.

1. To what extent has the fidelity of the AR program been implemented at each school?

Renaissance Learning, the parent company of AR, guarantees an increase in reading test scores if the AR program is properly implemented in a school, specifically using 10 guidelines prescribed by the company (DuVall, 2000). Table 8 lists these guidelines along with the recommended frequency of proper implementation.

Table 8

Renaissance Learning's Recommended Frequency of AR Implementation

Time to practice reading is scheduled	D	D=Daily
Proximal Development is determined	Q	W=Weekly
Reading log is used by students	D	Q=Quarterly
Status of the class is taken	W	
Reading goals are set for each student	Q	
Opportunity to Praise Students Report is checked	W	
Diagnostic report is reviewed	Q	
Book levels are adjusted	W	
A system of extrinsic rewards is created	Q	
Literacy skills tests are accessed	W	

The 22 fourth-grade teachers from the six schools being studied participated in this research by completing a Likert scale checklist indicating to what extent the fidelity of the AR program been implemented in their classroom. This checklist was designed to coincide with Renaissance Learning's recommended implementation of the AR program. The AR Implementation Checklist (Appendix O), presented in Chapter 3, was self-administered by the teachers. Answer choices ranged from "never" to "other." This summary data utilized a paired comparison based on socioeconomic population which divided the schools into three groups of two schools each. Throughout the study, these schools were grouped and identified as follows: A1/A2, B1/B2, and C1/C2. Schools A1 and A2 are intermediate schools consisting of fourth and fifth grades. Schools B1 and B2 are larger, more affluent schools consisting of kindergarten through fifth grades. C1 and

C2 are also K-5 schools; however, they are Title I schools. These two schools also consist of a smaller student population as compared with the other four schools.

A total of two observations with each of the 22 participating fourth-grade teachers was conducted over the course of 3 months by the researcher in order to determine the validity of teacher responses to the AR Implementation Checklist. These observations occurred during the teachers' literacy blocks. During the observations, the researcher obtained data from the following sources: the teacher's daily schedule, lesson plans, personal observation, principal input, student reading logs and reading notebooks, reading conference notebooks, and AR generated reports. Additional visits occurred at some of the schools in order to gather data either during teachers' planning times or after school hours. A comparison between the teacher responses to the AR Implementation Checklist and the researcher's observations was then compiled.

Table 9 provides the summary data for both the teachers' responses and the researcher's observations.

Table 9

AR Implementation Checklist, Teachers' Responses & Researcher's Observations

Criterion	Standard	A1 N=3 R/O	A2 N=3 R/O	B1 N=5 R/O	B2 N=5 R/O	C1 N=3 R/O	C2 N=3 R/O
Reading practice is scheduled	Daily	3/3	3/3	5/5	5/5	3/3	3/3
Proximal Development determined	Quarterly	2/3	3/3	5/5	4/5	3/3	3/3
Reading log is used	Daily	2/3	3/3	5/5	5/5	3/3	3/3
Status of the class is taken	Weekly	3/3	3/3	2/2	2/2	1/1	1/1
Reading goals are set	Quarterly	3/3	3/3	5/5	5/5	2/3	2/3
Opportunity to Praise Students Report is checked	Weekly	0/0	1/0	2/0	2/0	0/0	0/0
Diagnostic Report is reviewed	Quarterly	0/1	3/2	1/1	5/5	2/1	2/0
Book levels are adjusted	Weekly	0/0	0/0	1/0	0/0	0/0	0/0
Extrinsic rewards are given	Quarterly	2/3	3/3	5/5	5/5	3/3	3/3
Literacy skills tests are accessed	Weekly	1/1	0/0	1/1	2/2	0/0	0/0

Note. The numbers reflect the standard or better. N=the number of teachers per school; R/O=teachers' responses and researcher's observations.

Table 9 data show a summary of teacher responses for determining fidelity of Renaissance Learning's recommended 10-step implementation guidelines for the AR program. For fidelity to be considered, the teachers reported that they were complying

with the checklist, and the researcher observed this as fact.

Of the 10 recommended guidelines, there were three items that were met with 100% fidelity. These included daily reading practice is scheduled during the school day, students use a reading log daily, and extrinsic rewards are given quarterly. Overall, there was a possibility of 60 items being met with fidelity (six teachers x 10 guidelines). Of these totals, 29 of the 60 possibilities were fully being implemented, for a 48% rate of implementation.

Two of the other guidelines were being fully implemented by the teachers of four of the schools. Fourteen teachers (64%) were implementing with fidelity: proximal development is determined. Sixteen teachers (73%), also from four of the schools, were fully implementing: quarterly reading goals are set.

Only six of the 22 teachers (27%) were implementing with fidelity: taking a weekly status of the class. There were only five of the total number of teachers (23%) who were reviewing the diagnostic report quarterly.

Three of the 10 recommended guidelines were not being implemented by the teachers at all. These included the weekly Opportunity to Praise Students Report, book levels are adjusted weekly, and literacy skills tests are assessed weekly.

For school A1, the three teachers met or exceeded 5 (50%) of the recommended guidelines. The three teachers from school A2 met or exceeded 6 (60%) of the guidelines. Five (50%) of the recommended guidelines were met by the five teachers from schools B1 and B2. Teachers from schools C1 and C2 were implementing, with fidelity, 4 (40%) of Renaissance Learning's recommended guidelines.

In order to establish an understanding of the school district's expectations for reading instruction, particularly for fourth grade, the district's English language arts

curriculum facilitator was interviewed. The following narrative describes her opinion of successful reading instruction including the AR program.

This school district has adopted the balanced literacy approach which uses both whole language and phonics for its reading program. The goal of the balanced literacy program is to include the strongest elements of each. There are five different components of the balanced literacy program: the read aloud, guided reading, shared reading, independent reading, and word study (Fountas & Pinnell, 2001). Teachers in this school district are expected to follow the Instructional Expectations documents developed by the English language arts curriculum facilitator.

When asked questions concerning the AR program in relation to the district's expectations, the English language arts curriculum facilitator indicated that the program is a motivational reading support tool that is used in Grades 2-5. It allows students to monitor book selection and comprehension after reading self-selected titles.

She also stated that the program is used differently at every elementary school. The implementation and fidelity of AR among the elementary schools in this district is inconsistent, with some schools using it effectively and with fidelity while others do not. She believes the district is getting the desired results out of the investment from those schools that are implementing it correctly.

Principals were also interviewed to determine their expectations for the schools' reading program, particularly for the AR component. All six principals indicated that their schools were following the guidelines set forth by the district concerning the expectations for how the reading program should be implemented. Each principal indicated that their school was enforcing the balanced literacy model and observations conducted by the researcher verified this as fact. A 90-120 minute uninterrupted literacy

block called Readers Workshop took place daily in each school. Common themes emerged when interviewing these principals as to what they expected to observe when they walked into any classroom during Readers Workshop. These included well planned-out mini lessons taught by the teacher; modeling how good readers read by the teacher reading aloud to the students, then allowing the students to practice this by reading both in pairs and silently; partner discussions; small-group instruction and intervention led by the teacher; conferencing with students about what they were reading and taking anecdotal notes; and practicing fluency, writing, and word work.

When asked about AR's importance to their school's reading program, the six principals indicated that AR was a part of the program; however, it was not the focal point. They also felt that for the most part, they were getting the desired results out of the investment. Several schools had set aside an additional 30-minute block of time, not part of the literacy block, devoted to AR. These were the schools that scheduled a 120-minute literacy block of time during the day. During this time, students would read silently in their AR books and/or take AR tests; teachers would conference with students about their reading goals and what they were reading; students would select new AR books either in the classroom library or from the school's library. Other schools incorporated AR into their main literacy block with students reading and taking AR tests during their independent time in Readers Workshop. The principals felt that AR still has value but needs to be redefined and that it is a good program for those students who need more motivation to read.

The principals, in contrast, were not as sure that teachers were implementing AR effectively and with fidelity. Only two principals indicated that their teachers were using AR to its full potential, with one of these two principals saying the teachers were

implementing with fidelity 100% of the time. The other four principals did not think teachers fully utilize AR, saying that there is no training. What training there is usually comes in the form of a coworker showing how to use the computer components of the program. Three principals reported that it depends on the teacher and that it varies. Finally, one principal indicated that in all her years as an educator, she had only witnessed one second-grade teacher who used the AR program to its full capacity.

To summarize, the data gathered and compiled to answer Research Question 1 indicate that there were inconsistencies in the fidelity of implementation of the AR program in the schools that were involved in this research. There were, however, several of the items recommended by Renaissance Learning that were being implemented with fidelity. Of the components that indicated discrepancies, most teachers indicated that they were above standards set by Renaissance Learning. Teachers were also following the school district's mandates during their literacy blocks.

The second research question consists of several components which will be addressed separately.

2. How does parental support, motivation to read, and implementation fidelity of AR relate to academic success in reading as measured by the North Carolina EOG reading test scores?

The first part of Research Question 2 dealt with parental support in relation to academic success in reading. According to previous studies on the subject, many researchers feel that parents are the most important teachers and that parental involvement is crucial to students' academic success, particularly in the area of literacy (Cooter et al., 1999; Henderson, 1998; Padak & Rasinski, 1998).

When asked about how important parental support is in relation to a child's

reading success, the English language arts curriculum facilitator of the school district felt that it is very important and that it takes strong partnerships between the school and the home for all students to demonstrate high levels of success.

One of the questions presented to principals during interviews concerned their opinion on the importance of parental support in relation to a child's reading success. The resounding answer was that educators cannot produce successful students without parental support. One principal said, "They (the parents) should be the first teacher in their child's life." The principal of school B2 indicated that she could tell immediately which students enrolling in kindergarten had been read to at home and that parents must be held accountable. The principal of school B1 believes that home is the key and that support is needed from parents.

One principal who was interviewed for this research felt strongly that parental involvement is the key to initial reading success. Research tell us that children whose families encourage at-home literacy activities have higher phonemic awareness and decoding skills (Burgess, 1999), higher reading achievement in the elementary grades (Cooter et al., 1999), and advanced oral language development (Senechal et al., 1998).

In order to determine the level of parental involvement for each of the six schools being researched, a parent survey (Appendix R) presented in Chapter 3 was sent home and returned to the child's teacher from those parents who chose to participate. Of 533 surveys, 251 were completed and returned to the researcher for a 47% response rate. The survey consisted of eight Likert scale questions indicating frequency of participation in various components of their child's reading success. These answer choices ranged from "never" to "other." Teachers also completed a survey (Appendix S), for each parent survey returned that indicated their perceptions of the parents' responses. The teacher

survey also consisted of the same eight Likert scale questions as the parent survey. This survey helped to determine how involved parents were in their child's reading success as perceived by the teachers.

Tables 10-12 provide the data for both the parent survey responses and for the teachers' perceptions of the parents. Furthermore, these are arranged according to how the schools were paired for this research: schools A1/A2, B1/B2, and C1/C2.

Table 10

Schools A1/A2–Parent Survey Responses & Teacher Perceptions Survey Responses

School/Criteria	Standard											
	Never-Rarely				Daily-Biweekly				Other			
	Parent		Teacher		Parent		Teacher		Parent		Teacher	
	N	%	N	%	N	%	N	%	N	%	N	%
School A1												
N=49												
Listen to child read	7	14.0	16	33.0	41	84.0	18	36.0	1	2.0	15	31.0
Read to child	16	33.0	28	57.0	28	57.0	6	12.0	5	10.0	15	31.0
Public library	40	82.0	26	53.0	6	12.0	0	0.0	3	6.0	23	47.0
Purchase books	36	74.0	31	63.0	8	16.0	0	0.0	5	10.0	18	37.0
Free time reading	9	19.0	6	13.0	35	71.0	34	69.0	5	10.0	9	18.0
Pleasure reading	9	19.0	5	10.0	38	77.0	36	73.0	2	4.0	8	17.0
Discuss reading	9	19.0	28	57.0	37	75.0	6	12.0	3	6.0	15	31.0
Read together	20	41.0	28	57.0	24	49.0	8	16.0	5	10.0	13	27.0
School A2												
N=19												
Listen to child read	5	26.0	4	21.0	11	58.0	11	58.0	3	16.0	4	21.0
Read to child	6	32.0	8	42.0	11	58.0	6	32.0	2	10.0	5	26.0
Public library	7	37.0	12	63.0	9	47.0	2	11.0	3	16.0	5	26.0
Purchase books	14	74.0	16	84.0	2	11.0	0	0.0	3	15.0	3	16.0
Free time reading	2	11.0	4	21.0	16	84.0	13	68.0	1	5.0	2	11.0
Pleasure reading	3	16.0	1	5.0	16	84.0	17	90.0	0	0.0	1	5.0
Discuss reading	6	32.0	5	26.0	13	68.0	9	48.0	0	0.0	5	26.0
Read together	8	42.0	7	37.0	9	47.0	7	37.0	2	11.0	5	26.0

Note. N=total number of parent responses per school; P=parent responses; T=teacher perception responses, both frequencies and percentages.

There was a large discrepancy between the number of returned surveys between these two schools, with school A1 having 49 returned parent surveys and school A2 only having 19 surveys returned.

Overall, there was a possibility of 544 items being met for both schools from a daily to a biweekly frequency (68 parents x 8 criterion). Of these totals, 304 (56%) of the

544 possibilities were being met at this frequency. According to teacher perceptions, however, 173 (32%) of the parents met this standard. For the never-rarely standard, there were 197 (36%) parental responses in this category and 225 (41%) teacher perception responses.

A further analysis of the data show that school A1 (49 parents x 8 criterion=392 items) met the standard of daily-biweekly 217 (55%) and never-rarely 146 (37%) of the time. Teacher perceptions for school A1 was 108 (28%) for the daily-biweekly standard and 168 (43%) for never-rarely.

For school A2 (19 parents x 8 criterion=152 items), 87 (57%) parents responded that they are involved in their child's reading success on a daily to biweekly basis, while 51 (34%) parents' responses were from never to rarely. Teacher perceptions for school A2 was 65 (43%) for the daily-biweekly standard and 57 (38%) for never-rarely.

While all eight of the parent survey questions were centered on discovering the extent of parental involvement with their child's reading success, for full parental support to be considered, three of the questions were deemed most important in relation to parental involvement and fourth graders.

The first question was, "How often do you ask your child about his/her pleasure reading?" Overall, 12 (18%) of the 68 parents from both schools indicated that they never to rarely ask their child about his or her pleasure reading. Teachers responded that six (9%) ask about pleasure reading either never or rarely. For individual schools, nine (18%) parents from school A1 indicated that they ask their child about his or her pleasure reading on a never to rarely frequency. Data for school A2 show that three (16%) of the parents ask about pleasure reading either never or rarely. Teacher perceptions were five (10%) for parents of school A1 and one (5%) for parents of school A2.

For the daily to biweekly standard concerning the same question, overall parental responses were as follows: 54 (79%) said that they ask their child about his or her pleasure reading from a daily to biweekly frequency. Teachers perceived that 53 (78%) the parents met this standard. For individual schools, 38 (78%) parents from school A1 indicated that they ask their child about his or her pleasure reading on a daily to biweekly basis. For school A2, the data show that 16 (84%) parents met this standard. Teacher perceptions were 36 (73%) for parents of school A1 and 17 (89%) for parents of school A2.

The second question measuring parental support was, “How often do you take your child to the public library to check out books?” The overall response from parents of both schools was that 47 (69%) do this either never to rarely. Teachers perceived that 38 (56%) parents never or rarely take their child to the public library to check out books. Individually, 40 (82%) parents from school A1 indicated that they never to rarely take their child to the public library to check out books. For the same standard, the numbers for school A2 were seven (37%) parents. Teacher perceptions were 26 (53%) for parents of school A1 and 12 (63%) for parents of school A2.

