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Examining the Impact of the Lucy Calkins Teacher-Student Conference Tool in Collaboration with Accelerated Reader on Reading Comprehension of 5th-Grade Students at a Suburban Elementary School: An Action Research Study

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by

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Dedication

I dedicate this dissertation to all my friends and family. Your support during this journey has meant more to me than I can ever express with words. First, I would like to recognize my parents, for being my cheerleaders my entire life and teaching me to be and do my best always. I would also like to recognize my brother, because he has always believed in me and stood by me. My daughter, Camryn, and son, Beckham, have been so patient when I have had to work on my school work and taken time away from being with them. I hope that I have instilled a sense of lifelong learning that they will set out to achieve in their own unique ways, because they are the light of my life. Last, I dedicate this to my husband, Cory. Thank you for understanding my need to fulfill this dream and for supporting me. Your reassurance throughout these past three years has allowed me to persevere and to continue on this path. I love you all.

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Abstract

This paper describes a problem of practice arising from a concern that students are not continuously making reading comprehension gains. Focusing on the problem of practice, the researcher developed a triangulation action research study involving a convenience sampling population in a fifth grade elementary school classroom to examine the impact of the teacher-student conferencing tool from Lucy Calkins's reader's workshop model in collaboration with the Accelerated Reader program and comprehension to answer the following research question: What impact do the student-teacher conferences from the Lucy Calkins workshop have on reading comprehension as measured by the AR program? The eight-week study consisted of semi-structured teacher-student conferences at least once per week using quantitative data from the AR program to drive the conference. The t-test did not indicate a significant difference $p=0.73$, but there was an overall gain of the independent reading level of the class from 4.4 to 4.8 with 18 of the 27 students increasing their independent reading level. Teacher-student conferencing did show a positive correlation to an increase in book volume, engaged time spent reading, and book level.

Keywords: action research, Accelerated Reader, comprehension, teacher-student conferencing, Lucy Calkin's reader's workshop

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Chapter 1: Introduction

Topic and Background

All states must define what proficiency in reading is following the 2001 reauthorization of the Elementary and Secondary Education Act of 1965 (U.S. Department of Education, 2015). Even though states determine their own standards and assessments, the National Assessment of Educational Progress (NAEP) depends on equipercentile mapping so that each state can undergo comparison (U.S. Department of Education, 2015). Equipercentile is explained by the U.S. Department of Education (2015):

> For a given subject and grade, the percentage of students reported in the state assessment to be meeting the standard in each NAEP school is matched to the point on the NAEP achievement scale corresponding to that percentage. The results are then aggregated over all of the NAEP schools in a state to provide an estimate of the NAEP scale equivalent of the state's threshold for its standard. (p. 3)

According to the 2013 State Standards and NAEP Achievement Levels in Grade 4, only three states were proficient, with a score of at least 238, in reading (U.S. Department of Education, 2015). North Carolina is the state in which this action research study took place. According to the NAEP (U.S. Department of Education, 2015), North Carolina's fourth-grade reading scores increased in from 208 in 1971 to 221 in 2012. North Carolina

is making gains in reading, but it is still below proficient in fourth-grade reading (see Appendix A for North Carolina NAEP results).

The Programme for International Student Assessment (PISA), produced by the Organisation for Economic Co-operation and Development, measures performance in math, science, and reading for 15-year-olds, and students take it every three years (Stewart, 2012). Sixty countries take part in the PISA assessment, and the main goal of this assessment is to determine how well students apply their knowledge to real-life situations (Stewart, 2012). Stewart (2012) stated, "The United States is not among the top performers in of the three subjects tested by PISA. U.S. performance is average at best and largely flat.… American students are not well prepared to compete in today's knowledge economy," (p. 24). The U.S. Reading PISA score in 2009 was 500, in 2012 it was 498, and in 2015 it was 497. The average score on the reading PISA is 493. Twenty-three countries perform higher in reading than the United States. America's scores in reading are dropping.

Increasing students' reading comprehension was the goal for this action research study. The first time a child reads a book from cover to cover independently, a whole new world opens for that student. Over the course of reading instruction, many students' comprehension levels may plateau. Goodwin (2011) explained that between the ages of nine and ten years old, children who were reading on grade level will suddenly show a decrease in reading ability, also known as "the fourth-grade reading slump." This action research focused on using the teacher-student conferencing tool in Lucy Calkins's reader's workshop in collaboration with the trademarked program, Accelerated Reader (AR) to increase students' reading comprehension.

Statement of the Problem

According to Gullo (2013), "Since the passage of No Child Left Behind (NCLB), data-driven decision making has become one of the central foci in schools in their attempt to attain and maintain adequate levels of student academic performance" (p. 413). Data-driven instruction is the use of standards-based assessments to make educational decisions (Gullo, 2013). Literacy proficiency in the early years has links to academic progress later in life (Gullo, 2013). There is no foolproof way to teach reading comprehension, and each district within each state determines its own methodology for reading instruction. The problem of practice is that districts mandate language arts curriculum programs, but teachers are not using data tools effectively to drive instruction and to increase reading comprehension. If teachers used data to drive instruction, then teacher effectiveness and program efficacy may increase children's academic performance and narrow achievement gaps (Gullo, 2013). According to Gullo (2013),

> By collecting targeted types of data, program administrators can gain insights into curriculum design and development. These data can also provide an understanding of root causes of problems or potential problems. This then provides an avenue through which administrators, curriculum developers, or teachers can solve problems holistically, rather than only dealing with the symptomatic elements of the identified problems. Data provide information about what works and what is in need of improvement. Therefore, best practices can be shared among classes, school, and districts. Finally, data provides information about student performance with regard to attainment of knowledge and skills or rate of progression through the instructional sequence. (p. 416)

Educators must make data-driven decisions throughout the year to drive instruction to increase reading comprehension, and they cannot wait on end-of-year state test results.