For the daily to biweekly standard concerning the same question, overall parental responses were as follows: 15 (22%) said that they take their child to the public library to check out books from a daily to biweekly frequency. Teachers perceived that two (3%) of the parents met this standard. For individual schools, six (12%) parents from school A1 indicated that they take their child to the public library to check out books on a daily to biweekly basis. Data for school A2 show that nine (47%) parents met this standard. Teacher perceptions were zero (0%) for parents of school A1 and two (11%) for parents of school A2.

The final question used in determining the relationship between parental support and the reading success of fourth graders was, “How often do you take your child to purchase books?” Overall, 50 (74%) parents said that they never or rarely do this. Teacher perceptions indicated that they believe 47 (69%) parents never or rarely take their child to purchase books. Data for the individual schools show that 36 (73%) parents from school A1 never or rarely purchase books for their child, while 16 (84%) parents from school A2 met this standard. Teacher perceptions for school A1 indicated that 31 (63%) parents never or rarely purchase books for their child, while the perception for parents of school A2 was 16 (84%).

Overall parental responses for the same criterion but for the standard of daily to biweekly showed that 10 (68%) parents purchase books for their child at this frequency.

Data for individual schools indicated that eight (16%) parents from school A1 and two (11%) parents from school A2 purchase books for their child. Teachers perceived that none of the parents purchase books for their child on a daily to biweekly basis.

Table 11 shows the same information as Table 10, only it represents the data collected from schools B1 and B2. These were the largest of the six schools that participated in this research. School B1 had a response of 53 parents, while school B2 had a return of 64 parent surveys. School C1 had 41 returned surveys, while school C2 had 25 returned surveys.

Table 11

Schools B1/B2 – Parent Survey Responses & Teacher Perceptions Survey Responses

School/Criteria	Standard											
	Never-Rarely				Daily-Biweekly				Other			
	Parent		Teacher		Parent		Teacher		Parent		Teacher	
	N	%	N	%	N	%	N	%	N	%	N	%
School B1												
N=53												
Listen to child read	10	19.0	26	49.0	42	79.0	11	21.0	1	2.0	16	30.0
Read to child	14	26.0	28	53.0	37	70.0	6	11.0	2	4.0	19	36.0
Public library	29	54.0	36	69.0	12	23.0	1	1.0	12	23.0	16	30.0
Purchase books	33	62.0	40	75.0	8	15.0	1	1.0	12	23.0	12	24.0
Free time reading	12	23.0	13	25.0	39	73.0	38	71.0	2	4.0	2	4.0
Pleasure reading	6	11.0	8	15.0	45	85.0	39	74.0	2	4.0	6	11.0
Discuss reading	4	8.0	20	38.0	46	87.0	18	34.0	3	5.0	15	28.0
Read together	7	13.0	25	47.0	41	78.0	13	25.0	5	9.0	15	28.0
School B2												
N=64												
Listen to child read	20	31.0	35	55.0	39	61.0	5	8.0	5	8.0	24	37.0
Read to child	26	41.0	47	73.0	31	48.0	1	2.0	7	11.0	16	25.0
Public library	53	83.0	46	72.0	4	6.0	4	6.0	7	11.0	14	22.0
Purchase books	48	75.0	53	83.0	10	16.0	0	0.0	6	9.0	11	17.0
Free time reading	13	20.0	15	23.0	51	80.0	48	75.0	0	0.0	1	2.0
Pleasure reading	9	14.0	21	33.0	55	86.0	38	59.0	0	0.0	5	8.0
Discuss reading	13	20.0	30	47.0	44	69.0	16	25.0	7	11.0	18	28.0
Read together	26	41.0	29	45.0	34	53.0	17	27.0	4	6.0	18	28.0

Note. N=total number of parent responses per school; P=parent responses; T=teacher perception responses, both frequencies and percentages.

Overall, there was a possibility of 936 items being met for both schools from a daily to a biweekly frequency (117 parents x 8 criterion). Of these totals, 538 (57%) of the 936 possibilities were being met at this frequency. According to teacher perceptions, however, 256 (27%) of the parents met this standard. For the never-rarely standard, there were 323 (35%) parental responses in this category and 472 (50%) teacher perception

responses.

A further analysis of the data show that school B1 (53 parents x 8 criterion=424 items) met the standard of daily-biweekly 64% (270) and never-rarely 27% (115) of the time. Teacher perceptions for school B1 was 127 (30%) for the daily-biweekly standard and 196 (46%) for never-rarely.

For school B2 (64 parents x 8 criterion=512 items), 268 (52%) parents responded that they are involved in their child's reading success on a daily to biweekly basis, while 208 (41%) parents' responses were from never to rarely. Teacher perceptions for school B2 was 129 (25%) for the daily-biweekly standard and 276 (54%) for never-rarely.

While all eight of the parent survey questions were centered on discovering the extent of parental involvement with their child's reading success, for full parental support to be considered, three of the questions were deemed most important in relation to parental involvement and fourth graders.

The first question was, "How often do you ask your child about his/her pleasure reading?" Overall, 15 (13%) of the 117 parents from both schools indicated that they never to rarely ask their child about his or her pleasure reading. Teachers responded that 29 (25%) ask about pleasure reading either never or rarely. For individual schools, six (11%) parents from school B1 indicated that they ask their child about his or her pleasure reading on a never to rarely frequency. Data for school B2 show that nine (14%) of the parents ask about pleasure reading either never or rarely. Teacher perceptions were eight (15%) for parents of school B1 and 21 (33%) for parents of school B2.

For the daily to biweekly standard concerning the same question, overall parental responses were as follows: 100 (85%) said that they ask their child about his or her pleasure reading from a daily to biweekly frequency. Teachers perceived that 77 (66%)

of the parents met this standard. For individual schools, 45 (85%) parents from school B1 indicated that they ask their child about his or her pleasure reading on a daily to biweekly basis. For school B2, the data show that 55 (86%) parents met this standard. Teacher perceptions were 39 (74%) for parents of school B1 and 38 (59%) for parents of school B2.

The second question measuring parental support was, “How often do you take your child to the public library to check out books?” The overall response from parents of both schools was that 82 (70%) do this either never to rarely. Teachers perceived that 82 (70%) parents never or rarely take their child to the public library to check out books. Individually, 29 (55%) parents from school B1 indicated that they never to rarely take their child to the public library to check out books. For the same standard, the numbers for school B2 were 53 (83%) parents. Teacher perceptions were 36 (68%) for parents of school B1 and 46 (72%) for parents of school B2.

For the daily to biweekly standard concerning the same question, overall parental responses were as follows: 16 (14%) said that they take their child to the public library to check out books from a daily to biweekly frequency. Teachers perceived that seven (1%) of the parents met this standard. For individual schools, 12 (23%) parents from school B1 indicated that they take their child to the public library to check out books on a daily to biweekly basis. Data for school B2 show that four (1%) parents met this standard. Teacher perceptions were one (.02%) for parents of school B1 and four (1%) for parents of school B2.

The final question used in determining the relationship between parental support and the reading success of fourth graders was, “How often do you take your child to purchase books?” Overall, 81 (69%) parents said that they never or rarely do this.

Teacher perceptions indicated that they believe 93 (79%) parents never or rarely take their child to purchase books. Data for the individual schools show that 33 (62%) parents from school B1 never or rarely purchase books for their child, while 48 (75%) parents from school B2 met this standard. Teacher perceptions for school B1 indicated that 40 (75%) parents never or rarely purchase books for their child, while the perception for parents of school B2 was 53 (83%).

Overall parental responses for the same criterion, but for the standard of daily to biweekly, showed that 18 (15%) parents purchase books for their child at this frequency.

Data for individual schools indicated that eight (15%) parents from school B1 and 10 (16%) parents from school B2 purchase books for their child. Teachers perceived that only one (.02%) parent from school B1 purchases books for their child on a daily to biweekly basis.

Table 12 represents data collected for schools C1 and C2. These are smaller Title 1 schools as compared to the other four schools included in this research. There were 41 returned parent surveys from school C1 and 25 for school C2.

Table 12

Schools C1/C2–Parent Survey Responses & Teacher Perceptions Survey Responses

School/Criteria	Standard											
	Never-Rarely				Daily-Biweekly				Other			
	Parent		Teacher		Parent		Teacher		Parent		Teacher	
	N	%	N	%	N	%	N	%	N	%	N	%
School C1												
N=41												
Listen to child read	3	7.0	15	37.0	36	88.0	9	22.0	2	5.0	17	41.0
Read to child	9	22.0	23	54.0	30	73.0	7	17.0	2	5.0	11	29.0
Public library	30	73.0	25	61.0	6	15.0	3	0.0	5	12.0	16	39.0
Purchase books	29	71.0	26	64.0	5	12.0	1	2.0	7	17.0	14	34.0
Free time reading	15	37.0	9	22.0	24	58.0	30	73.0	2	5.0	2	5.0
Pleasure reading	4	10.0	7	17.0	33	80.0	27	66.0	4	10.0	7	17.0
Discuss reading	4	10.0	13	32.0	34	83.0	8	19.0	3	7.0	20	49.0
Read together	6	15.0	14	35.0	32	78.0	8	19.0	3	7.0	19	46.0
School C2												
N=25												
Listen to child read	10	40.0	12	48.0	14	56.0	3	12.0	1	4.0	10	40.0
Read to child	6	24.0	17	68.0	14	56.0	2	8.0	5	20.0	6	24.0
Public library	13	52.0	13	52.0	4	16.0	0	0.0	8	32.0	12	48.0
Purchase books	11	44.0	17	68.0	10	40.0	0	0.0	4	16.0	8	32.0
Free time reading	7	28.0	3	12.0	14	56.0	20	80.0	4	16.0	2	8.0
Pleasure reading	0	0.0	4	16.0	20	80.0	17	68.0	5	20.0	4	16.0
Discuss reading	6	24.0	7	28.0	15	60.0	9	36.0	4	16.0	9	36.0
Read together	6	24.0	8	32.0	12	48.0	8	32.0	7	28.0	9	36.0

Note. N=total number of parent responses per school; P=parent responses; T=teacher perception responses, both frequencies and percentages.

Overall, there was a possibility of 528 items being met for both schools from a daily to a biweekly frequency (66 parents x 8 criterion). Of these totals, 303 (57%) of the 528 possibilities were being met at this frequency. According to teacher perceptions, however, 149 (28%) of the parents met this standard. For the never-rarely standard, there were 159 (30%) parental responses in this category and 213 (40%) teacher perception

responses.

A further analysis of the data show that school C1 (41 parents x 8 criterion=328 items) met the standard of daily-biweekly 61% (200) and never-rarely 31% (100) of the time. Teacher perceptions for school C1 was 90 (27%) for the daily-biweekly standard and 132 (40%) for never-rarely.

For school C2 (25 parents x 8 criterion=200 items), 103 (52%) parents responded that they are involved in their child's reading success on a daily to biweekly basis, while 59 (30%) parents' responses were from never to rarely. Teacher perceptions for school C2 was 59 (30%) for the daily-biweekly standard and 81 (41%) for never-rarely.

While all eight of the parent survey questions were centered on discovering the extent of parental involvement with their child's reading success, for full parental support to be considered, three of the questions were deemed most important in relation to parental involvement and fourth graders.

The first question was, "How often do you ask your child about his/her pleasure reading?" Overall, four (1%) of the 66 parents from both schools indicated that they never to rarely ask their child about his or her pleasure reading. Teachers responded that 11 (17%) ask about pleasure reading either never or rarely. For individual schools, four (1%) parents from school C1 indicated that they ask their child about his or her pleasure reading on a never to rarely frequency. Data for school C2 show that zero (0%) of the parents ask about pleasure reading either never or rarely. Teacher perceptions were seven (17%) for parents of school C1 and four (16%) for parents of school C2.

For the daily to biweekly standard concerning the same question, overall parental responses were as follows: 53 (80%) said that they ask their child about his or her pleasure reading from a daily to biweekly frequency. Teachers perceived that 44 (67%)

of the parents met this standard. For individual schools, 33 (80%) parents from school C1 indicated that they ask their child about his or her pleasure reading on a daily to biweekly basis. For school C2, the data show that 20 (80%) parents met this standard. Teacher perceptions were 27 (66%) for parents of school C1 and 17 (68%) for parents of school C2.

The second question measuring parental support was, “How often do you take your child to the public library to check out books?” The overall response from parents of both schools was that 43 (65%) do this either never to rarely. Teachers perceived that 38 (58%) parents never or rarely take their child to the public library to check out books. Individually, 30 (73%) parents from school C1 indicated that they never to rarely take their child to the public library to check out books. For the same standard, the numbers for school C2 were 13 (52%) parents. Teacher perceptions were 25 (61%) for parents of school C1 and 13 (52%) for parents of school C2.

For the daily to biweekly standard concerning the same question, overall parental responses were as follows: 10 (15%) said that they take their child to the public library to check out books from a daily to biweekly frequency. Teachers perceived that zero (0%) of the parents met this standard. For individual schools, six (15%) parents from school C1 indicated that they take their child to the public library to check out books on a daily to biweekly basis. Data for school C2 show that four (16%) parents met this standard. Teacher perceptions were zero (0%) for parents of school C1 and zero (0%) for parents of school C2.

The final question used in determining the relationship between parental support and the reading success of fourth graders was, “How often do you take your child to purchase books?” Overall, 40 (61%) parents said that they never or rarely do this.

Teacher perceptions indicated that they believe 43 (65%) parents never or rarely take their child to purchase books. Data for the individual schools show that 29 (71%) parents from school C1 never or rarely purchase books for their child, while 11 (44%) parents from school C2 met this standard. Teacher perceptions for school C1 indicated that 26 (63%) parents never or rarely purchase books for their child, while the perception for parents of school C2 was 17 (68%).

Overall parental responses for the same criterion, but for the standard of daily to biweekly, showed that 15 (23%) parents purchase books for their child at this frequency.

Data for individual schools indicated that five (12%) parents from school C1 and 10 (40%) parents from school C2 purchase books for their child. Teachers perceived that only 1 (.02%) parent from school C1 purchases books for their child on a daily to biweekly basis.

In addition to the eight Likert scale questions, parents were also asked about the combined household income on the parent survey. The purpose of this open-ended question was to determine if household income played a role either in increased or decreased parental involvement in their child's reading success. For example, the researcher sought to determine if a higher combined household income would result in more books being purchased for the child.

Table 13 shows the data for the 251 responses, broken down into six income ranges. The data also show the number of parents in each category by school.

Table 13

Combined Household Income by School

School	Income Ranges					
	<\$20,000	\$20,000-40,000	\$40,001-60,000	\$60,001-80,000	\$80,001-100,000	>\$100,000
A1	15	8	13	1	3	9
A2	1	7	1	2	1	7
B1	3	9	15	9	9	8
B2	2	9	14	8	11	20
C1	12	13	12	0	1	3
C2	2	8	8	3	2	2
Totals:	<u>35</u>	<u>54</u>	<u>63</u>	<u>23</u>	<u>27</u>	<u>49</u>

Responses to the Likert scale questions were further compiled by income. Table 14 provides the summary data of this information.

Table 14

Parent Survey Responses by Income

Criterion	Standard																	
	< \$20,000			\$20,000-\$40,000			\$40,001-\$60,000			\$60,001-\$80,000			\$80,001-\$100,000			>\$100,000		
	N	D	O	N	D	O	N	D	O	N	D	O	N	D	O	N	D	O
Listen to child read	3	30	2	6	46	2	12	51	0	10	9	4	6	21	0	16	26	7
Read to child	9	25	1	6	40	8	18	40	5	10	8	5	10	15	2	21	23	5
Public library	25	7	3	34	11	9	45	12	6	15	1	7	17	5	5	32	5	12
Purchase books	23	8	4	34	10	10	38	15	10	15	4	4	18	4	5	39	2	8
Free time reading	7	24	4	11	37	6	14	46	3	6	16	1	9	17	1	8	39	2
Pleasure reading	4	28	3	5	44	5	9	51	3	6	17	0	4	22	1	3	45	1
Discuss reading	5	29	1	7	43	4	10	48	5	5	14	4	4	20	3	9	35	5
Read together	12	21	2	8	37	9	14	45	4	13	8	2	5	15	7	19	26	4

Note. N=never – rarely; D=daily – biweekly; O=other.