Literacy instruction in elementary schools has evolved over the years. Reading wars over skill-based instruction versus a holistic view of instruction have led to a balanced literacy approach (Bingham & Hall-Kenyon, 2013). According to Bingham and Hall-Kenyon (2013),

> Balanced literacy is a philosophical perspective that seeks to combine, or balance, skill-based and meaning-based instruction in order to ensure positive reading and writing results in children. The balanced literacy framework is often conceptualized based on a view of scaffolded instruction, or gradual release of responsibility (reading and writing – to, with and by students; where teachers provide varying levels of support based on children's needs. Balanced literacy instructional practices are often enacted through the use of specific instructional routines such as guided reading, shared reading, interactive writing, literacy centers and independent reading and writing. The use of these instructional techniques is intended to allow for differentiated literacy instruction and is posited as a way of helping children gain access to developmentally appropriate literacy knowledge skills. (p. 16)

The balanced literacy approach is the literacy model the researcher's district has adopted.

During the 1990s, the district in which this research study took place began requiring all classroom teachers in second through eighth grade to implement the AR program to build reading comprehension. The district purchased this technology-enhanced reading comprehension program to implement it alongside the English

language arts (ELA) adopted textbook basal. *A Nation at Risk* (U.S. National Commission on Excellence in Education, 1983) reported that the U.S. education system was falling far behind the global competition, and one component of the report focused on textbooks:

> Textbooks and other tools of learning and teaching should be upgraded and updated to assure more rigorous content. We call upon university scientists, scholars, and members of professional societies, in collaboration with master teachers, to help in this task, as they did in the post-Sputnik era.… Because no textbook in any subject can be geared to the needs of all students, fund[s] should be made available to support text development in "thin-market" areas such as those for disadvantaged students, the learning disabled, and the gifted and talented. (para. 21)

One problem with textbooks is that they cover specific reading levels to correlate with grade levels, even though each classroom has many students on various reading levels (Dole, Brown, & Trathen, 1996). States and districts have searched for curriculum programs to increase students' reading comprehension so that the United States can boost performance and compete globally.

In this race to be the best, schools in the district in which this research took place purchased licenses to begin using AR. Teachers and administrators received training from Reading Renaissance (2007) to implement the AR program to motivate students to read independently on their own individual reading levels (IRLs) and to reach reading comprehension goals to improve reading. Over the years, schools and teachers have developed their own methods of implementing the program. There is a specific model of

implementation of AR, but some trained educators have retired or left the profession, leaving new teachers to set their own course of implementation due to the lack of professional development since the original implementation.

In 2012, 47 states adopted the Common Core State Standards (CCSS) to ensure a rigorous curriculum to prepare students for 21st-century learning. The introduction to the ELA standards is as follows:

> The Common Core asks students to read stories and literature, as well as more complex texts that provide facts and background knowledge in areas such as science and social studies. Students will be challenged and asked questions that push them to refer back to what they have read. This stresses critical-thinking, problem-solving, and analytical skills that are required for success in college, career, and life. (Common Core State Standards Initiative, 2012, para. 2)

The state in which this study took place adopted the CCSS, and the district of this study began to implement reader's workshop in kindergarten through fifth grade, based on the model developed by Lucy Calkins. With the new curriculum implementation, AR is still a requirement of the district in which the study took place. These two programs are not integrated, but rather they work parallel to one another. It is not a requirement to integrate the two programs, but educators must find ways to work smarter, not harder, and this integration is an example of that expression. Lucy Calkins's reader's workshop focuses heavily on qualitative data from anecdotal notes based on teacher-student conferencing, whereas AR provides quantitative data based on student comprehension tests. Only relying on one type of data source does not provide the whole picture of a child's literacy progress. Combining the two programs could provide both qualitative and quantitative

data to drive instruction and to facilitate decisions to improve students' reading comprehension.

According to Smith and Westberg (2011), "AR is an isolated event in most classrooms and is not integrated into other literacy activities" (p. 2). The elementary school where this study took place uses the AR program, although teachers implement AR in their own manner. There are 14 classrooms in third through fifth, and each teacher utilizes AR at his or her own discretion. One common theme between teachers using the program is the belief that AR is just a requirement for the student to complete independently to earn AR points. AR is not an independent reading (IR) practice. Teachers are struggling to integrate AR with reader's workshop. Calkins (2006) stated, "The problem is that if our teaching is to be an art, we need an organizing vision that brings together all of these separate components into something graceful and vital, and significant" (p. 4). Using the conferencing methods of reader's workshop with AR, not only to discuss reading strategies (quantitative data), but also to focus on AR comprehension progress (qualitative data) may allow the teacher to implement both programs successfully and effectively and may increase students' reading comprehension.

Purpose Statement

The purpose of this action research study was to determine whether integrating the teacher-student conferencing tool from Lucy Calkins's reader's workshop along with the AR program increases fifth-grade reading comprehension. Teachers in the district where the research took place use both AR and Lucy Calkins's reader's workshop. The implementation of both programs with fidelity and integrity requires strategic planning.

Integrating both programs may improve ELA instruction and alleviate stress. The researcher's district also analyzes data from the STAR reading test throughout the year to monitor comprehension levels. It expects data-driven instruction from all classroom teachers.

Research Questions

To examine the potential effects of teacher-student conferencing on AR and comprehension, the following research questions guided this study:

RQ 1: What impact does Lucy Calkins's teacher-student conference tool in collaboration with the AR program have on elementary students' reading comprehension?

RQ 2: What impact does Lucy Calkins's teacher-student conference tool in collaboration with the AR program have on specific student groups (learning disabled, academically intelligent gifted (AIG), race, gender, and socioeconomic status)?

RQ 3: What impact does Lucy Calkins's teacher-student conference tool in collaboration with the AR program have on students' engaged time per day reading, book level, and book volume?

Significance of the Study

The significant results of this study may show changes in comprehension and lead to program integration within the researcher's school, or even in the whole district. Using both qualitative and quantitative data is necessary to make curriculum decisions. This integration may lead to further studies in developing reading comprehension in children

Study Rationale

The U.S. National Commission on Excellence in Education (1983) declared America's education system at risk, but it sent a message to students: "When you work to your full capacity, you can hope to attain the knowledge and the skills that will enable you to create your future and control your destiny" (para. 57). Students must learn what their full capacity is. The quantitative data the AR software provides aids teachers and students to examine the current reading capacity of a student and then to work together during teacher-student conferences to set goals and reach reading levels, showing gains over the course of a year. Chapter 2 shows the mixed results from AR from previous researchers, possibly as a result of isolated implementation (Smith & Westberg, 2011). Using teacher-student conferencing techniques associated with the reader's workshop model along with AR may aid in students reaching their maximum reading comprehension ability and developing self-efficacy. Other countries are outperforming the United States, and its scores are dropping instead of increasing. Elementary school is the crucial time to develop the reading skills necessary for life. The rationale for this study is to integrate reading programs and to provide both qualitative and quantitative data to build reading comprehension in 5th-grade students.