Overall, there are 2008 items (251 parents x 8 criteria) represented in the summary data for Table 14. For all income ranges, 659 (32%) of the responses indicate that these parents never, or rarely, participate in their child's reading success. Again, for all income ranges, 1,145 (57%) of the responses indicate that these parents are involved in their child's reading success somewhere between a daily to a biweekly frequency.

For parents indicating that their combined household income was below \$20,000

per year, there was a possibility of 280 items meeting the criteria. The data show that 88 (31%) of these choices fell in the never to rarely range and 172 (61%) in the daily to biweekly range.

Parents with a combined yearly household income between \$20,000-\$40,000 showed 111 (26%) of a possible 432 items in the never to rarely range and 268 (62%) for daily to biweekly.

In the \$40,001-\$60,000 combined yearly household range where there was a possibility of 504 items meeting the criteria, 160 (32%) parent responses indicated that they are never involved in their child's reading success. Parents who said that they are involved from a daily to a biweekly range represented 308 (61%) of the data.

There was a possibility of 184 items represented for parents with a combined yearly household income ranging between \$60,001-\$80,000. For the never to rarely category, there were 80 (43%) responses. There were 77 (42%) of the responses represented in the daily to biweekly category.

Data from parents with a combined yearly household income ranging between \$80,001-\$100,000 showed that 73 (34%) of a possible 216 responses were never or rarely involved in their child's reading success. Responses in the daily to biweekly category showed a response of 119 (55%).

The last category for the 251 parents' data representing combined yearly household income showed the responses for the 49 parents who indicated an income of over \$100,000. There were 392 items (49 parents x 8 criterion). Of these 392 possible responses, 147 (38%) were in the never to rarely category and 201 (51%) were in the daily to biweekly category.

Also in the parent survey was the following open-ended question: What is your

opinion of the AR program at your child's school? Parents' responses were 78% positive opinions about the AR program, while 22% responded negatively.

The resounding themes gleaned from the positive responses was that AR motivates children to read (which is the main purpose of the program), it encourages and challenges them to set goals and to reach them, it is a good program for improving reading skills and for assessing comprehension, the program helps to guide children to choose books that are within their appropriate reading level, and that children love the rewards that are obtained from reaching their goals.

Some negative responses included that the AR program is too restrictive, meaning that it does not allow for reading other media such as newspaper articles and magazines, books that are not considered to be AR books, and not allowing children to read outside of their reading range. The AR rewards are not sufficient or given often enough or consistently enough to be an adequate incentive to reach the reading goal. Often, the same rewards are offered repetitively which causes students who were once motivated to read in order to participate in the reward to become indifferent to that incentive. One parent felt that if a child does not like to read, the emphasis of earning points becomes a stressor for that child. Along those lines, a common theme was that points seem to be the main focus of the AR program instead of reading for enjoyment which creates a competitive atmosphere.

In addition to the role that parental support plays in a child's academic success in reading, motivation to read is also a vital component of the equation. Research indicates, as discussed in Chapter 2, that one has to practice reading in order to become a better reader. In order to have the desire to read, the motivation to want to read must be in place. An important component that is often ignored where reading success is concerned

is the fact that many students, for various reasons, just do not have the desire to read. This is often the case even for students who are proficient readers.

The recent emphasis on enhanced reading proficiency has often ignored the important role played by children's attitudes in the process of becoming literate (McKenna & Kear, 1990).

According to Allington and Gabriel (2012), there are six elements of instruction that every child should experience every day in order gain academic success in literacy. The first of these elements is that every child reads something he or she chooses. Students are more likely to become engaged readers when they are given the choice of what they are able to read. By giving students these opportunities, we help them develop the ability to choose appropriate texts for themselves—a skill that dramatically increases the likelihood they will read outside school (Ivey & Broaddus, 2001; Reis et al., 2007).

In a national survey of motivation to read and as evidenced in tests that measure reading proficiency, a large majority of fourth graders in the United States reported that reading was not a favorite activity and they did not read frequently for enjoyment (Donahue et al., 2005).

In order to gather data concerning motivation to read, students from the fourth-grade classrooms of the six schools who participated in this research were given the opportunity to complete the ERAS, more commonly known as the Garfield survey. The purpose of this instrument, according to its developers, was to produce a public-domain instrument that would enable teachers to estimate attitude levels efficiently and reliably (McKenna & Kear, 1990).

The ERAS consists of 20 items: 10 of these deal with attitudes towards recreational reading, and the remaining 10 focus on students' attitudes towards academic

reading. A pictorial format was elected because of its natural appeal for children and because of its comprehensibility by the very young. The Garfield comic strip character was selected due to it being an easily recognizable character among children in Grades 1-6. Jim Davis, who is the creator of Garfield, and United Features, his publisher, agreed to supply four black-line, camera-ready poses of Garfield, ranging from very happy to very upset, and to then permit the resulting instrument to be copied and used by educators (McKenna & Kear, 1990).

Only those surveys from which parents gave permission through signing a consent form were then used as a part of this study. There were a total of 533 students in these classrooms: 251 parental consent forms were returned, giving the researcher a 47% response rate for use of the ERAS survey.

The data collection is presented in Tables 15-21. The summary data for Table 15 show the frequency for all students' responses, while data represented in Tables 16-21 are for each of the six schools.

Table 15

Frequency of Students' Responses to the ERAS Survey

Criterion	Frequency/Percentage N=251			
	Very Upset	A Little Upset	A Little Happy	Very Happy
Reading on a rainy Saturday	33/13.0	59/24.0	95/38.0	64/25.0
Reading in school during free time	12/5.0	35/14.0	83/33.0	121/48.0
Reading for fun at home	48/19.0	51/20.0	85/34.0	67/27.0
Getting a book for a present	25/10.0	25/10.0	78/31.0	123/49.0
Spending free time reading	20/8.0	62/25.0	102/41.0	67/27.0
Starting a new book	4/2.0	18/7.0	61/24.0	168/67.0
Reading during summer vacation	83/33.0	68/27.0	72/29.0	28/11.0
Reading instead of playing	99/39.0	71/28.0	67/27.0	14/6.0
Going to a bookstore	4/2.0	20/8.0	88/35.0	139/55.0
Reading different kind of books	9/4.0	27/11.0	89/35.0	126/50.0
Teacher asking questions about your reading	22/9.0	59/24.0	118/47.0	52/20.0
Reading workbook pages/worksheets	48/19.0	76/30.0	92/37.0	35/14.0
Reading in school	8/3.0	24/10.0	79/31.0	140/56.0
Reading your school books	13/5.0	44/18.0	90/36.0	104/41.0
Learning from a book	6/2.0	37/15.0	97/39.0	111/44.0
Time for reading in class	15/6.0	23/9.0	71/28.0	142/57.0
Stories you read in reading class	10/4.0	44/18.0	103/41.0	94/37.0
Reading out loud in class	78/32.0	68/27.0	64/25.0	41/16.0
Using a dictionary	39/15.0	57/23.0	101/40.0	54/22.0
Taking a reading test	43/17.0	48/19.0	89/36.0	71/28.0

Note. N=the number of student responses for all six schools. All questions begin with either, "How do you feel when..."? or "How do you feel about..."?

According to the data represented in Table 15, there were a total of 5,020 possible responses to the 20 ERAS survey questions (20 questions x 251 students). The category of "very upset" received 619 (13%) of the responses; "a little upset" 916 (18%); "a little happy" 1,724 (34%); and 1,761 (35%) for "very happy."

Overall, student attitudes toward reading were more positive than negative, both

for questions dealing with recreational and for academic reading. There were a total 2,510 possible responses for both categories for data representing all 251 students (10 questions x 251 students). Student responses for recreational reading were as follows: 337 (13%) for “very upset”; 426 (17%) for “a little upset”; 820 (33%) for “a little happy”; and 917 (37%) for “very happy.”

For questions dealing with academic reading, student responses were as follows: 282 (11%) for “very upset”; 916 (19%) for “a little upset”; 1,724 (36%) for “a little happy”; and 1,761 (34%) for “very happy.”

A further analysis of the data shows that for recreational reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading instead of playing?” This coincides with the national survey concerning motivation to read, conducted by Donahue et al. (2005) in which a large majority of fourth graders indicated that reading was not a favorite activity. The criterion that received the most “very happy” responses was for the question, “How do you feel about starting a new book?”

For academic reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading out loud in class?” The criterion that received the most “very happy” responses was for the question, “How do you feel when it is time for reading in class?”

Table 16 presents the data for school A1, which had a return of 49 ERAS surveys.

Table 16

Frequency of Students' Responses to the ERAS Survey for School A1

Criterion	Frequency/Percentage N=49			
	Very Upset	A Little Upset	A Little Happy	Very Happy
Reading on a rainy Saturday	13/27.0	7/14.0	19/39.0	10/20.0
Reading in school during free time	3/6.0	9/18.0	18/37.0	19/39.0
Reading for fun at home	12/24.0	13/27.0	16/33.0	8/16.0
Getting a book for a present	7/14.0	6/12.0	14/29.0	22/45.0
Spending free time reading	6/12.0	9/18.0	24/49.0	10/20.0
Starting a new book	0/0.0	2/4.0	14/29.0	33/67.0
Reading during summer vacation	16/33.0	16/33.0	14/29.0	3/6.0
Reading instead of playing	21/43.0	15/31.0	12/24.0	1/2.0
Going to a bookstore	0/0.0	6/12.0	18/37.0	25/51.0
Reading different kind of books	2/4.0	1/2.0	17/35.0	29/59.0
Teacher asking questions about your reading	1/2.0	10/20.0	32/65.0	6/12.0
Reading workbook pages/worksheets	5/10.0	14/29.0	21/43.0	9/18.0
Reading in school	1/2.0	6/12.0	16/33.0	26/53.0
Reading your school books	2/4.0	5/10.0	20/41.0	22/45.0
Learning from a book	0/0.0	5/10.0	16/33.0	28/57.0
Time for reading in class	1/2.0	8/16.0	14/29.0	26/53.0
Stories you read in reading class	2/4.0	9/18.0	23/47.0	15/31.0
Reading out loud in class	14/29.0	10/20.0	19/39.0	6/12.0
Using a dictionary	7/14.0	6/12.0	20/41.0	16/33.0
Taking a reading test	7/14.0	9/18.0	22/45.0	11/22.0

Note. N=the number of student responses for all six schools. All questions begin with either, “How do you feel when...”? or “How do you feel about...”

According to the data represented in Table 16, there were a total of 980 possible responses to the 20 ERAS survey questions (20 questions x 49 students) for school A1. The category of “very upset” received 120 (12%) of the responses; “a little upset” 166 (17%); “a little happy” 369 (38%); and 163 (33%) for “very happy.”

Overall, student attitudes toward reading were more positive than negative, both

for questions dealing with recreational and for academic reading. There were a total of 490 possible responses for both categories for data representing all 49 students (10 x 49). Student responses for recreational reading were as follows: 80 (16%) for “very upset”; 84 (17%) for “a little upset”; 166 (34%) for “a little happy”; and 160 (33%) for “very happy.”

For questions dealing with academic reading, student responses were as follows: 120 (12%) for “very upset”; 166 (17%) for “a little upset”; 369 (38%) for “a little happy”; and 325 (33%) for “very happy.”

A further analysis of the data shows that for recreational reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading instead of playing?” The criterion that received the most “very happy” responses was for the question, “How do you feel about starting a new book?” These overall responses were indicative of those from the data for all schools presented in Table 15.

For academic reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading out loud in class?” The criterion that received the most “very happy” responses was for the question, “How do you feel about learning from a book?” This varied from the overall schools’ response of being most happy when reading when it is time for reading in class.

Table 17 presents the data for school A2, which had a return of 19 ERAS surveys.

Table 17

Frequency of Students' Responses to the ERAS Survey for School A2

Criterion	Frequency/Percentage N=19			
	Very Upset	A Little Upset	A Little Happy	Very Happy
Reading on a rainy Saturday	1/5.0	6/32.0	10/53.0	2/11.0
Reading in school during free time	2/11.0	2/11.0	7/37.0	8/42.0
Reading for fun at home	5/26.0	4/21.0	8/42.0	2/11.0
Getting a book for a present	1/5.0	4/21.0	9/47.0	5/26.0
Spending free time reading	3/16.0	7/37.0	8/42.0	1/5.0
Starting a new book	0/0.0	5/26.0	5/26.0	9/47.0
Reading during summer vacation	7/37.0	1/5.0	10/53.0	1/5.0
Reading instead of playing	10/53.0	6/32.0	3/16.0	0/0.0
Going to a bookstore	0/0.0	5/26.0	6/32.0	8/42.0
Reading different kind of books	0/0.0	5/26.0	9/47.0	5/26.0
Teacher asking questions about your reading	6/32.0	8/42.0	4/21.0	1/5.0
Reading workbook pages/worksheets	6/32.0	10/53.0	3/16.0	0/0.0
Reading in school	0/0.0	1/5.0	12/63.0	6/32.0
Reading your school books	1/5.0	11/58.0	5/26.0	2/11.0
Learning from a book	1/5.0	6/32.0	8/42.0	4/21.0
Time for reading in class	1/5.0	1/5.0	12/63.0	5/26.0
Stories you read in reading class	1/5.0	10/53.0	6/32.0	2/11.0
Reading out loud in class	9/47.0	5/26.0	3/16.0	2/11.0
Using a dictionary	3/16.0	8/42.0	6/32.0	2/11.0
Taking a reading test	8/42.0	3/16.0	5/26.0	3/16.0

Note. N=the number of student responses for all six schools. All questions begin with either, "How do you feel when...?" or "How do you feel about...?"

According to the data represented in Table 17, there were a total of 380 possible responses to the 20 ERAS survey questions (20 questions x 19 students) for school A2. The category of "very upset" received 65 (17%) of the responses; "a little upset" 108 (28%); "a little happy" 139 (37%); and 68 (18%) for "very happy."

Overall, student attitudes toward reading were more positive than negative, both

for questions dealing with recreational and for academic reading. There were a total of 380 possible responses for both categories for data representing all 19 students (10 questions x 19 students). Student responses for recreational reading were as follows: 29 (15%) for “very upset”; 45 (24%) for “a little upset”; 75 (39%) for “a little happy”; and 41 (22%) for “very happy.”

For questions dealing with academic reading, student responses were as follows: 36 (19%) for “very upset”; 63 (33%) for “a little upset”; 64 (34%) for “a little happy”; and 27 (14%) for “very happy.”

A further analysis of the data shows that for recreational reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading instead of playing?” The criterion that received the most “very happy” responses was for the question, “How do you feel about starting a new book?” These were the same responses as the overall schools’ responses as well as those of school A1.

For academic reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading out loud in class?” which was the same as the overall school’s responses. The criterion that received the most “very happy” responses was for the question, “How do you feel when it is time for reading in class?” This was the same as the schools’ overall responses; however, different than the paired school’s (School A1) response which was, “How do you feel when about learning from a book?”

Table 18 presents the data for school B1, which had a return of 53 ERAS surveys.