Action Research as the Chosen Methodological Approach

For the participant-researcher, a fifth-grade classroom teacher, action research was the most appropriate model for this study. The goal was to increase students' reading comprehension in the 5th-grade classroom by using both qualitative and quantitative data from two separate reading programs. Action research is a cyclical, four-stage procedure: planning, acting, developing, and reflecting (Mertler, 2014). During Phase 1: planning,

the researcher identified and limited the topic, gathered information, reviewed the relevant literature, and developed a research plan, as presented in Chapters 1 and 2 (Mertler, 2014). Phase 2: the acting stage, consisted of collecting and analyzing the data (Mertler, 2014). The developing stage is where the researcher developed an action research plan, as presented in Chapter 3 (Mertler, 2014). The final stage: reflecting consisted of sharing and communicating the results and reflection on the whole action research process (Mertler, 2014).

Assumptions, Limitations, Scope, and Delimitations

This action research focused on finding quantitative evidence to determine whether integrating the teacher-student conferencing tool from Lucy Calkins's reader's workshop with the AR program increased reading comprehension. The researcher assumed that comprehension would grow during this action research study. Limitations included the small population consisting only of fifth-grade students. The administration of the school selected the available students. The study took place over an eight-week period. The researcher used the STAR test both pre- and posttest for data. The researcher kept anecdotal records during student conferencing; therefore, triangulation of quantitative measures from AR along with qualitative measures from teacher-student conferencing was possible. There was no script for conferencing to allow for the diversity of students in the class and individual needs. Student motivation was recorded in anecdotal notes during conferences. The researcher did set AR point goals for students to earn because that is a requirement of the district, but extrinsic rewards were not given if goals were met.

Operational Definitions

Acronyms and technical jargon arise in education, including terms dealing with literacy development in schools. Cornett (2010) provided examples of operational definitions based on research, teacher wisdom, and educational philosophies. Being able to communicate thoughts, ideas, feelings, and emotions effectively through comprehension and composition, written expression, is the definition of literacy (Cornett, 2010). Reading is only one aspect of literacy, and Cornett stated, "Reading is constructing, creating, or composing sense from any text" (p. 6). Comprehension, meaning understanding of text, is both a process and a product (Cornett, 2010). A text in use in this study was a library book, word-based source of meaning. The definitions of other terms are as follows:

Accelerated Reader (AR): A term used to describe a computerized information system that collects information on students as they read books and take multiple-choice quizzes to assess their comprehension (Mallette, Henk, & Melnick, 2004).

Guided independent reading: An active time for students to read, find books, and take AR tests while the teacher circulates around the room, monitors, coaches, and conferences with students about reading (Renaissance Learning, 2007).

Information processing theory: A theory to explain how the human brain interprets sensory information, like a computer (Beers, 1987).

Self-efficacy: A term that describes the belief in one's ability (Corkett, Hatt, & Benevides, 2011).

Social cognitive theory: A theory developed by Albert Bandura to explain human functioning as the result of an interaction between factors related to the self, environment, and behavior (Putman, 2005).

Standardized Test for the Assessment of Reading (STAR): A norm-referenced placement test to ascertain reading level and then a posttest to measure comprehension – measures the zone of proximal development (ZPD) or instructional reading level (Groce & Groce, 2005).

Sustained silent reading: A term that describes continuous opportunities for students to read sustained texts, time to read them, and teacher support for doing so. IR enables readers to branch out, to enhance and expand their reading diet (Carey, Howard, & Leftwich, 2013).

Teacher-student conferencing: A meeting between the student and teacher that can be brief or in depth depending on the goals and needs of each student. Conferences should always consist of planning for the reading conference, learning about the student's personal interests and attitudes towards reading, referring to previous goal(s), gathering information about the student's progress and discussing this information with the student, hearing the student read, clarifying the processes or comprehension strategies or other aspects of reading (e.g., fluency, vocabulary, decoding, variety of texts being read) the student is using and ensuring the student is monitoring and reflecting on how these support understanding of the text, providing personalized, specific feedback, on-the-spot teaching, agreeing on goals for further learning and establishing tasks to help achieve goals, recording observations and comments, extending a student's reading interests, and finishing positively (Snowball & Bolton, 2010).

Zone of proximal development (ZPD): A term that describes a dynamic continuum of independent and assisted abilities associated with Vygotsky's theory of child development (Groce & Groce, 2005).

Summary and Conclusion

This action research study focused on solving the problem of how to increase students' reading comprehension using teacher-student conferencing during reader's workshop along with AR as an active learning experience. From *A Nation at Risk* to NCLB, data-based instruction is key when implementing a balanced literacy model. Integrating programs that collect different types of data may allow teacher inquiry to evolve into a more dynamic and engaging curriculum implementation (Drake, 2012). The researcher created this action research study to examine the impact of teacher-student conferencing on AR and students' reading comprehension by answering the research questions. Reading comprehension may rise as teacher effectiveness improves through data-driven instruction.

The following chapters explain this action research further. Chapter 2 provides literature about AR and Lucy Calkins's reader's workshop model. It includes studies that question and support the use of AR. It also discusses research showing the effectiveness of including teacher-student conferencing during reading. Chapter 3 outlines the action research model the researcher implemented for this study. The results follow in Chapter 4, specifically answering all three research questions. Chapter 5 gives the interpretation of the results as analyzed by the researcher.

Chapter 2: Literature Review

Introduction

With the different movements of reading models in literacy instruction, there have been ups and downs in reading achievement scores across the United States since 1998 (U.S. Department of Education, 2015). The basal reader has been in use predominantly since the early 1900s (Graves & Dykstra, 1997). Throughout the course of the reading wars, the basal reader underwent adaptation to fit a skill-specific approach to whole-language approach, but always keeping all students on the same reading level (Graves & Dykstra, 1997). A balanced literacy approach explains that all children learn differently and that there is no one specific way to teaching reading during the elementary years. The AR program began during the age of the basal readers to begin having students read on their independent reading levels (IRLs). Reader's workshop models then evolved to provide differentiated reading instruction and a balanced literacy approach.

AR is a computerized information system that collects information (data) on students as they read books and take multiple-choice quizzes to assess their comprehension (Mallette et al., 2004). There is contradictory evidence among researchers regarding the effectiveness of AR to improve reading comprehension in elementary students. Variables that impact this mixed review of evidence are implementation, book availability, time spent independently reading, population size, and extrinsic rewards. There are few studies to show the impact of conferencing on reading comprehension, so the researcher included action research studies from theses and dissertations to provide

data for this literature review. This chapter explains the conferencing aspects in detail while outlining previous research. There are many gaps in the research due to differences in data focus for each program; quantitative data drives AR, while qualitative data drives reader's workshop. Gathering a picture of the whole child is crucial when evaluating reading comprehension progress. The data from STAR reports and the daily use of AR provide data for engaging conversation during a student-teacher reading conference.

This chapter has the following subheadings: comprehension, students' achievement in comprehension, theoretical framework, historical context (support to integrate AR and student-teacher conferencing), the building blocks of AR (provides the background to the AR program and how to implemented it in classrooms), AR research studies (organized by no significant results and implementation studies), studies including AR and conferencing, key components of Lucy Calkins's reader's workshop (explaining the reader's workshop model and how AR can fit into this program), conferencing research studies, and summary. The broad range of research in this literature review examines the practical use of AR, conferencing, and comprehension.

Comprehension

Cornett (2010) defined comprehension as an inquiry-based problem-solving process. Another definition, "Literacy is the ability to communicate thoughts, ideas, feelings, and emotions effectively through comprehension (understanding) and composition" (Cornett, 2010, p. 5). The adoption of the CCSS has caused a change in literacy instruction at the elementary level due to an emphasis on higher level comprehension skills, expecting students to sort and categorize, compare and contrast,

evaluate, analyze, and reason (Calkins, Ehrenworth, & Lehman, 2012). Researchers over the years have identified seven subcategories of comprehension:

- activating relevant prior knowledge before, during, and after reading a text
- determining the most important themes and ideas in a text
- creating visual and sensory images, before, during, and after reading a text
- asking questions
- drawing inferences
- retelling and synthesizing
- utilizing a variety of fix-up strategies to repair comprehension when it breaks down. (Serravallo, 2014, p. 13)

These strategies take place before, during, and after reading. Students must learn how to use these strategies through explicit instruction, teacher modeling, and guided and independent practice to become effective (Pressley, Roehrig, Bogner, Raphael, & Dolezal, 2002).

Comprehension instruction must take place in a supportive classroom context and include a great deal of time actually reading, experience of reading real texts for real reasons, an environment rich in vocabulary and concept development through reading, experience, and, above all, discussion of words and their meanings, substantial facility in the accurate and automatic decoding of words, and an environment rich in high-quality talk about text (Duke & Pearson, 2002). Research by Gottfried (1985), Sweet, Guthrie, and Ng (1998), West and Stanovich (1995), and Guthrie and Wigfield (2000) has shown that achievement on standardized tests has links to motivation to read, and this laid the foundation for Guthrie et al.'s (2006) study. The increased of number of stimulating

literacy tasks in a supportive classroom context has direct links to increased motivation of reading and higher achievement on the reading standardized test (Guthrie et al. 2006). According to Guthrie et al., the following instructional practices increase reading motivation and comprehension:

- providing content goals for reading
- supporting student autonomy
- providing interesting texts
- facilitating social interactions related to reading
- maintaining warm relations between teachers and students
- using hands-on activities to spark interest. (p. 232)

Literacy instruction in the classroom that includes both AR and student-teacher conferencing from Lucy Calkins's reader's workshop may increase comprehension, because this combination produces both qualitative and quantitative data, allowing the teacher to make data-driven decisions based on the whole child.

Students' Reading Comprehension Achievement

In 1971, the NAEP reported an average score of 208 in reading achievement of 4th graders, while in 2012, that score rose to 221 (U.S. Department of Education, 2015; see Appendix B). It took 40 years to increase the average score by 13 points, but for proficiency, a score of 238 is necessary. According to the current trend, it will take more than 40 years to achieve proficiency. The Nation's Report Card (U.S. Department of Education, 2015) details the reading performance level descriptions. Descriptions of the skills students demonstrate at each reading performance level follow. The five performance levels are applicable at all three age groups (9-, 13-, and 17-years-of-age);

however, the likelihood of attaining higher performance levels depends on a student's age:

- **Level 350: Learn from specialized reading materials –** Readers at this level can extend and restructure the ideas presented in specialized and complex texts. Examples include scientific materials, literary essays, and historical documents. Readers can also understand the links between ideas, even when those links are not explicitly stated, and make appropriate generalizations. Performance at this level suggests the ability to synthesize and learn from specialized reading materials.
- **Level 300: Understand complicated information –** Readers at this level can understand complicated literary and informational passages, including material about topics they study at school. They can also analyze and integrate less familiar material about topics they study at school, as well as providing reactions to and explanations of the text as a whole. Performance at this level suggests the ability to find, understand, summarize, and explain relatively complicated information.
- **Level 250: Interrelate ideas and make generalizations –** Readers at this level use intermediate skills and strategies to search for, locate, and organize the information they find in relatively lengthy passages, and they can recognize paraphrases of what they have read. They can also make inferences and reach generalizations about main ideas and the author's purpose from passages dealing with literature, science, and social studies. Performance at

this level suggests the ability to search for specific information, interrelate ideas, and make generalizations.