Table 18

Frequency of Students' Responses to the ERAS Survey for School B1

Criterion	Frequency/Percentage N=53			
	Very Upset	A Little Upset	A Little Happy	Very Happy
Reading on a rainy Saturday	6/11.0	12/23.0	22/42.0	13/25.0
Reading in school during free time	1/2.0	8/15.0	15/28.0	29/55.0
Reading for fun at home	9/17.0	11/21.0	15/28.0	18/34.0
Getting a book for a present	5/9.0	4/8.0	19/36.0	25/47.0
Spending free time reading	5/9.0	19/36.0	13/25.0	16/30.0
Starting a new book	0/0.0	4/8.0	13/25.0	36/68.0
Reading during summer vacation	18/34.0	16/30.0	9/17.0	10/19.0
Reading instead of playing	22/42.0	13/25.0	16/30.0	2/4.0
Going to a bookstore	0/0.0	2/4.0	24/45.0	27/51.0
Reading different kind of books	2/4.0	3/6.0	27/51.0	21/40.0
Teacher asking questions about your reading	3/6.0	15/28.0	28/53.0	7/13.0
Reading workbook pages/worksheets	11/21.0	19/36.0	20/38.0	3/6.0
Reading in school	1/2.0	6/11.0	14/26.0	32/60.0
Reading your school books	3/6.0	10/19.0	16/30.0	24/45.0
Learning from a book	2/4.0	7/13.0	28/53.0	16/30.0
Time for reading in class	4/8.0	3/6.0	13/25.0	33/62.0
Stories you read in reading class	1/2.0	4/8.0	23/43.0	25/47.0
Reading out loud in class	14/26.0	15/28.0	14/26.0	10/19.0
Using a dictionary	7/13.0	13/25.0	22/42.0	11/21.0
Taking a reading test	5/9.0	16/30.0	15/28.0	17/32.0

Note. N=the number of student responses for all six schools. All questions begin with either, “How do you feel when...”? or “How do you feel about...”?

According to the data represented in Table 18, there were a total of 1,060 possible responses to the 20 ERAS survey questions (20 questions x 53 students) for school B1. The category of “very upset” received 119(11%) of the responses; “a little upset” 200 (19%); “a little happy” 366 (35%); and 375 (35%) for “very happy.”

Overall, student attitudes toward reading were more positive than negative, both

for questions dealing with recreational and for academic reading. There were a total of 530 possible responses for both categories for data representing all 53 students (10 questions x 53 students). Student responses for recreational reading were as follows: 68 (13%) for “very upset”; 92 (17%) for “a little upset”; 173 (33%) for “a little happy”; and 197 (37%) for “very happy.”

For questions dealing with academic reading, student responses were as follows: 51 (10%) for “very upset”; 108 (20%) for “a little upset”; 193 (36%) for “a little happy”; and 178 (34%) for “very happy.”

A further analysis of the data shows that for recreational reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading instead of playing?” The criterion that received the most “very happy” responses was for the question, “How do you feel about starting a new book?” These responses were the same as those from the overall schools’ responses and for schools A1 and A2.

For academic reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading out loud in class?” The criterion that received the most “very happy” responses was for the question, “How do you feel about reading in school?” Reading out loud in class, which received the most “very upset,” and reading in school, which received the most “very happy” responses were the same as for the other schools already discussed.

Table 19 presents the data for school B2, which had a return of 64 ERAS surveys.

Table 19

Frequency of Students' Responses to the ERAS Survey for School B2

Criterion	Frequency/Percentage N=64			
	Very Upset	A Little Upset	A Little Happy	Very Happy
Reading on a rainy Saturday	3/5.0	14/22.0	23/36.0	24/38.0
Reading in school during free time	2/3.0	6/9.0	21/33.0	35/55.0
Reading for fun at home	8/13.0	7/11.0	29/45.0	20/31.0
Getting a book for a present	5/8.0	3/5.0	22/34.0	34/53.0
Spending free time reading	2/3.0	11/17.0	28/44.0	23/36.0
Starting a new book	1/2.0	4/6.0	18/28.0	41/64.0
Reading during summer vacation	15/23.0	15/23.0	26/41.0	8/13.0
Reading instead of playing	22/34.0	19/30.0	15/23.0	8/13.0
Going to a bookstore	1/2.0	2/3.0	23/36.0	38/59.0
Reading different kind of books	2/3.0	7/11.0	23/36.0	32/50.0
Teacher asking questions about your reading	6/9.0	9/14.0	31/48.0	18/28.0
Reading workbook pages/worksheets	14/22.0	13/20.0	26/41.0	11/17.0
Reading in school	2/3.0	7/11.0	16/25.0	39/61.0
Reading your school books	4/6.0	13/20.0	24/38.0	23/36.0
Learning from a book	2/3.0	9/14.0	25/39.0	28/44.0
Time for reading in class	4/6.0	5/8.0	14/22.0	41/64.0
Stories you read in reading class	2/3.0	10/16.0	25/39.0	27/42.0
Reading out loud in class	15/23.0	26/41.0	13/20.0	10/16.0
Using a dictionary	8/13.0	19/30.0	26/41.0	11/17.0
Taking a reading test	10/16.0	6/9.0	23/36.0	25/39.0

Note. N=the number of student responses for all six schools. All questions begin with either, “How do you feel when...”? or “How do you feel about...”?

According to the data represented in Table 19, there were a total of 1,280 possible responses to the 20 ERAS survey questions (20 questions 64 students) for school B2.

The category of “very upset” received 128 (10%) of the responses; “a little upset” 205 (16%); “a little happy” 451 (35%); and 496(39%) for “very happy.”

Overall, student attitudes toward reading were more positive than negative, both

for questions dealing with recreational and for academic reading. There were a total of 640 possible responses for both categories for data representing all 64 students (10 questions x 64 students). Student responses for recreational reading were as follows: 61 (10%) for “very upset”; 87 (14%) for “a little upset”; 228 (36%) for “a little happy”; and 263 (41%) for “very happy.”

For questions dealing with academic reading, student responses were as follows: 67 (10%) for “very upset”; 117 (18%) for “a little upset”; 223 (35%) for “a little happy”; and 233 (36%) for “very happy.”

A further analysis of the data shows that for recreational reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading instead of playing?” The criterion that received the most “very happy” responses was for the question, “How do you feel about starting a new book?” These were the same responses as evidenced with all the other schools. These responses have been very similar to the responses on student motivation to read surveys conducted nationwide (Donahue et al., 2005).

For academic reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading out loud in class?” The criterion that received the most “very happy” responses was for the question, “How do you feel when it is time for reading in class?” Again, these responses coincided with those of the other schools.

Table 20 presents the data for school C1, which had a return of 41 ERAS surveys.

Table 20

Frequency of Students' Responses to the ERAS Survey for School C1

Criterion	Frequency/Percentage N=41			
	Very Upset	A Little Upset	A Little Happy	Very Happy
Reading on a rainy Saturday	6/15.0	13/32.0	11/27.0	11/27.0
Reading in school during free time	4/10.0	2/5.0	13/32.0	22/54.0
Reading for fun at home	8/20.0	10/24.0	8/20.0	15/37.0
Getting a book for a present	2/5.0	6/15.0	7/17.0	26/63.0
Spending free time reading	2/5.0	10/24.0	19/46.0	10/24.0
Starting a new book	2/5.0	3/7.0	5/12.0	31/76.0
Reading during summer vacation	14/34.0	13/32.0	9/22.0	5/12.0
Reading instead of playing	14/34.0	14/34.0	11/27.0	2/5.0
Going to a bookstore	2/5.0	5/12.0	8/20.0	26/63.0
Reading different kind of books	3/7.0	7/17.0	6/15.0	25/61.0
Teacher asking questions about your reading	4/10.0	15/37.0	12/29.0	10/24.0
Reading workbook pages/worksheets	11/27.0	13/32.0	11/27.0	6/15.0
Reading in school	2/5.0	1/2.0	16/39.0	22/54.0
Reading your school books	2/5.0	4/10.0	15/37.0	20/49.0
Learning from a book	1/2.0	9/22.0	12/29.0	19/46.0
Time for reading in class	4/10.0	1/2.0	13/32.0	23/56.0
Stories you read in reading class	3/7.0	8/20.0	14/34.0	16/39.0
Reading out loud in class	18/44.0	7/17.0	9/22.0	7/17.0
Using a dictionary	11/27.0	7/17.0	15/37.0	8/20.0
Taking a reading test	8/20.0	13/32.0	9/22.0	11/27.0

Note. N=the number of student responses for all six schools. All questions begin with either, “How do you feel when...”? or “How do you feel about...”?

According to the data represented in Table 20, there were a total of 820 possible responses to the 20 ERAS survey questions (20 questions 41 students) for school C1. The category of “very upset” received 121 (15%) of the responses; “a little upset” 161 (20%); “a little happy” 223 (27%); and 315 (38%) for “very happy.”

Overall, student attitudes toward reading were more positive than negative, both

for questions dealing with recreational and for academic reading. There were a total of 410 possible responses for both categories for data representing all 41 students (10 questions x 41 students). Student responses for recreational reading were as follows: 57 (14%) for “very upset”; 83 (20%) for “a little upset”; 97 (24%) for “a little happy”; and 173 (42%) for “very happy.”

For questions dealing with academic reading, student responses were as follows: 64 (16%) for “very upset”; 161 (20%) for “a little upset”; 223 (27%) for “a little happy”; and 315 (38%) for “very happy.”

A further analysis of the data shows that for recreational reading, the criterion that received the most “very upset” responses was a tie for the following two questions, “How do you feel about reading during summer vacation,” and “How do you feel about reading instead of playing?” The criterion that received the most “very happy” responses was for the question, “How do you feel about starting a new book?” Reading during summer vacation had not been a majority of the responses from other schools.

For academic reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading out loud in class?” The criterion that received the most “very happy” responses was for the question, “How do you feel when it is time for reading in class?” These responses were consistent with those of the other schools.

Table 21 presents the data for school C2, which had a return of 25 ERAS surveys.

Table 21

Frequency of Students' Responses to the ERAS Survey for School C2

Criterion	Frequency/Percentage N=25			
	Very Upset	A Little Upset	A Little Happy	Very Happy
Reading on a rainy Saturday	4/16.0	7/28.0	10/40.0	4/16.0
Reading in school during free time	0/0.0	8/32.0	9/28.0	8/32.0
Reading for fun at home	6/24.0	6/24.0	9/28.0	4/16.0
Getting a book for a present	5/20.0	2/8.0	7/28.0	11/44.0
Spending free time reading	2/8.0	6/24.0	10/40.0	7/28.0
Starting a new book	1/8.0	0/0.0	6/24.0	18/72.0
Reading during summer vacation	13/52.0	7/28.0	4/16.0	1/8.0
Reading instead of playing	10/40.0	4/16.0	10/40.0	1/8.0
Going to a bookstore	1/8.0	0/0.0	9/28.0	15/60.0
Reading different kind of books	0/0.0	4/16.0	7/28.0	14/56.0
Teacher asking questions about your reading	2/8.0	2/8.0	11/44.0	10/40.0
Reading workbook pages/worksheets	1/8.0	7/28.0	11/44.0	6/24.0
Reading in school	2/8.0	3/12.0	5/20.0	15/60.0
Reading your school books	1/8.0	1/8.0	10/40.0	13/52.0
Learning from a book	0/0.0	1/8.0	8/32.0	16/64.0
Time for reading in class	1/8.0	5/20.0	5/2.0	14/56.0
Stories you read in reading class	1/8.0	3/12.0	12/48.0	9/28.0
Reading out loud in class	8/32.0	5/20.0	6/24.0	6/24.0
Using a dictionary	3/12.0	4/16.0	12/48.0	6/24.0
Taking a reading test	5/20.0	1/8.0	15/60.0	4/16.0

Note. N=the number of student responses for all six schools. All questions begin with either, “How do you feel when...”? or “How do you feel about...”?

According to the data represented in Table 21, there were a total of 500 possible responses to the 20 ERAS survey questions (20 questions 25 students) for school C2.

The category of “very upset” received 128 (10%) of the responses; “a little upset” 66 (13%); “a little happy” 76 (15%); and 176 (35%) for “very happy.”

Overall, student attitudes toward reading were more positive than negative, both

for questions dealing with recreational and for academic reading. There were a total of 250 possible responses for both categories for data representing all 25 students (10 questions x 25 students). Student responses for recreational reading were as follows: 42 (17%) for “very upset”; 44 (18%) for “a little upset”; 81 (32%) for “a little happy”; and 83 (33%) for “very happy.”

For questions dealing with academic reading, student responses were as follows: 66 (13%) for “very upset”; 76 (15%) for “a little upset”; 176 (35%) for “a little happy”; and 182 (37%) for “very happy.”

A further analysis of the data shows that for recreational reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading during summer vacation?” Responses to this question had not previously been the one that received the most “very upset,” except with school C1 which was paired with this school. The criterion that received the most “very happy” responses was for the question, “How do you feel about starting a new book?”

For academic reading, the criterion that received the most “very upset” responses was for the question, “How do you feel about reading out loud in class?” The criterion that received the most “very happy” responses was for the question, “How do you feel about learning from a book?” These responses were consistent with responses indicated by the other schools.

The English language arts curriculum facilitator and the six principals participating in this study were interviewed in order to determine their opinions on best ways to help motivate children to read. According to the English language arts curriculum facilitator, putting the right types of books into students’ hands is the best way for educators to help motivate children to read. Interest and level are the keys to success.

She also stated that not only the school library but classroom libraries as well must be equipped with high interest-level books that match topics that students are interested in learning more about. There must also be enough books on varying reading levels that will keep students motivated readers.

Principals from the six schools involved in this research were asked about how educators can help motivate children to read. One common theme that emerged from all was that educators must show their own love of reading and do this by modeling. One principal indicated that when students hear how a good reader sounds, they are more likely to copy those habits. Another principal felt that teachers who show their own love of reading by sharing with others what they are personally reading will tend to have more enthusiastic readers in their classroom. Two principals also said that one way to help struggling readers is to guide them to books that are within their reading range—what is called “just right books”—so that they are challenged just enough but not frustrated while reading. Three principals also felt that since children love technology, teachers must tap into that medium during their literacy block in order to excite children during reading time.

According to Renaissance Learning (2009), the parent company of the AR program, students must score at least 60% in order to pass an AR quiz. Table 22 shows the mean AR scores for the end of the 2014-2015 school year for students in each of the six schools that participated in this study.

Table 22

Mean AR Scores for 2014-2015

Schools	Number of Students	Mean AR Scores
A1	49	86.2
A2	19	75.9
B1	53	88.0
B2	64	91.2
C1	41	70.4
C2	25	84.1

The data show that schools B1 and B2 had the highest overall mean AR scores of the six schools, followed by schools A1 and C2. School A2 had the next to lowest scores, while school C1 had the lowest mean AR scores when compared to all other schools.

The last portion of Research Question 2 dealt with how the previous data relate to academic success in reading as measured by the North Carolina EOG reading test scores. In order to determine this, reading EOG scores were collected for the 251 students participating in this study. In order to show a comparison, their scores for the end of their third-grade school year, in addition to their scores at the end of fourth grade, were collected. The following four tables (Tables 23-26) show the proficiency levels for the North Carolina Reading EOG for both the third and fourth grades and student mean reading EOG scores for those grades.

Table 23

2013-2014 Third-Grade Proficiency Levels for the North Carolina Reading EOG

Level	Scale Score
1	≤ 431
2	432 – 438
3	439 – 441
4	442 – 451
5	≥ 452

Table 24

2013-2014 Third-Grade Mean Reading EOG Scores

Schools	Number of Students	Mean Reading EOG Scores
A1	49	439
A2	19	441
B1	53	443
B2	64	440
C1	41	439
C2	25	435

Table 25

2014-2015 Fourth-Grade Proficiency Levels for the North Carolina Reading EOG

Level	Scale Score
1	≤ 438
2	439 – 444
3	445 – 447
4	448 – 459
5	≥ 460

Table 26

2014-2015 Fourth-Grade Mean Reading EOG Scores

Schools	Number of Students	Mean Reading EOG Scores
A1	49	445
A2	19	446
B1	53	449
B2	64	445
C1	41	445
C2	25	443

Data for all schools show consistency between reading EOG scores for third and fourth grades. There was also consistency when comparing proficiency levels among all the schools. The data for each school show the following, which was the same for these same students at the end of their third and fourth grades respectively: school B1 scored a Level 4 mean reading EOG average; school C2 scored a Level 2; and the other four schools scored a Level 3.