- **Level 200: Demonstrate partially developed skills and understanding –** Readers at this level can locate and identify facts from simple informational paragraphs, stories, and news articles. In addition, they can combine ideas and make inferences based on short, uncomplicated passages. Performance at this level suggests the ability to understand specific or sequentially related information.
- **Level 150: Carry out simple, discrete reading tasks –** Readers at this level can follow brief written directions. They can also select words, phrases, or sentences to describe a simple picture and can interpret simple written clues to identify a common object. Performance at this level suggests the ability to carry out simple, discrete reading tasks.

The United States has remained within the lower level 200 of only partially developed skills and understanding. Reardon, Valentino, and Shores (2012) stated, "Overall, however, despite some evidence of improvement in the most recent decade, the knowledge-based competencies of U.S. students have changed little in the past forty years" (p. 3). However, the NAEP (U.S. Department of Education, 2015) reported an increase in scores for all gender, racial, and socioeconomic groups since 1971. Chall (1996) related the up and down scores of students' reading achievement to changes in teaching, in textbooks, and in other educational practices.

North Carolina's NAEP report card has increased from a score of 215 in 1971 to 226 in 2015, which is a significant difference (U.S. Department of Education, 2015; see

Appendix A). The largest increase was from 2013 to 2015, in which period the state fully implemented the CCSS (U.S. Department of Education, 2015). According to the NAEP (U.S. Department of Education, 2015), within the race trend, White students are outperforming both African American and Hispanic students, but African American students (range of scale from 170-206) and Hispanics (range of scale from 183-203) have shown more growth to close the achievement gap to White students (range of scale from 214-229) between 1971 and 2015. The U.S. Department of Education (2015) also reported that male students (range of scale from 201-218) are closing the achievement gap to females (range of scale from 214-223). The school in which the research took place has shown a gain in reading state testing scores since 2014, and it is at the same average as the state of North Carolina (NC State Reports, 2017). The gains that have taken place have occurred since the school implemented the AR program and the reader's workshop model along with the CCSS.

Theoretical Framework

For this action research study, the relevant theories were based on the two programs. Accelerated Reader is a behaviorist approach while readers workshop is grounded in the constructivist theory.

Behaviorism. In the Behaviorist theory, the focus of learning is the final product and not the process in which the learning takes place (Oglan, 1999). Skinner (1999) defined positive reinforcement as a classical pattern in which we generate behavior in others through reward. The AR program was grounded in this theory. Students read a book and then take a test to earn AR points. The immediate feedback from the test taken develops an extrinsic motivation to read. Students receive immediate, positive, or

negative, feedback with the TOPS (three opportunities to praise a student) report (Paul, 1996). The levels to praise are quantity, quality, and level of reading, and the teacher can recognize students during what Paul (1996) refers to as the status of the class:

> Teachers visit one-on-one with each student daily to check the Student Reading Logs, which record their day-to-day reading progress in the interval between AR tests. The daily Status of the Class increases the frequency of the feedback and reduces the risk of failure. One-on-One time also permits interpersonal feedback and improves positive alignment of student and teacher purposes. (p. 25)

The students are focused on the end-product of the number of AR points earned versus the process of reading a book. The classroom teacher sets reading goals based on earning the AR points and the only concern addressed is whether the AR point goal has been met.

Many schools have developed reward systems if the AR point goal has been met within a certain time. Pizza parties, AR stores, and extra recess are examples of how teachers extrinsically motivate students to read using AR. Skinner (1999) explained, "A very slight reinforcement may be tremendously effective in controlling behavior if it is widely used" (p. 191). Some schools also use visual bulletin boards to track individual student progress as a means of competition. Persinger (2000) found in her qualitative case study found that extrinsic motivation and rewards were important to the students and questioned whether the rewards and competition fostered a well-balanced literacy environment. With many schools implementing the AR program using the focus of the generation of AR points, the process of reading and deepening comprehension may be lost.

Constructivism. Constructivists theorists believe in the process of learning and the final product. In the Constructivist paradigm, the learner is active participant who constructs knowledge (Oglan, 1999). Regarding literacy, all aspects including reading, writing, listening, speaking, thinking, viewing, and computing are active process where the teacher is the facilitator that collaborates with the students (Oglan, 1999).

Constructivist theorists such as Vygotsky and Jerome Bruner believed that what a child can do today with guidance, he or she will be able to do independently tomorrow (Calkins, 2006). Vygotsky viewed cognition as a full-body experience (Smagorinsky, 2013). Vygotsky's research centered on human development. "An emphasis on human development focuses on how people engage with others socially to learn how to use cultural tools (writing, reading) that will contribute to one's understanding of self in relation to society" (Smagorinsky, 2013, p. 198). Going through the motions of reading is not enough to reach and sustain the maximum reading level possible: educators must guide and facilitate students through the process (Sanden, 2014). Readers workshop uses a time for students to practice their independent reading. For students to read for a sustained amount of time students must choose books on their reading level. The basis of the zone of proximal development (ZPD) is Vygotsky's theory of child development. A student's ZPD is the ability level at which he or she can read independently, and when reading within this level, the child can be successful. As Costello (2014) explained, "According to Vygotsky, as children master challenging everyday tasks, they engage in cooperative dialogues with adults and more expert peers, who assist them in their efforts of language interaction" (p. 4). During the independent time of readers workshop, teachers meet with students one-on-one. Conferencing with students about the books they

can read independently may continue to increase their ZPD to work toward the highest ability level possible for each student (Costello, 2014). During the conference, the teacher keeps qualitative data records through anecdotal note taking which can be later analyzed to focus instruction to meet the individual needs of each student.