Table 27 shows the relationship between motivation to read and fourth-grade reading EOG scores which indicates that motivation to read is not playing a role in increasing test scores.

Table 28

Relationship between Motivation to Read and Fourth-Grade Reading EOG Scores

Motivation	PSP	Mean	Standard Deviation	N
.00	.00	445.28	8.385	82
	1.00	445.11	7.367	47
	Total	445.22	8.000	129
1.00	.00	446.55	9.052	76
	1.00	445.39	9.382	46
	Total	446.11	9.156	122
Total	.00	445.89	8.707	158
	1.00	445.25	8.379	93
	Total	446.65	8.576	251

The following narrative summarizes the data gathered and compiled to answer the research question, “How does parental support, motivation to read, and implementation fidelity of AR relate to academic success in reading as measured by the North Carolina EOG reading test scores?”

All participants in this study including the English language arts curriculum facilitator, the six principals, and the 22 fourth-grade teachers all agreed that parental support plays a pivotal role in a child’s academic success in reading. The data results indicating the extent of parental support varied, as evidenced by the responses for parent surveys and from the teacher perception surveys. A response of “biweekly” support was used as the criteria to determine if parents were supporting their child’s reading success. According to the criteria, 69% of parents were not supportive. According to the teacher perceptions survey, 94% of parents were not supportive.

The data show that overall, students were not motivated to read, especially

evidenced by their responses to the academic portion of the ERAS survey. Even for the recreational portion of the ERAS, though, student responses indicated a more negative reaction to reading rather than a positive one.

Implementation fidelity of AR varied within this school district. All participants involved in this study believe that AR is a good program, especially as a motivator; however, the implementation of the program varies among the schools and even among the teachers within each school.

Reading EOG scores for this group of students remained consistent as evidenced by their scores at the end of third grade and the end of fourth grade. All six schools' proficiency levels also remained consistent between the 2 school years.

Summary

This study sought to determine what strategies are involved in being a successful, lifelong reader. An in-depth discussion of where AR fits into a successful reading program was included in the study as well as the implementation process of the program. Parental support and student motivation to read were also addressed in this study. Finally, reading comprehension as measured by reading EOG scores was researched. Further data analysis summarizing this research including discussions and conclusions is provided in Chapter 5.

Chapter 5: Conclusions, Discussion, and Recommendations

Introduction of the Dissertation

The purpose of this study was to evaluate fidelity of program implementation of the AR program in relation to fourth-grade students' achievement in reading at six elementary schools located in a school district in North Carolina. Specifically, the study examined the relationship among students' motivation to read, the role of parental support, and the reading success of students as measured by the fourth-grade EOG reading test.

Participants who aided in providing the data for these questions included the English language arts curriculum facilitator, the principals, fourth-grade students along with their parents, and the 22 fourth-grade teachers from six elementary schools of a school district located in the piedmont region of North Carolina.

The research questions guiding this study were as follows.

1. To what extent has the fidelity of the AR program been implemented at each school?
2. How does parental support, motivation to read, and implementation fidelity of AR relate to academic success in reading as measured by the North Carolina EOG reading test scores?

Implications of the Findings/Conclusions

According to the data collected for the AR Implementation Checklist used to answer the first research question, both teacher responses and researcher observations, none of the schools were implementing Renaissance Learning's 10-step guidelines with 100% fidelity. In fact, there were only three of the 10 items that were being implemented

with fidelity by the six schools. These included daily reading practice is scheduled, a reading log is used daily by students to record what and how much they are reading, and extrinsic rewards are provided by the school on a quarterly basis. These three items are included in the county-wide expectations for what should be evidenced through administrative observations during literacy blocks. It was evident through teacher responses, researcher observations, and interviews with the English language arts curriculum facilitator and the principals that teachers were adhering to the school district's curriculum outlines and pacing guides for reading instruction.

As for the remaining seven recommended guidelines for implementation fidelity of AR, 14 of the 22 teachers were determining proximal development quarterly; 16 teachers were setting quarterly reading goals; six teachers were taking a daily status of the class; and only five teachers were reviewing the diagnostic report weekly.

The most alarming finding was that three of the 10 recommended guidelines were not being implemented with fidelity at all. One of these was the weekly use of a computer generated report from the AR software in which teachers can conference with students about their reading progress. The report is titled The Opportunity to Praise Students (TOPS) report. Only five teachers indicated that they use this report; however, the researcher observed no evidence of this taking place. Since the main purpose of the AR program is to motivate students to read and one of the district's expectations is that teachers conference with each student on a weekly basis, this report would be an invaluable tool in accomplishing both goals. The TOPS report gives a student immediate, personalized feedback on quizzes taken and it communicates goals, identifies problems, and celebrates success with students and parents (Renaissance Learning, 2007).

Another recommendation not being implemented with fidelity was that book levels are adjusted weekly. Only one of the 22 teachers indicated that she actually accomplishes this, although the researcher did not observe evidence of this. In order to determine appropriate book levels, students take a computerized reading test called STAR. The STAR then generates a GE also known as a ZPD which determines reading range (Renaissance Learning, 2007). An explanation of this discrepancy in frequency of adjusting books levels came from the English language arts curriculum facilitator. She indicated that it has been the school district's practice to consolidate two of the guidelines, those of setting reading goals and students taking the STAR test in order to determine book levels, on a quarterly basis. This process usually takes place at the beginning of each 9-week grading period in order to provide students with a new reading range and goal for that quarter.

The final recommended guideline not being implemented with fidelity was that of literacy skills tests being accessed on a weekly basis. While four of the teachers indicated that they did utilize this test, the researcher observed this taking place with three of those teachers. The literacy skills tests assess how students are progressing in 24 specific reading skills in four key areas. The tests measure the students' development of comprehension skills such as making inferences, making predictions, and responding to literature. In addition, the literacy skills tests document student skill scores for the grading period and his or her progress compared to peers, allowing the teacher to personalize instruction (Renaissance Learning, 2007). Again, this guideline would serve as an invaluable tool in conferencing with students and with individualizing instruction if implemented with fidelity.

Inconsistencies with AR implementation were also evidenced through interviews

with administration. The English language arts curriculum facilitator indicated that the program is a great motivational reading support tool. The principals believed that AR was a part of their school's reading program, just not the focal point of it.

However, when asked about implementation and fidelity of AR, the English language arts curriculum facilitator stated that some schools used the program effectively, while others did not. She also indicated that there have not been any professional development opportunities available to train teachers on how to use the program effectively. In addition, only two of the six principals indicated that their teachers were utilizing the AR program to its full potential.

To summarize, the data collected and analyzed to answer Research Question 1 indicated that this school district is not implementing the AR program with fidelity. This should be of concern to stakeholders because, according to Renaissance Learning, the parent company of AR, implementation is most effective when all 10 guidelines are utilized. The company also guarantees an increase in test scores if the AR program is properly implemented in a school, specifically using the 10-step guidelines (DuVall, 2000).

There were several components involved in determining the answer to the second research question for this study. The first one involved the level of parental support in relation to academic success in reading.

Family literacy professionals often point out that parents are their children's first and most important teachers. Research has shown that children whose families encourage at-home literacy activities have higher phonemic awareness and decoding skills, higher reading achievement in the elementary grades, and advanced oral language development (Hart & Risley, 2003).

In one study, children were asked to share how they found out about the books they were currently reading or had recently read. While examining the ways children were exposed to books, several sources emerged such as the school library, teachers, family members, and peers (Edmunds & Bauserman, 2006). When children were asked who got them interested in and excited about reading, the interviews revealed that the children's interest in and excitement about reading was sparked by various individuals including family members—especially mothers. Once again, the children illustrated the importance of family in the area of reading (Edmunds & Bauserman, 2006).

For the purposes of this study, there were several data sources utilized in determining the extent of parental support and its impact on student reading success. The first one involved interviews with the English language arts curriculum facilitator and with the principals of the six schools who participated in the study.

The English language arts curriculum facilitator stated that it is vital for there to be a strong partnership between the home and the school for there to be high levels of student success in all academic subjects, not just reading.

Principals also emphasized the importance of parental involvement in order for students to become successful readers, and they indicated that the schools cannot produce successful students without parental support. One principal even stated that educators can quickly determine, as early as the kindergarten screening process, which students were read to and exposed to books before school enrollment. Research into the influence of the home and parents has established beyond a doubt that the home connection is critical to student success in learning in general, and literacy in particular (Epstein, 1984; Henderson, 1998; Padak & Rasinski, 1998). Postlethwaite and Ross (1992) found that parental involvement was the most significant predictor of student reading achievement

in their worldwide survey of literacy development in Grades 2 and 8. “Programs to promote family literacy may be an important component in a school’s literacy design. School personnel need to investigate whether home environments are conducive to reading and whether parents are reading to their children” (Johnson, 2003, p. 92).

Other data sources used for determining the extent of parental support were a parent survey and a teacher perception survey. There were discrepancies among the way parents answered the questions versus what the teachers perceived would be their responses concerning parental involvement in their child’s reading success. These discrepancies indicated that either the parents were not totally accurate in their responses and/or teachers’ perceptions were inaccurate.

For the purposes of this research, the criteria used to determine parental support was on a biweekly basis. For example, one of the questions on the parent survey was, “How often to you ask your child about his/her pleasure reading?” If a parent answered that the child was asked about pleasure reading a minimum of a biweekly basis, it was determined that the parent was supporting the child’s reading success. According to the data, 69% of parents were not supportive. An even higher rate, 94%, was calculated for the teacher perceptions according to this criterion.

In order to determine the level of reading motivation of the fourth-grade students who participated in this study, the ERAS was administered. According to the data, student attitudes toward reading, both recreational and academic, were more positive than negative. However, the data show that only 60% of students are motivated to read.

The last portion of Research Question 2 dealt with how all the previous data relates to academic success in reading as measured by the North Carolina EOG reading test scores. Another component of this research dealt with where the AR program fits

into all this information. In order to determine this, mean AR scores were gathered for each school. In addition, reading EOG scores were compiled for both third grade and fourth grade for the same students—the fourth graders who participated in this study.

In an analysis of the data, it is interesting to note that the reading EOG proficiency levels remained the same for all schools when comparing the same students' third-grade scores with their fourth-grade ones. Even though scale scores vary slightly between grade levels, the data reflect what research has indicated as discussed in previous chapters: Reading scores have remained either stagnant or improved slightly over the course of many years (National Center for Educational Statistics, 2015).

Mean AR scores were also of interest. For example, even though school C1 had the lowest overall mean AR score, school C2 had the lowest EOG proficiency level. Also, while school B1 earned the highest EOG scores, school B2 actually had the highest mean AR score. School A1 was reported as having the strongest AR program in the school district; however, schools B1 and B2 actually had a higher mean AR score. These two schools happened to also be the most affluent of the six schools, while school C1 was a Title 1 school with the lowest mean AR score.

Limitations

One limitation concerned several of the questions that were included in the parent survey, particularly the question, “How often do you listen to your child read?” Had the students who participated in this research been younger, this would have been an appropriate question. Having a parent listen to the child read is usually a daily homework assignment in the early childhood grades. However, the student participants were fourth graders; therefore, most parents indicated that they no longer listen to their child read. This was an oversight on the researcher's part. Another limitation involved the Teacher

Perception Survey. This survey was used for the purpose of determining how accurately teachers felt parents responded to the Parent Survey; however, this was a purely subjective instrument. Time constraints also posed a major problem as there were 22 classrooms and several hundred participants involved in the data collection. In addition, there was limited information at the county level of the school district involved in the study concerning exactly when, why, and how AR was implemented across the school district.

Delimitations

In order to insure that data collection was more manageable, only six schools in one school district participated in this research. Also, it was limited to only one grade level within these six schools. All quantitative scores were incorporated into the research since there were only six schools involved. Participants included teachers who had used AR as a part of their reading curriculum; therefore, they were familiar with the program. Administrators, including the school district's superintendent, the English language arts curriculum facilitator, and the six principals were very receptive to participating in this research and were looking forward to reviewing the results.

Recommendations

Findings discussed in this research indicate that there is a place for the AR program in this school district. This was evidenced in the mainly positive responses gathered from the parents' opinions of the AR program in their child's schools and by the positive responses from students gathered from the ERAS survey. Administrators and teachers also believe that AR has its place in the reading curriculum.

There were, however, some weaknesses in implementation that became evident during the course of this research. Teachers lack appropriate training in how to correctly

implement the program using the 10 guidelines suggested by Renaissance Learning (DuVall, 2000). Furthermore, if implementation integrity is to be sustained at the level necessary to raise student attainment, appropriate and sufficient high-quality training and support for teachers are needed (Balajthy, 2007). Moreover, teacher training and student-parent orientations are essential to promoting optimal AR program use (Johnson, 2003). This lack of training could be rectified by mandated professional development opportunities to train not only teachers and media specialists but administrators as well on how to properly implement and maintain the program in classrooms. In addition, this would be most effective if actual representatives from Renaissance Learning would conduct the training. As a follow-up to this training and as a tool for making sure that the program is then being implemented with fidelity in classrooms, principal observation checklists could also include a section for the AR program as a part of the teacher evaluation. Also, from district-level administrators at the central office, it would be beneficial to become familiar with the components of the AR program in order to justify its cost effectiveness. Renaissance Learning provides a framework of guiding questions for district administration, school principals, school AR leadership teams, and classroom teachers to be used as a starting point to help design a comprehensive plan to create a culture of reading in the school district (Renaissance Learning, 2009). In addition, Renaissance Learning provides a training center offering a variety of training options including the following, depending on the school district's needs and budget: seminars, webinars, consulting, implementation coaching, train the trainers model, and Renaissance training symposiums (Renaissance Learning, 2012).

Media specialists could also become "lead teachers" in continuing to train teachers as newer components of the AR program are introduced; however,

administrators should also keep abreast of this to make sure that periodic training is taking place. Teachers within grade levels could also hold one another accountable by just touching base during their weekly professional learning communities meeting. Perhaps monthly or quarterly would be a good time to actually go over the 10 recommended guidelines and various AR reports with one another.

Most schools have family nights scheduled as a part of their parental involvement program. One recommendation would be to have an “AR Night” where parents come into the classroom and the teacher would give a brief presentation highlighting the AR program. Students could then show and explain to their parents various reports and could actually show components of the program on a computer. They could even take an AR quiz, explaining the process along the way. Teachers could also send home in the weekly parent communication folder some of the recommended reports that are generated as a part of the program.

The following recommendations concern student motivation to read. The first one was mentioned by administrators during their interviews. Teachers must take the time to read aloud daily to their students (Allington & Gabriel, 2012). There are several benefits to this practice. First of all, listening to an adult model fluent reading increases students’ own fluency and comprehension skills (Trelease, 2001) as well as expanding their vocabulary, background knowledge, sense of story, awareness of genre and text structure, and comprehension of the texts read (Wu & Samuels, 2004). Reading aloud also shows a teacher’s love of reading. Students also love to witness the human side of their teacher, so sharing what you are personally reading is also beneficial (Allington & Gabriel, 2012).

Teachers should also implement, with fidelity, the 10 recommended guidelines of

Renaissance Learning, especially the Opportunity to Praise Students report that none of the teachers in this study were implementing. This report was designed to encourage students and keep them motivated (Renaissance Learning, 2007), and this tool could easily be incorporated into the district-mandated weekly conference.

Students like to start a new book, as indicated in their response to the question on the ERAS. They also are more likely to read when the book is on a topic they enjoy; therefore, there should be an abundance of newer, interesting books available in the school library and in classroom libraries. Research has shown that students read more, understand more, and are more likely to continue reading when they have the opportunity to choose what they read (Allington, 2012). Guthrie and Humenick (2004) found that the two most powerful instructional design factors for improving reading motivation and comprehension were (1) student access to many books and (2) personal choice of what to read. Research has demonstrated that access to self-selected texts improves student reading performance (Krashen, 2011). By giving students these opportunities, we help them develop the ability to choose appropriate texts for themselves—a skill that dramatically increases the likelihood they will read outside school (Ivey & Broaddus, 2001; Reis et al., 2007).

Teachers and media specialists should also allow for reading of other materials that interest students such as magazines and graphic novels. “An expanded concept of ‘text’ must transcend print-based texts to also include various electronic media and adolescents’ own cultural and social understandings” (Phelps, 2006, p. 4). Technology is also highly engaging to students; therefore, this medium should also be incorporated in the reading curriculum.

Summary

The results of this research indicate that the AR program is still a viable component of the school district's reading program. The program does, however, need to be readdressed as many teachers do not fully utilize its potential. Ideally, if parents become more familiar with the program, they will become more involved with their child's reading success. Furthermore, by enhancing student motivation to read, there will be more reading taking place. More reading will equate to more practice of the actual reading process which will, in turn, help to improve reading test scores. In conclusion, for the scope of this particular study, there was no relationship found between AR scores and EOG reading test scores.

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Appendix A

Letter Explaining New Common Core Standards

[REDACTED]

January 2, 2013

Dear Parent/Guardian:

[REDACTED] Schools will experience changes in testing this year as a result of the new Common Core State Standards (CCSS) for Mathematics and English Language Arts and the North Carolina Essential Standards (ES) for Science. The new curriculums are being taught for the first time in classrooms throughout North Carolina. Consequently, new End-of-Course (EOC) Algebra I/Integrated I Mathematics, English II, and Biology summative assessments aligned to these standards will be administered for the first time at the end of this first (fall) semester.

The first priority when implementing new assessments is to ensure the results of the test scores are valid and reliable. When new assessments are administered to students for the first time, scores are delayed while the North Carolina Department of Public Instruction (NCDPI) processes the test data and completes all of the necessary analyses. These processes and analyses will take place during summer 2013. Due to the necessity of this critical process, students will not receive their test scores at the completion of the test administration; instead the scores for these assessments will be delayed until October 2013. Once the State Board of Education has approved the scores (achievement levels) in October 2013, schools will provide parents with each student's Individual Student Report.

[REDACTED] board policy requires EOC assessments to be used as at least 25% of the student's final grade for each respective course. With results from the new assessments being delayed until October 2013, NCDPI will allow school districts to calculate a 0-100 score for English II, Biology, and Algebra I/Integrated I EOC Assessments in early February. Therefore, students will be assigned an "incomplete" until the 0-100 score for the assessment is available. Once available, schools will calculate the final grade for the course with the assessment counting 25% of the final grade. Schools will then determine if students are appropriately enrolled in spring 2013 classes, and will make other necessary placement adjustments/decisions.

We appreciate your understanding as North Carolina makes the transition to the new curriculum and the next generation of assessments. Our goal is to provide the most accurate information possible concerning student performance on EOC assessments. If you have questions or concerns about the delay of EOC test scores or the assignment of grades, please contact your child's guidance counselor or principal.

Sincerely,

[REDACTED]

Assistant Superintendent
Curriculum and Instruction

Appendix B

Permission to Print Accelerated Reader Reports



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 Phone: (715) 424-3636
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 ③ Growth Report ④ Progress Monitoring Report ⑤ Student Record Report
 ⑥ Diagnostic Report ⑦ Literacy Skills Chart ⑧ Literacy Skills Class
 Summary Report

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My dissertation involves a case study of six
 elementary schools in the school district in which
 I teach. I am seeking to determine if the AR program
 is being implemented properly + how it is incorporated into

Estimated cost: _____ Release date: Fall of 2014 The reader
 Target audience: Faculty + school district personnel program

Author(s) of the publication.

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Tammy K. Waters

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Appendix C

Accelerated Reader Diagnostic Report

STAR Reading • Student Report



Diagnostic Report

Printed Monday, May 19, 2008 11:15:20AM

School: Oakwood Elementary School

Test Date:

Provides information about Matthew's reading level based on his STAR Reading test results.

Bosley, Matthew

Class: Grade 4 (Adams)
Teacher: Mrs. M. Adams

A short computer adaptive test provides key data to help you understand Matthew's reading level.

Diagnostic information about the student's general reading skills, based on the student's performance.

STAR Reading accommodates other readability formulas.

Time for First Part: 4 minutes 57 seconds
Time for Second Part: 4 minutes 35 seconds

SS	GE	PR	PR Range	IRL	Est. ORF ^a	ZPD	ATOS 2000	ZPD 2000
550	5.1	57	45-61	4.5	127	3.5-5.5	771	530-860

This student's Grade Equivalent (GE) score is 5.1. His reading skills are therefore comparable to those of an average fifth grader after the first month of the school year. Matthew also achieved a national Percentile Rank (PR) of 57. This score is in the average range and means that Matthew scored greater than 57% of students nationally in the same grade. The PR Range indicates that, if this student had taken the STAR Reading test numerous times, most of his scores would likely have fallen between 45 and 61. It reflects the amount of statistical variability in a student's PR score.

These scores indicate that Matthew is probably learning to apply his reading skills to different academic areas. Matthew likely uses textbooks and other nonfiction resources to achieve his content area goals. Matthew is also developing study skills to support his reading skills. He is learning to set a purpose for reading. He is also learning to use different reading skills when reading for pleasure and when reading for information. Also, Matthew is beginning to apply pre-reading and post-reading strategies to increase his understanding of nonfiction text.

For optimal reading growth, Matthew needs to:

- Maintain a minimum of 30 to 60 minutes of guided independent reading practice daily
- Practice reading unfamiliar material, especially expository text
- Select a wide range of reading materials to improve reading skills and expand vocabulary
- Continue to develop listening comprehension

Use the ZPD to help Matthew select appropriate-level books to maximize growth.

This student's Zone of Proximal Development (ZPD) for independent reading is book level 3.5 - 5.5. If Accelerated Reader® reading management software is being used in your classroom or school, Matthew should be encouraged to select books with book levels in the ZPD. These books will provide optimal reading challenge without frustration. The ZPD, however, is approximate. Success at any book level also depends on the student's interest and prior knowledge of a book's content. Matthew's ZPD 2000 is 530-860. The ZPD 2000 score is the ZPD converted to a 2000-point scale.

The following techniques will also help ensure the student's continued growth in reading:

- Guide reading practice so that Matthew averages at least 85 percent on Accelerated Reader Reading Practice Quizzes.
- Once Matthew is able to maintain an 85% average, encourage him to raise his average to 90% or higher. High averages are associated with the greatest reading gain.
- Use the Accelerated Reader Diagnostic Report and Student Record Report for more detailed information about the student's reading practice.
- Teach Matthew how to select books throughout his ZPD.
- Help Matthew establish a minimum book level, minimum percent correct, and point goals for each marking period.

Recommends strategies that you can incorporate into Matthew's personalized reading plan to promote growth.

^a Est. ORF: Estimated Oral Reading Fluency is only reported for tests taken in grades 1-4.

Appendix D

Accelerated Reader Summary Report

STAR Reading • Classroom Report



Summary Report

Printed Monday, June 16, 2008 10:14:22AM

School: Oakwood Elementary School

Report Options
Reporting Parameter Group: All Demographics [Default]
Group By: Class
Sort By: Last Name

Reporting Period: 4/14/2008 - 6/13/2008
(4th Quarter)

Research-based,
reliable and valid data enables
you to see how the class is doing as
a whole, to make critical
instructional decisions.

Estimated Oral
Reading Fluency is an estimation of
the number of words a student should
be able to read within a one-
minute time span.

Class: Grade 4 (Adams)

Student	Class	Teacher	Test Date	Rank	GP	SS	GE	PR	NCE	IRL	Est. ORF ^a	ZPD	ATOS 2000	ZPD 2000
Anderson, Marcus	Grade 4 (Adams)	Adams, Marcle	05/16/2008	7	4.85	522	4.8	51	50.5	4.3	120	3.3-5.2	743	491-911
Bel, Timothy	Grade 4 (Adams)	Adams, Marcle	05/16/2008	2	4.85	586	5.5	65	58.1	4.8	135	3.7-5.7	811	551-988
Bosley, Matthew	Grade 4 (Adams)	Adams, Marcle	05/16/2008	4	4.85	550	5.1	57	53.7	4.6	127	3.5-5.5	771	530-860
Chang, Michelle	Grade 4 (Adams)	Adams, Marcle	05/16/2008	6	4.85	520	4.8	50	50.0	4.3	120	3.3-5.2	733	491-811
Gonzales, Maria	Grade 4 (Adams)	Adams, Marcle	05/16/2008	8	4.85	542	5.0	55	52.9	4.5	125	3.4-5.4	711	511-841
Hadden, Susan	Grade 4 (Adams)	Adams, Marcle	05/16/2008	10	4.85	481	4.3	40	44.7	4.0	111	3.1-4.8	701	489-750
O'Neill, Sarah	Grade 4 (Adams)	Adams, Marcle	05/16/2008	1	4.85	646	5.4	76	64.9	5.4	145	4.0-6.1	872	619-931
Richmond, Angela	Grade 4 (Adams)	Adams, Marcle	05/15/2008	5	4.85	545	5.1	56	53.2	4.5	125	3.5-5.5	771	530-860
Rodriguez, Carlos	Grade 4 (Adams)	Adams, Marcle	05/15/2008	3	4.85	591	4.8	64	57.5	4.8	134	3.7-5.7	801	561-888
Stone, Lisa	Grade 4 (Adams)	Adams, Marcle	05/15/2008	9	4.85	508	4.7	47	48.4	4.2	117	3.3-5.2	733	491-811
Average					4.85	548	5.0	56	53.4	4.5	126	3.5-5.5	771	530-860

PR Distribution Summary

Percentile	Students	Percent
Below 25th	0	0.0
25th to 49th	2	20.0
50th to 74th	7	70.0
75th & Above	1	10.0
Number of Students: 10		

Distribution summaries
give an overall picture of the class,
quickly identifying those who
may need intervention.

GE Distribution Summary

GE	Students	Percent
0.0 - 0.9	0	0.0
1.0 - 1.9	0	0.0
2.0 - 2.9	0	0.0
3.0 - 3.9	0	0.0
4.0 - 4.9	5	50.0
5.0 - 5.9	5	50.0
6.0 - 6.9	0	0.0
7.0 - 7.9	0	0.0
8.0 - 8.9	0	0.0
9.0 - 9.9	0	0.0
10.0 - 10.9	0	0.0
11.0 - 11.9	0	0.0
12.0 - 12.9+	0	0.0

^aEst. ORF: Estimated Oral Reading Fluency is only reported for tests taken in grades 1-4.

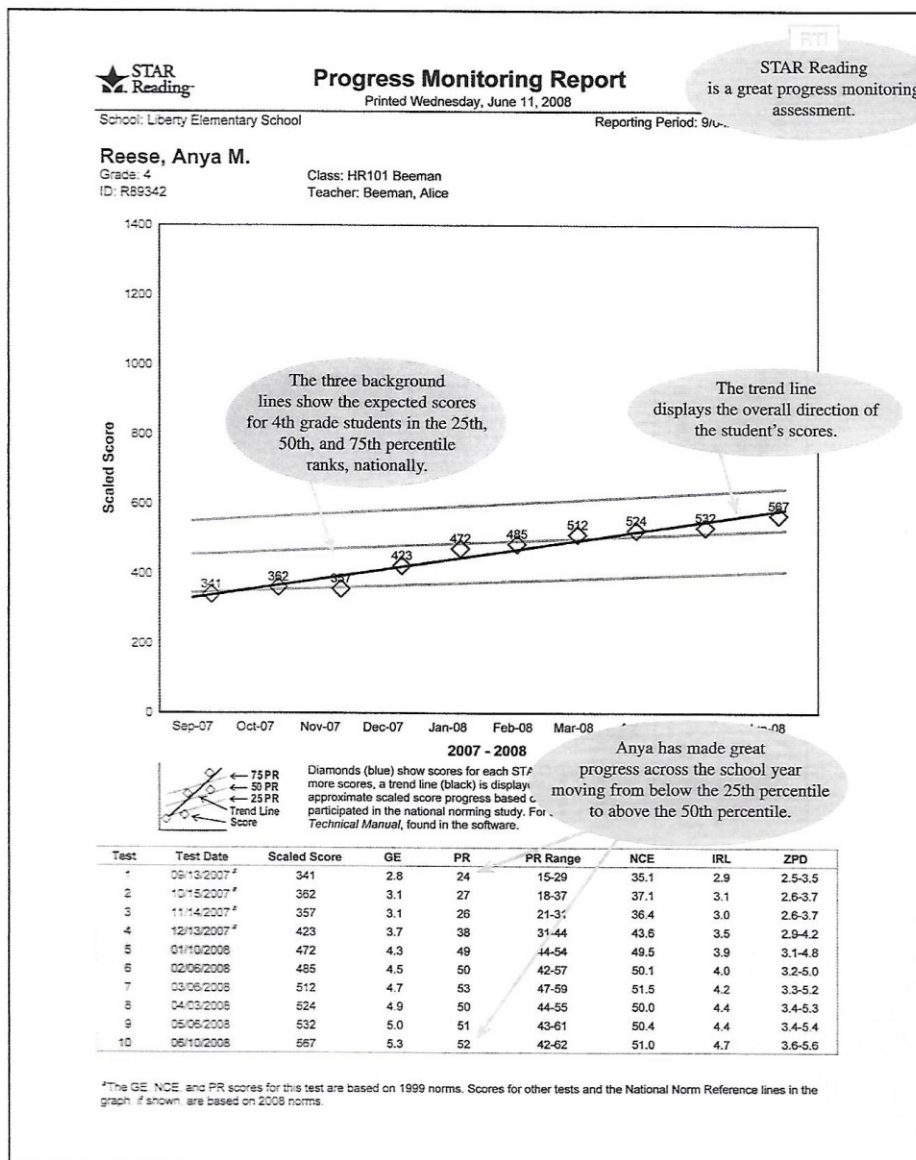
Appendix E

Accelerated Reader Growth Report

Appendix F

Accelerated Reader Progress Monitoring Report

STAR Reading • Student Report



Appendix G

Accelerated Reader Guideline Chart

Goal-Setting Chart

Use the chart and guidelines below to help plan goals for your students based on their reading level and the amount of daily reading practice that you provide.

Identify ZPD

Identify each student's grade-equivalent (GE) score with a standardized assessment, such as STAR Reading, or estimate a GE based on the student's past performance. The corresponding ZPD is a recommended book-level range for the student. If books in that range seem too hard or easy for a student, choose a new range or create a wider one that better matches the student's abilities.

Set Goals

Average percent correct—The most important goal for all students is to average 85% or higher on Reading Practice Quizzes. Meeting this goal has significant impact on reading growth. Averages of 90% and higher are associated with even greater gains. If a student struggles to maintain the minimum average, talk to the student and find out why. Then decide on a strategy that will lead to success.

Point goals—The chart shows the number of points students are expected to earn based on GE and time spent reading. These are estimates—set goals that are realistic for individual students.