Building Blocks of AR

Judith Paul created the AR program sitting at her kitchen table in the 1980s (Stefl-Mabry, 2005). Paul was disappointed with the reading program at her children's school, so she developed a reading list with points incorporating behavioral motivation techniques along with technology to enhance her children's reading experiences further (Stefl-Mabry, 2005). Paul essentially completed an action-research study on her own children, which led to the implementation of AR across the United States. The AR program provides a model for teachers to use to motivate students to read and build reading comprehension. Renaissance Learning (2007) wrote,

> The purpose of Accelerated Reader is to enable powerful practice. It does this by; providing data that helps you monitor and personalize reading practice, encouraging substantial amounts of practice, according to guidelines based on research findings, making practice fun for students by facilitating successful encounters with text. (p. 5)

Students choose books of interest to them, and they should read 30 to 60 minutes per day. Teachers observe and conference with students during reading to gain more insight into each child's unique learning style. The STAR assessment provides valuable quantitative data on each student based on his or her reading ability. Reading Renaissance (2007) clearly outlined how educators should implement AR in the classroom with one specific

emphasis on checking in with students one on one at key moments to monitor students' practice and to motivate reading:

> While other programs advocate that teachers should quietly read with students during periods of independent reading, we urge you to be active. Use this time for brief, one-on-one conversations during which you monitor and guide your students' reading practice. This planned and thoughtful guidance is what makes AR different from sustained silent reading. It puts the "guided" in guided independent reading, and is essential to students' reading progress. (p. 27)

Truly to evaluate the effect of AR on reading comprehension would require a study with implementation, according to Renaissance Learning (2007). Implementation studies will be evaluated later in this chapter.

The Standardized Test for the Assessment of Reading (STAR) is a norm-referenced test used in AR. Students take the 34-question, adaptive test on the computer. This assessment then generates quantitative data about each student's reading ability. Teachers use the STAR quantitative data to obtain individualized reading levels, based upon the zone of proximal development (ZPD), and to set reading goals (Renaissance Learning, 2007). The ZPD baseline sets a range of reading levels for students to choose books of interest to them that they can read independently with little or no frustration. After completing the book, the student takes a comprehension test on a computer and receives immediate feedback from the computer (Renaissance Learning, 2007). The teacher conferences with students using the TOPS and diagnostic report to discuss quantitative data progress (Renaissance Learning 2007). The conferencing component of AR fosters a relationship between the teacher and child, which further strengthens a

student's self-efficacy by discussing successes and/or improvements for the next reading. Terry Paul (1996), the co-creator of AR, explained a key component of AR, called status of the class:

> Teachers visit one-on-one with each student daily to check the Student Reading Logs, which record their day-to-day reading progress in the interval between AR tests. The daily Status of the class increases the frequency of the feedback, improves the loop response rate, and, thereby, reduces the risk of failure. One-on-one time also permits interpersonal feedback and improves positive alignment of student and teacher purposes. (p. 25)

Teacher feedback is a key component of building self-efficacy in elementary students (Corkett et al., 2011). There is a gap in the literature about using the quantitative data provided by the AR software and conferencing with students about their progress with the program.

The STAR assessment can also generate other quantitative data reports that may be valuable in a data-driven classroom. The State Standards Student Report estimates a student's mastery of State Standards or CCSS based on the STAR Enterprise scaled score (Renaissance Learning, 2014). This report shows below, at, or above mastery level for each ELA CCSS, which can pinpoint individualized instruction planning for each student. Another report the STAR data can generate is the Instructional Planning Report for students, which provides a list of recommended skills for individualized instruction based on most recent assessment (Renaissance Learning, 2014). These reports are also available in a classroom format to tailor instruction for the class and individual students

to drive instruction in the classroom. The quantitative data may aid a teacher in a class with 25-plus students to work effectively and efficiently to build reading comprehension.

AR Research Studies

No significant results. Over the years, there have been many different research studies on the AR program, but the findings have been mixed. Stephen Krashen has analyzed many research studies over the years involving the AR program and reading comprehension gains. In "The (Lack of) Experimental Evidence Supporting the Use of Accelerated Reader," Krashen (2003) discussed studies that showed no significant evidence of AR: Turner (1993), Potter (1994), Howard (1999), and Smith and Clark (2001). Krashen (2003) did not consider Renaissance Independent Research Reports scientific studies. In a study considered the "gold standard" conducted by Vollands, Topping and Evans (1999), Krashen (2003) refuted significant findings due to the comparison group sample size, the amount of reading time, the use of read aloud, and book reports yielding unclear data. Krashen did not claim to prove AR ineffective, but stated that there is no evidence to support it. The problem lies within the studies.

Krashen (2004) analyzed a study by Tavonatti, Brimmer, and Cipielewksi, comparing seventh-grade students who had used AR in elementary school and students who had not in three districts. In Krashen's study, there was no significant difference, and there was no check on fidelity and implementation. Krashen (2004) explained the four components of AR: books, reading time, tests, and prizes. Krashen (2005) stated that no studies completed with AR have focused on equal numbers of books and equal amounts of recreational reading time, which do, in fact, increase reading comprehension. For this research study, all students had access to the same books and all students had equal

amounts of IR time at school. There were no prizes for AR during this research study. The tests students took on their AR books provided data for the student-teacher conference. This research study addressed the issues with previous studies.

Many schools use AR as a token system, and they are losing the true intent of the program. Krashen (2003) wrote,

> None of the studies included long term follow-up data telling us if children continue to read after the incentive system is no longer in place. This is crucial considering McLoyd's (1979) finding that the use of rewards inhibits subsequent reading. (p. 21)

The implementation has turned into a reward system for prizes rather than a tool to increase reading comprehension to higher levels.

According to Melton et al. (2004),

> With almost 55,000 schools having purchased the program, and only 279,000 educators having received training, the quality of implementation varies greatly. This factor can affect the degree to which the program is successful in motivating readers and improving reading achievement. (p. 20)

Many of the studies focused on the reading comprehension gains and not the implementation integrity of the program (Melton et al., 2004). The purpose of Melton et al.'s ex post facto study was to compare the reading achievement of 5th-grade students in Jackson, Mississippi, using AR along with the ELA curriculum and 5th-grade students only using the ELA curriculum. The Terra Nova standardized reading achievement test was used as a pre- and posttest (Melton et al., 2004). The sample included two different elementary schools with similar demographics consisting of 322 5th-grade students

participating in the AR program and another school of 270 students not using the AR program (Melton et al., 2004). There was no significant difference in reading achievement in the study based on the analysis of covariance (Melton et al., 2004). Other than just the use of AR along with the ELA curriculum, there was no description of program implementation. Without knowing how the schools implemented AR, there is no way of knowing whether the schools were using the program with fidelity and no basis to compare comprehension between the two schools. There is a discussion of the implementation of this research study in Chapters 3 and 4.

Many researchers have deconstructed the AR program. Robin Groce and Erin Groce (2005) conducted a study to examine teacher implementation of AR focusing on assessment, aesthetics, and text interactions, motivation, and book selection. Researchers asked a random sample of 100 teachers to complete a qualitative assessment to provide data to deconstruct the AR program; 67 teachers responded to the survey. In the study, 46% of teachers used the comprehension test and the other 54% sometimes used or rarely used the assessment component. Teachers only used AR with projects on aesthetics and text interaction, but they noted, "We have observed teachers who also engage their students in literature circles, story retellings, teacher-student conferences, writing activities, and other aesthetic text interactions" (Groce & Groce, 2005, p. 22). Researchers identified over half the teachers they surveyed as implementing motivation through the points system. Teachers recognize students for achieving their goals, and over 58% of the schools always give special recognition to the students earning the most points. Groce and Groce felt that book selection was a positive point of AR, but they

were concerned when students would not choose books if there was no AR, or if books were below the students' reading levels.

One issue with Groce and Groce (2005) is measuring text interactions only through projects. Even more so, researchers observed that teachers were conferencing with students, but provided no data or information about the conferences. Groce and Groce concluded that more research is necessary using modifications to enrich the program, such as literature circles, discussions with students about book choices, and allowing students to have more book choice. These are all activities that Reading Renaissance (2007) includes in the implementation of a successful AR program. Without proper implementation, the measurements may not be truly reliable or valid.

Implementation studies. AR is a tool for teachers to track and measure students' reading comprehension. Therefore, students are stakeholders in the AR process who must have a voice. Smith and Westberg (2011) conducted a two-part study that included administering questionnaires to 1,365 Grade 3-8 students to gather their views about the AR program. Then researchers held focus group discussions with eight to 10 students from five school sites from three different districts, including elementary and middle school students (Smith & Westberg, 2011).

Researchers asked open-ended questions to give students an opportunity to share what they thought of AR. Smith and Westberg (2001) determined that AR was completely isolated, with little interaction between the student and teacher in all three districts. Students said that points influenced their reading along with earning rewards. Some students in the focus groups were frustrated because AR factored into their grades, and that took the enjoyment out of reading for them (Smith & Westberg, 2011). Students

in the study voiced their opinion: “They read more because of AR, especially if class time was devoted to AR reading time, but … they didn’t read for the pleasure of reading. Rather they were motivated by earning treats, candy, parties, and other incentives” (Smith & Westberg, 2011, p. 4). Smith and Westberg (2011) concluded that a close and careful look at the implementation of AR in schools was warranted. Students have a voice, and they appreciate being asked about their feelings and recommendations on AR. Renaissance Learning (2007) advised setting goals and levels while conferencing with students. Throughout the grading period, teachers may also decide to change a student’s goal based on the experience during that time. This comes from engaging in an active relationship between the student and teacher, which the students in Smith and Westberg explained was not the case at any of their schools.

Shannon, Styers, Wilkerson, and Peery (2015) evaluated teacher implementation and found a statistically significant positive impact on student reading gains when compared with traditional reading instruction alone. Researchers used a cluster randomized controlled trial design to evaluate the program with 344 first through fourth grade students in three schools (Shannon et al., 2015). The treatment group used AR, and Shannon et al. measured teacher implementation fidelity by conducting initial AR training seminars, training visits, onsite classroom observations and interviews, and online self-report implementation logs for teachers. Researchers evaluated teachers based on 29 variables, which included teacher and student routines and responsibilities, use of instructional goal-setting, and motivational components. Overall, the teacher’s implementation mean was 91%, suggesting that teachers implemented AR with high fidelity (Shannon et al., 2015). According to the authors, “Teachers generally reported

reading to students regularly, checking individual student logs before they took quizzes, providing appropriate support and feedback, intervening when appropriate, reviewing reports, monitoring student reading practice and recognizing students' successes" (p. 27). Teacher implementation fidelity significantly affected comprehension, and others could replicate this study with the use of focus groups or student perception surveys to enhance the research on AR further. Shannon et al.'s study is significant for the increase of comprehension, but also for the student-teacher interaction regarding AR and reading data. The current research study may show an increase in reading comprehension when combining AR and student-teacher conferences.

Facemire (2000) studied third-grade students over a nine-week period, comparing the experimental group with both teachers and students trained in the use and implementation of AR to the control group, plus students at the same school with the same access to books, just not using AR. Students in this study received a pre- and posttest using STAR to determine effectiveness (Facemire, 2000). Students in the experimental group gained 17% in effectiveness, whereas the control group gained 9% (Facemire, 2000). Students in both groups had at least 20 minutes per day of reading time, and students in the experimental groups received extrinsic rewards, such as bookmarks and paperback goods, when they met goals (Facemire, 2000). The sample size in this study was small, and a larger survey would be necessary to increase the validity.

Nunnery, Ross, and McDonald (2009) found that students in classrooms in Grades 3 through 6 using STAR and AR according to Reading Renaissance guidelines with no extrinsic rewards exhibited significantly higher growth rates than those in control classrooms. They designed a randomized field experiment for 978 urban students in

Grades 3-6 (Nunnery et al., 2009). Researchers also found a correlation between the quality of program implementation and a reduction in the negative effect of learning disability status (Nunnery et al., 2009). Researchers did not analyze gender, race, or other student groups in the data. Teachers in the treatment group received professional development on the implementation of AR and the software, along with training on integrating student materials with the reports generated from AR to provide interventions (Nunnery et al., 2009). Nunnery et al. used consultants to rate classroom implementation, time spent reading to, with, or independently, hardware usage, and principal support using Likert-type scales three times per year. Nunnery et al. stated,

> Reading Renaissance is a teacher professional development program designed to facilitate teachers' use of several practices, including providing 60 minutes per day for student reading, use of AR in the classroom, managing students' use of reading logs, identifying students' zones of proximal development to identify appropriately challenging reading materials, and use of AR diagnostic reports to identify students who need remediation or other interventions. (p. 7)

Students in the treatment classroom with a high implementation score showed significant results when compared to those in a non-treatment classroom, third grade +0.36, fourth grade +0.16, fifth grade +0.09, and sixth grade +0.06 (Nunnery et al., 2009). Nunnery et al. (2009) also noted that there was no significant difference between the control and low-implementation classrooms, indicating that implementation of AR is a key element to student reading growth. The use of the diagnostic quantitative data reports in Nunnery et al. (2009) is like the approach in this action research study to drive the student-teacher conference during independent reading time in the reader's workshop.