Grade-Equivalent Score	Suggested ZPD	60 Min. Daily Practice			30 Min. Daily Practice			20 Min. Daily Practice		
		Points per Week	Points per 6 Weeks	Points per 9 Weeks	Points per Week	Points per 6 Weeks	Points per 9 Weeks	Points per Week	Points per 6 Weeks	Points per 9 Weeks
1.0	1.0 – 2.0	1.7	10	15	0.9	5.0	7.5	0.6	3.3	5.0
1.5	1.5 – 2.5	1.9	11	17	1.0	5.5	8.5	0.6	3.7	5.7
2.0	2.0 – 3.0	2.1	13	19	1.1	6.5	9.5	0.7	4.3	6.3
2.5	2.3 – 3.3	2.3	14	21	1.2	7.0	10.5	0.8	4.7	7.0
3.0	2.6 – 3.6	2.5	15	23	1.3	7.5	11.5	0.8	5.0	7.7
3.5	2.8 – 4.0	2.7	16	24	1.4	8.0	12.0	0.9	5.3	8.0
4.0	3.0 – 4.5	2.8	17	25	1.4	8.5	12.5	0.9	5.7	8.3
4.5	3.2 – 5.0	3.2	19	29	1.6	9.5	14.5	1.0	6.3	9.7
5.0	3.4 – 5.4	3.5	21	32	1.8	10.5	16.0	1.2	7.0	10.7
5.5	3.7 – 5.7	3.9	23	35	2.0	11.5	17.5	1.3	7.7	11.7
6.0	4.0 – 6.1	4.2	25	39	2.1	12.5	19.5	1.4	8.3	13.0
6.5	4.2 – 6.5	4.6	28	41	2.3	14.0	20.5	1.5	9.3	13.7
7.0	4.3 – 7.0	4.9	29	44	2.5	14.5	22.0	1.6	9.7	14.7
7.5	4.4 – 7.5	5.3	32	48	2.7	16.0	24.0	1.8	10.7	16.0
8.0	4.5 – 8.0	5.6	34	50	2.8	17.0	25.0	1.9	11.3	16.7
9.0	4.6 – 9.0	6.3	38	57	3.2	19.0	28.5	2.1	12.7	19.0
10.0	4.7 – 10.0	6.9	41	62	3.5	20.5	31.0	2.3	13.7	20.7
11.0	4.8 – 11.0	7.6	46	68	3.8	23.0	34.0	2.5	15.3	22.7
12.0	4.9 – 12.0	8.3	50	75	4.2	25.0	37.5	2.8	16.7	25.0

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Appendix H

Accelerated Reader Opportunity to Praise Students Report

Accelerated Reader • Student Report



Reading Practice TOPS Report for Matthew Bosley

Printed November 5, 2007 1:02 PM

School: Oakwood Elementary School
Class: Grade 4 (Adams)

AR Best Practices recommend using the TOPS Report to communicate goals, identify problems, and celebrate success with students and parents.

What I Read	How I Did
Allosaurus (Dinosaurs) by Michael P. Goecke ATOS BL #: 2.7 Quiz Number: 55459 F/NF: Nonfiction Quiz Date: 11/5/2007 1:01 PM Word Count: 600 Interest Level: Lower Grades (LG) TWI: Read Independently	Correct: 5 of 5 ●●●●● <i>Terrific, Matthew!</i> Percent Correct: 100% Points Earned: 0.5 of 0.5

Printed after each quiz, the TOPS Report gives Matthew immediate, personalized feedback on this quiz.

My Progress in Marking Period 2 10/15/2007 - 11/30/2007 (48% Complete)	
Average Percent Correct: 96.0% 	Points Earned: 4.2
Average ATOS BL: 2.8 	Marking Period Totals Quizzes Passed: 5 Quizzes Taken: 5 Words Read: 26,732

Easy-to-read graphics help Matthew understand his progress toward goals for the marking period.

Matthew's ATOS BL (book level) goal helps him choose books at an appropriate book level to optimize success.

My School Year Summary 9/4/2007 - 6/13/2008 (24% Complete)		
ATOS BL: 2.9 Words Read: 9,917 Quizzes Passed: 12 Quizzes Taken: 12 Total Words Read: 69,335	Last Certification: Super Reader Date Achieved: 10/12/2007 Certification Goal: Super Reader (2)	

Monitor

Teacher

Comments:

*ATOS BL: ATOS Book Level

Appendix I

Accelerated Reader Student Record Report

Accelerated Reader • Student Report



Student Record Report

Printed December 3, 2007 1:15 PM

School: Oakwood Elementary School

Reporting Period: 10/15/2007–11/30/2007
(Marking Period 2)

Report Options

Reporting Parameter Group: All Demographics [Default]
Sort By: Date taken
Quiz Type: All
Group By: Class
Filter Student Quizzes: Use only quizzes taken for the specific class

Renaissance collects data from all AR quiz types and compiles the data for each student in one convenient report.

Assess students' reading practice with four types of quizzes: Reading Practice, Vocabulary Practice, Literacy Skills, and Textbook (Other Reading) Quizzes.

Bosley, Matthew

Grade: 4
ID: BOSLM
Class: Grade 4 (Adams)
Teacher: Adams, Marcie

Reading Practice – English

Quiz Information						Questions			Points			ATOS 100
Date	Number	Lang.	Title	F/NF	TVI	Corr.	Poss.	% Corr.	Earned	Poss.		
11/28/07	53784	EN	Caleb's Story	F	I	10	10	100	2.0	2.0		44
11/26/07	8151	EN	African Animals (New True Books)	NF	I	5	5	100	0.5	0.5		44
11/19/07	88959	EN	The Big Blueberry Barf-Off!	F	I	9	10	90	0.9	1.0		46
11/05/07	55459	EN	Allosaurus (Dinosaurs)	NF	I	5	5	100	0.5	0.5		44
11/01/07	105257	EN	The Real Thing	F	I	5	5	100	0.5	0.5		44
10/29/07	1663	EN	From Caterpillar to Butterfly	F	I	5	5	100	0.5	0.5		44
10/26/07	5304	EN	Mystery Ranch	F	I	9	10	90	1.8	2.0		47
10/22/07	11420	EN	It Goes Eeeeeeeeeeeeee!	F	I	9	10	90	0.9	1.0		44
Quizzes Passed/Taken: 8/8							96	7.6	8.0			44 ^a

Reading Practice – Spanish

No quizzes taken

AR accommodates other readability formulas.

Vocabulary Practice

Quiz Information						First-Try New			Second-Try New			Review Words				
Date	Number	Lang.	Title	Corr.	Poss.	%	Corr.	Poss.	%	Corr.	Poss.	%	Corr.	Poss.	%	ATOS 100
10/26/07	5304	EN	Mystery Ranch	5	5	100	-	-	-	-	-	-	-	-	-	47
10/22/07	11420	EN	It Goes Eeeeeeeeeeeeee!	13	15	87	2	2	100	-	-	-	-	-	-	44
Quizzes Taken: 2							94		100							

Literacy Skills

Quiz Information						Questions			ATOS 100
Date	Number	Lang.	Title	F/NF	TVI	Corr.	Poss.	% Corr.	
11/28/07	53784	EN	Caleb's Story	F	I	10	12	83	44
Quizzes Passed/Taken: 1/1								83	44 ^a

Other Reading – English

No quizzes taken

Other Reading – Spanish

No quizzes taken

^a Recorded Voice Quiz

^a Book level averages in summary are based on passed quizzes.

Appendix J

Accelerated Reader Class Diagnostic Report

Accelerated Reader • Classroom Report

Use this report to monitor progress on overall comprehension of authentic literature.

1 of 1



School: Oakwood Elementary School

Report Options

Report: Quizzes

Use the AR Average %

Correct as an indicator of the strength

of the Tier 1 classroom.

AR Best Practices focuses

on Average % Correct, Points Earned,

and Book Level to accelerate

student learning.

Diagnostic Report-Reading Practice

Printed Monday, December 1, 2008 10:20 AM

Reporting Period: 10/13/08-11/26/08
(Marking Period 2)

Class: Grade 4 (4uarms)

Teacher: Adams, Marcle

Student	Diag. Code	RP Quizzes Passed	RP Quizzes Taken	% Correct Goal	% Correct Avg.	Points Earned	% of Goal	% Read Indep.	% Fiction	Engaged Time per Day ^b	Book Level ATOS BL Goal	Certification Working Toward
Anderson, Marcus		4	4	90	95.0	82	9.5	115.9	100	34	3.0	3.3 Achieved
Bell, Timothy		4	4	90	95.0	9.8	11.5	117.3	100	35	3.3	3.6 Achieved
Bosley, Matthew		8	8	90	96.3	7.6	7.8	100.0	100	29	2.6	2.9 Super(2)
Chang, Michelle		4	4	90	97.5	8.5	11.8	138.8	100	41	3.0	3.5 Star
Gonzales, Maria		4	4	85	87.5	9.1	7.1	78.0	100	25	3.0	3.6 Achieved
Halden, Susan		7	7	85	91.4	7.2	5.9	81.9	100	25	2.5	2.8 Advanced(2)
O'Neill, Sarah		4	4	90	100.0	10.9	15.0	137.6	100	41	3.5	4.1 Star(2)
Richmond, Angela		4	4	85	87.5	8.5	8.8	103.5	100	30	3.0	3.2 Achieved
Rodriguez, Carlos	D%	4	4	85	80.0	9.5	3.1	32.6	100	17	3.2	3.0 -
Stone, Lia		7	7	85	94.3	7.8	7.7	98.7	100	30	2.6	2.9 Advanced
Average		5	5	88	92.4			100	88	31	3.0	3.3

Diagnostic Code Summary

Number of Students	Percent of Students	Diag. Code	Description
0	0	A	No quizzes taken during period
0	0	B	Low average percent correct (70% to 79%)
0	0	C	Very low average percent correct (below 70%)

Carlos is below his goals

for quality and quantity of Reading

Practice. Codes point out that

he is At Risk.

^a Trouble value

^b Engaged Time per Day: An estimate of the time the student is engaged in reading practice. Displayed in minutes. It is based on a test score from STAR Reading™ or STAR Early Literacy™ and points earned in Accelerated Reader. Score not reported unless the student tested with a STAR assessment within the last 12 months.

Class Summary

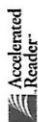
Engaged Time estimates minutes per day students are actively engaged in reading practice.

Number of Students	10
Total Quizzes Passed	50
Total Quizzes Taken	50
Total Points Goal	87.1
Percent Read Independently Earned	90.5
Percent Fiction / Nonfiction	100%
	88% / 12%

Appendix K

Accelerated Reader Literacy Skills Chart

Accelerated Reader • Student Report



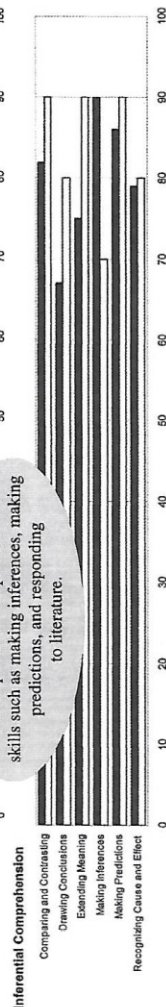
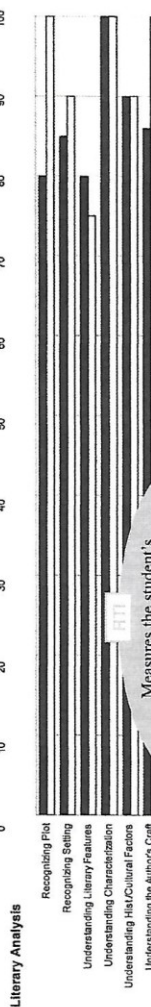
School: Mayfield Elementary
Initial Understanding

Literacy Skills Chart for Jack Bauman

Printed June 6, 2006 5:54 PM

Reporting Period: 8/13/2005 - 10/22/2005 (MP1)

Literacy Skills Quizzes
assess how students are progressing
in 24 specific reading skills in
four key areas.



Measures the student's
development of comprehension
skills such as making inferences, making
predictions, and responding
to literature.

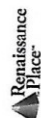
Documents Jack's literacy
skills scores for the marking period and
his progress compared to his peers,
allowing you to personalize his
instruction.

■ Student: Jack Bauman Class: Reading 1A *No questions presented on this skill

Appendix L

Accelerated Reader Implementation Status Report

Accelerated Reader • District/School Report



Accelerated Reader™ Implementation Progress Report

District: Union School District
 School: Oakwood Elementary School
 Printed: June 16, 2008 10:10 AM
 Last Consolidated Date: June 16, 2008 02:00 AM

Report Options

Reporting Period: Provides a full picture of the school year, showing progress over individual reporting periods.
 Group By: Grade

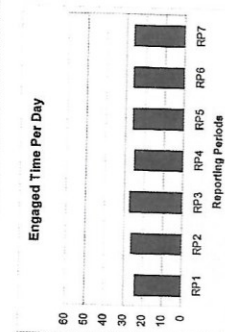
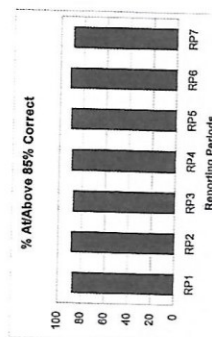
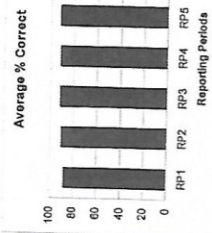
RP1: 09/04/07 - 10/12/07 (Reporting Period 1)
 RP2: 10/15/07 - 11/30/07 (Reporting Period 2)
 RP3: 12/03/07 - 01/20/08 (Reporting Period 3)
 RP4: 01/23/08 - 03/13/08 (Reporting Period 4)

Evaluate the success of your Accelerated Reader implementation at the district, school, grade or class level.

RP reflects the quality and quantity of student reading practice.

Grade: 3

Teacher	Average % Correct							% of Students AUAbove 85% Correct							Engaged Time Per Day						
	RP1	RP2	RP3	RP4	RP5	RP6	RP7	RP1	RP2	RP3	RP4	RP5	RP6	RP7	RP1	RP2	RP3	RP4	RP5	RP6	RP7
Boyd, M	88	90	92	91	92	93	91	85	90	85	85	90	85	87	23	24	26	23	25	22	24
Ellis, A	89	90	91	92	91	91	91	89	89	89	95	89	95	91	28	26	27	24	27	29	27
Frederick, J	88	91	91	92	92	95	92	89	84	89	89	95	95	91	27	25	25	26	26	25	26
Jensen, C	89	91	90	90	92	91	91	81	86	86	86	90	90	87	21	24	26	22	21	19	22
Lehman, K	89	91	91	90	90	90	90	85	85	85	85	90	90	87	26	27	27	25	26	28	27
Ramirez, R	88	90	91	92	91	92	91	89	89	84	89	89	89	88	25	28	29	29	30	30	29
Tucker, H	90	91	91	93	96	96	93	85	90	85	90	90	90	88	22	26	25	25	24	25	25
White, G	85	88	88	90	90	90	89	89	89	94	89	94	89	94	24	25	27	29	30	29	27
Summary	88	90	91	92	92	92	91	87	88	87	89	90	91	89	24	26	27	25	26	26	26



Average % Correct: Average score on Reading Practice Quizzes
 % of Students AUAbove 85%: Percentage of students who averaged at least 85% on Reading Practice Quizzes
 Engaged Time Per Day: An estimate of the time students spent reading Accelerated Reader. Score not reported unless students were tested with a STAR assessment.

Best Practices suggest that by year 3, 90% of students should be averaging 85% or above on Reading Practice Quizzes.

STAR Early Literacy™ and points

Appendix M

Permission to Copy and Administer the ERAS

3/20/2014

permission

Tammy Waters
To: MSuggell@amuniversal.com

Sun, Mar 23, 2014 at 5:21 PM

I am a 2nd grade teacher at [REDACTED], I am currently pursuing a Doctorate of Education degree. As part of my course requirements, I am conducting a case study of the Accelerated Reader program in six schools in the school district. A portion of my dissertation includes student motivation to read.

The purpose of this email is to ask for permission to copy and administer the Elementary Reading Attitude Survey to 4th graders in the six schools I am studying. If permission is granted, I will gladly share the results of my study with you at the completion of the project. Thank you for your consideration for this request.

Tammy K. Waters
2nd Grade Teacher

Raegan Carmona <rcaamone@amuniversal.com>
To: Tammy Waters

Mon, Mar 24, 2014 at 2:23 PM

Dear Tammy,

Thank you for your request.

Which particular cartoon are you interested in using?

Thank you,

Raegan

Raegan Carmona
Manager of Permissions

Universal Uclick

1100 Walnut St

3/12/2014

Kansas City MO 64106

P 816.581.7358

F 816.581.7395

rcarmona@amuniversal.com

From: Tammy Waters ([REDACTED])

Sent: Sunday, March 23, 2014 4:21 PM

To: Mary Suggett

Subject: permission

[Quoted text hidden]

This message originated from [REDACTED] e-mail correspondence to and from this address is subject to the North Carolina Public Records Law as defined under N.C.G.S. §132.1, which may result in monitoring and disclosure to third parties, including law enforcement and the media.

Tammy Waters

To: Raegan Carmona [REDACTED]

Mon, Mar 24, 2014 at 3:57 PM

The Elementary Reading Attitude Survey, or ERAS (more commonly known as the Garfield Survey).

[Quoted text hidden]

TaTammy K. Waters
2nd Grade Teacher

2 [REDACTED]

Raegan Carmona <rcarmona@amuniversal.com>

To: Tammy Waters [REDACTED]

Wed, Mar 26, 2014 at 11:57 AM

Dear Tammy,

You can use that survey at no charge. You can download it here: http://professorgarfield.com/parents_teachers/home.html

It's under the printed materials section along the left of the home page.

Let me know if you have any questions.

Best,

From: Tammy Waters [mailto: [REDACTED]]
 Sent: Tuesday, March 25, 2014 8:29 PM
 To: Wendy Logan
 Subject: Re: dissertation

[Quoted text hidden]

Wiley Global Permissions <permissions@wiley.com>
 To: [REDACTED]

Fri, Mar 28, 20

Dear Ms. Waters:

Permission is hereby granted for the use requested subject to the usual acknowledgements (author, title of material, title of book/journal, ourselves as publisher). You should also duplicate the copyright notice that appears in the Wiley publication in your use of the Material.

Any third party material is expressly excluded from this permission. If any of the material you wish to use appears within our work with credit to another source, authorization from source must be obtained.

This permission does not include the right to grant others permission to photocopy or otherwise reproduce this material except for accessible versions made by non-profit organizations serving the blind, visually impaired and other persons with print disabilities (VIPs).

Sincerely,

WILEY

Sheik Safdar | Permissions Coordinator | P: 201-748-6512 | F: 201-748-6008

John Wiley & Sons, Inc. | 111 River Street | Hoboken, NJ | 07030 | Mailstop: 4-02

From: Tammy Waters [mailto: [REDACTED]]
 Sent: Tuesday, March 25, 2014 8:29 PM
 To: Wendy Logan
 Subject: Re: dissertation

I have attached the first page of the survey if seeing a picture of it would help. It was designed by Dennis Kear at Wichita State University. I originally found the survey at the following site:

[Quoted text hidden]

[Quoted text hidden]

Exemplary Reading Affixes Series



ERAS.jpg
 27K

Appendix N

ERAS

School _____ Grade _____ Name _____

Please circle the picture that describes how you feel when you read a book.

1. How do you feel when you read a book on a rainy Saturday?



2. How do you feel when you read a book in school during free time?



3. How do you feel about reading for fun at home?



4. How do you feel about getting a book for a present?



5.

How do you feel about spending free time reading a book?



6.

How do you feel about starting a new book?



7.

How do you feel about reading during summer vacation?



8.

How do you feel about reading instead of playing?



9.

How do you feel about going to a bookstore?

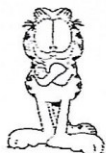


10.

How do you feel about reading different kinds of books?



11. How do you feel when a teacher asks you questions about what you read?



12. How do you feel about reading workbook pages and worksheets?



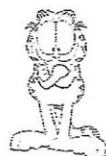
13. How do you feel about reading in school?



14. How do you feel about reading your school books?



15. How do you feel about learning from a book?



16. How do you feel when it's time for reading in class?



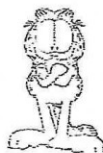
17. How do you feel about stories you read in reading class?



18. How do you feel when you read out loud in class?



19. How do you feel about using a dictionary?



20. How do you feel about taking a reading test?



Appendix O

Accelerated Reader Implementation Checklist

AR Implementation Checklist

	Never	Daily	Weekly	Biweekly	Monthly	Quarterly	Other
The teacher will schedule time for reading practice							
The teacher will find the zone of proximal development for each student							
Students will use a reading log							
The teacher will take the status of the class							
The teacher will set reading goals with each student							
The teacher will check the Opportunity to Praise Students report (TOPS)							
The teacher will review the diagnostic report weekly							
The teacher will adjust book levels so students maintain an average of 85-92% on quizzes							
The teacher and/or the school will create a system of motivators (extrinsic rewards)							
The teacher will assess skills with literacy skills tests							

Appendix P

Teacher Observation Checklist

Teacher Observation Checklist

	Never	Daily	Weekly	Biweekly	Monthly	Quarterly	Other
The teacher schedules time for reading practice							
The teacher finds the zone of proximal development for each student							
Students use a reading log							
The teacher takes the status of the class							
The teacher sets reading goals with each student							
The teacher checks the Opportunity to Praise Students report (TOPS)							
The teacher reviews the diagnostic report weekly							
The teacher adjusts book levels so students maintain an average of 85-92% on quizzes							
The teacher and/or the school creates a system of motivators (extrinsic rewards)							
The teacher accesses skills with literacy skills tests							

Appendix Q

Accelerated Reader Student Record Report

Accelerated Reader • Student Report



Student Record Report

Printed December 3, 2007 1:15 PM

School: Oakwood Elementary School

Reporting Period: 10/15/2007–11/30/2007
(Marking Period 2)

Report Options

Reporting Parameter Group: All Demographics [Default]
Sort By: Date taken
Quiz Type: All
Group By: Class
Filter Student Quizzes: Use only quizzes taken for the specific class

Renaissance collects data from all AR quiz types and compiles the data for each student in one convenient report.

Bosley, Matthew

Grade: 4
ID: BOSLM

Class: Grade 4 (Adams)
Teacher: Adams, Marcie

Assess students' reading practice with four types of quizzes: Reading Practice, Vocabulary Practice, Literacy Skills, and Textbook (Other Reading) Quizzes.

Reading Practice – English

Date	Quiz Information				Questions			Points		ATOS 100
	Number	Lang.	Title	F/NF	TI	Corr.	Poss.	% Corr.	Earned	Poss.
11/28/07	53784	EN	Caleb's Story	F	I	10	10	100	2.0	2.0
11/28/07	8151	EN	African Animals (New True Books)	NF	I	5	5	100	0.5	0.5
11/19/07	88599	EN	The Big Blueberry Barf-Off!	F	I	9	10	90	0.9	1.0
11/05/07	55459	EN	Allosaurus (Dinosaurs)	NF	I	5	5	100	0.5	0.5
11/01/07	105257	EN	The Real Thing	F	I	5	5	100	0.5	0.5
10/29/07	1663	EN	From Caterpillar to Butterfly	F	I	5	5	100	0.5	0.5
10/26/07	5304	EN	Mystery Ranch	F	I	9	10	90	1.8	2.0
10/22/07	11420	EN	It Goes Eeeeeeeeeeeeee!	F	I	9	10	90	0.9	1.0
Quizzes Passed/Taken: 8/8						96	7.6	8.0	44 ^a	

Reading Practice – Spanish

No quizzes taken

AR accommodates other readability formulas.

Vocabulary Practice

Date	Quiz Information				First-Try New			Second-Try New			Review Words			ATOS 100
	Number	Lang.	Title		Corr.	Poss.	%	Corr.	Poss.	%	Corr.	Poss.	%	
10/26/07	5304	EN	Mystery Ranch		5	5	100	-	-	-	-	-	-	47
10/22/07	11420	EN	It Goes Eeeeeeeeeeeeee!		13	15	87	2	2	100	-	-	-	44
Quizzes Taken: 2					94			100						

Literacy Skills

Date	Quiz Information				F/NF	Questions			ATOS 100
	Number	Lang.	Title			Corr.	Poss.	% Corr.	
11/28/07	53784	EN	Caleb's Story		F	10	12	83	44
Quizzes Passed/Taken: 1/1								83	44 ^a

Other Reading – English

No quizzes taken

Other Reading – Spanish

No quizzes taken

^a Recorded Voice Quiz

^a Book level averages in summary are based on passed quizzes.

Appendix R

Parent Survey

Parent Survey

	Never	Daily	Weekly	Biweekly	Monthly	Quarterly	Other
How often do you listen to your child read?							
How often do you read to your child?							
How often do you take your child to the public library to check out books?							
How often do you take your child to purchase books?							
How often does your child enjoy reading as a "free time" activity?							
How often do you ask your child about his/her pleasure reading?							
How often do you discuss what you are reading with your child?							
How often do you and your child participate in reading							

What is your combined household income? Please check the one that applies:

Below \$20,000	\$20,000- \$40,000	\$40,000- \$60,000	\$60,000- \$80,000	\$80,000- \$100,000	Above \$100,000

What is your highest level of education?

What is your opinion of the AR program at your child's school?

What school does your child attend?

Who is your child's teacher?

Appendix S
Teacher Perception Survey

Teacher Perception Survey

	Never	Daily	Weekly	Biweekly	Monthly	Quarterly	Other
How often do you think this parent listens to the child read?							
How often do you think this parent reads to the child?							
How often do you think this parent takes the child to the public library to check out books?							
How often do you think this parent takes the child to purchase books?							
How often do you think this parent asks the child about his/her pleasure reading?							
How often do you think this parent discusses his/her reading with the child?							
How often do you think this parent and child participates in reading together?							

Appendix T
Principal Interview Questions

Principal Interview Questions

1. What are the expectations for your school-wide reading program, particularly for fourth grade?
2. Where does AR fit into the reading program?
3. How important is AR to your school's reading program?
4. To what extent do you think teachers are effectively, and with fidelity, implementing AR?
5. Are you getting the desired results out of the investment?
6. What extrinsic motivators do you have in place to reward students for their AR participation?
7. In what ways can educators help motivate children to read?
8. How important is parental support in relation to a child's reading success?

Appendix U

ELA Curriculum Facilitator Interview Questions

ELA Curriculum Facilitator Interview Questions

1. What are the district-wide expectations for reading instruction on the elementary level, particularly in fourth grade?
2. Where does AR fit into the reading program?
3. How important is AR to the district's reading program?
4. To what extent do you think the schools are effectively, and with fidelity, implementing AR?
5. Do you think the district is getting the desired results out of the investment?
6. In what ways can educators help motivate children to read?
7. How important is parental support in relation to a child's reading success?

Appendix V

Superintendent/Principal Consent Letter

Principal Letter

The purpose of this letter is to ask for your consent allowing me to conduct some research as part of my dissertation requirements.

I am a _____ grade teacher at _____ and am working on my doctoral dissertation at Gardner-Webb University. My doctorate degree will be in the area of curriculum and instruction. The focus of my dissertation will be a case study on the Accelerated Reader program. In particular, my research seeks to determine implementation fidelity of AR, parental support, and motivation to read in relation to academic success in reading as measured by EOG scores. For this research, fourth-grade students, their parents and teachers will be asked to respond to Likert-scale surveys.

Participation in the study is completely voluntary, and there is no risk to participants should they choose not to respond. However, a higher participant response rate allows the researcher to gather substantial data to best represent the population as a whole. All responses will remain confidential. Time taken for data collection will also be kept to a minimum, as I am personally aware of the demands on educators' time. The results of this study will be published in a dissertation, and the county will be provided with a copy to review at your convenience. Additional reports may be written as perceived necessary by particular stakeholders.

Any questions regarding the research should be directed to the researcher, Tammy Waters, at 704-214-2453 or through e-mail at watersrt@bellsouth.net. Inquiries regarding the nature of this research, your district's rights as a subject, or any other aspect of this research as it relates to the participants can be directed to the researcher or Gardner-Webb University. The chairperson of the research committee is Dr. David Shellman who may be contacted by phone at 704-761-5106 or through e-mail at dshellman@gardner-webb.edu.

If you agree for me to conduct a responsive evaluation regarding the effectiveness of the AR program in the school system, please sign below. Thank you in advance for assisting me with this professional endeavor.

Sincerely,

Tammy K. Waters – Doctoral Student, Gardner-Webb University

Principal Signature

Date

Appendix W

Teacher Consent Letter

Teacher Consent Letter

The purpose of this letter is to ask for your consent allowing me to conduct some research as part of my dissertation requirements.

I am a _____ grade teacher at _____ and am working on my doctoral dissertation at Gardner-Webb University. My doctorate degree will be in the area of curriculum and instruction. The focus of my dissertation will be a case study on the Accelerated Reader program. In particular, my research seeks to determine implementation fidelity of AR, parental support, and motivation to read in relation to academic success in reading as measured by EOG scores. For this research, fourth-grade students, their parents and teachers will be asked to respond to Likert-scale surveys.

Participation in the study is completely voluntary, and there is no risk to participants should they choose not to respond. However, a higher participant response rate allows the researcher to gather substantial data to best represent the population as a whole. All responses will remain confidential. Time taken for data collection will also be kept to a minimum, as I am personally aware of the demands on educators' time. The results of this study will be published in a dissertation, and the county will be provided with a copy to review at your convenience. Additional reports may be written as perceived necessary by particular stakeholders.

Any questions regarding the research should be directed to the researcher, Tammy Waters, at 704-214-2453 or through e-mail at watersrt@bellsouth.net. Inquiries regarding the nature of this research, your district's rights as a subject, or any other aspect of this research as it relates to the participants can be directed to the researcher or Gardner-Webb University. The chairperson of the research committee is Dr. David Shellman who may be contacted by phone at 704-761-5106 or through e-mail at dshellman@gardner-webb.edu.

If you agree for me to conduct a responsive evaluation regarding the effectiveness of the AR program in the school system, please sign below. Thank you in advance for assisting me with this professional endeavor.

Sincerely,

Tammy K. Waters – Doctoral Student, Gardner-Webb University

Appendix X
Parent Consent Letter

Parent Consent Letter

The purpose of this letter is to ask for your consent allowing me to conduct some research as part of my dissertation requirements.

I am a former [REDACTED] Schools teacher who is working on my doctoral dissertation at Gardner-Webb University. My doctorate degree will be in the area of curriculum and instruction. The focus of my dissertation will be a case study on the Accelerated Reader (AR) program. Two areas of my research in which I seek your assistance involve motivation to read and parental involvement.

There are two attachments included with this letter. The first one is a survey requesting information regarding your involvement in your child's reading success. The second one is a survey for your child to complete which asks questions about his or her motivation to read, both for recreational and for academic purposes. If you agree to be a participant and give consent for your child to participate, please sign the letter below, complete the attached parent survey, have your child complete the Garfield survey, and return all forms back to your child's teacher. I am requesting that this information be returned within one week of receiving it from the teacher so that I may compile the data.

Participation in the study is completely voluntary, and there is no risk to participants should they choose not to respond. However, a higher participant response rate allows the researcher to gather substantial data to best represent the population as a whole. All responses will remain confidential and will only be used for the purposes of this research.

Any questions regarding the research should be directed to the researcher, Tammy Waters, at 704-214-2453 or through e-mail at tkwaters1993@gmail.com. Inquiries regarding the nature of this research, your rights as a subject, or any other aspect of this research as it relates to the participants can be directed to the researcher or Gardner-Webb University. The chairperson of the research committee is Dr. David Shellman who may be contacted by phone at 704-761-5106 or through e-mail at dshellman@gardner-webb.edu.

Thank you in advance for assisting me with this professional endeavor.

Sincerely,

Tammy K. Waters – Doctoral Candidate, Gardner-Webb University

Parent Signature

Date