Johnson and Howard (2003) evaluated the effect of the AR program on reading achievement and vocabulary development. Seven hundred fifty-five students in third, fourth, and fifth grade at an elementary school participated in the study and underwent categorization based upon the number of points they accumulated during the study period (Johnson & Howard, 2003). The groups were as follows: low participation (0-20 AR points); average participation (21-74 AR points); and high participation (75 points and above). All groups increased their reading achievement based on the pretest posttest design using the Gates-MacGinitie Reading Test (Johnson & Howard, 2003). Students with higher accumulations of points had the biggest comprehension increases (Johnson & Howard, 2003).

Vollands and Topping et al. (1999) also conducted a study focused on two projects in Scotland. In Project A, an experimental class of sixth graders had access to the AR software, books, public display of class points, and extrinsic rewards based on points for six months (Vollands et al., 1999). The experimental group participated in 15 to 30 minutes of IR each day and 30 minutes of teacher read-aloud (Vollands et al., 1999). The comparison group had no access to AR, and it comprised similar students (Vollands et al., 1999). Both groups were evaluated using a pretest and posttest from two norm-referenced reading tests from the UK (Vollands et al., 1999). The treatment group made statistically significant gains in reading accuracy and reading comprehension in comparison to the other group (Vollands et al., 1999). In Project B, Vollands et al. did not use tangible rewards, and the AR treatment group still showed more gains in reading comprehension than the alternative treatment group, even though the AR group had less time to read independently. Within this study, females scored higher than males

(Vollands et al., 1999). Vollands et al. (1999) also found that 70.3% of students starting the study were at risk for comprehension achievement, but at the end of the study, only 22% were at risk. This may be due to students with learning disabilities having success with the AR program.

Another study, by Topping and Paul (1999), evaluated the reading performance of states according to the NAEP study by the U.S. Department of Education. Topping and Paul ranked the 39 participating states according to reading performance, and then focused study on the 20 of the 39 states that also had AR data. The relationship was as follows: high-performing states had an average NAEP score of 221.4 and an AR points/student average of 39.2; average-performing states had an average NAEP score of 213.3 and an AR points/student average of 25.1; low-performing states had an average NAEP score of 202.0 and an AR points/student average of 24.7 (Topping & Paul, 1999). The extent of this relationship is not definable due to the implementation quality and the time spent in different schools around the country in comparison to schools in states not using the AR program.

Topping, Samuels, and Paul (2008) found a correlation between the quality of reading and time spent engaged reading. Researchers measured the quality of reading by the average percentage correct in AR tests. The engaged reading volume was a measure of the quantity and quality of reading (Topping et al., 2007). Data revealed high average percentage correct, and high engaged reading volume showed statistically significant gains over lower groups (Topping et al., 2007). Therefore, there may be purpose to more than just time spent reading, but also quality of reading.

AR and Conferencing Studies

An action research study by Barrett and Kreiser (2002) focused on increasing reading achievement, motivation, and attitude in third- and fourth-grade students using 40 minutes of daily reading, the AR program, teacher conferencing, read aloud, and social interactions with text. The control group consisted of one third- and one fourth-grade classroom that provided less IR time and use of the AR program, but not as a diagnostic or intervention tool (Barrett & Kreiser, 2002). Students received a pre- and posttest STAR assessment to compare reading comprehension gains over an eighteen-week period (Barrett & Kreiser, 2002). The researchers' goal was for students to grow at least four months according to the grade equivalent gathered from the STAR data. Barrett and Kreiser did not include the use of specific AR reports during conferencing, but they stated,

> Teachers held conferences with students to discuss reading progress a minimum of once a week. The topics varied according to individual needs of each student. In addition to discussing the books the students were reading, AR test scores, goals, and points earned with AR program were subjects of discussion. (p. 35)

Both experimental groups surpassed their goals, but so did the fourth-grade control group with no intervention (Barrett & Kreiser, 2002). The third-grade control group only gained .3 grade equivalent (Barrett & Kreiser, 2002). The researchers found a positive relationship between amounts of time spent reading and achievement, and they suggested further studies to provide more data about conferencing as an intervention strategy (Barrett & Kreiser, 2002). The use of qualitative data during conferring with the students was not included in this research study.

Rogers and Wolf (2014) found that integrating student conferencing with AR led to an increase in reading comprehension and reading enjoyment in an action research project. During the six-week study, a second- and fifth-grade teacher used student conferencing to create a dialogue with students about reading interests, feelings, and progress towards goals (Rogers & Wolf, 2014). Students would read for 25-30 minutes for four to five days per week and meet with teachers to conference at least once per week (Rogers & Wolf, 2014). This strategy allowed teachers one-on-one time with each of their students to encourage and motivate reading and to create an active relationship. During conferences, there were discussions of reading skills, books being read, and the students' thoughts and feelings about their readings (Rogers & Wolf, 2014). Rogers and Wolf did not include the specific use of AR reports when conferencing with students in their study. Students took a pre- and posttest STAR test to determine reading comprehension growth, which indicated growth for all students (Rogers & Wolf, 2014). Students in both second and fifth grade showed increases in their ZPD scores when comparing the pre- and posttest, 12% and 16% respectively (Rogers & Wolf, 2014). Researchers added the conferencing component to increase reading enjoyment and comprehension as compared to the previous time of the year, when conferencing was not a part of the implementation of AR.

This researcher believes that AR is a quantitative data source that may aid in the monitoring of student comprehension growth, but so many studies indicate AR is used an extrinsic reward system to grow AR points. The reward system is a dark component to the AR program which may have an adverse reaction to students' reading. The AR

program allows the student and teacher to conduct a data-driven conference which may increase reading comprehension.

Key Components of Lucy Calkins's Reader's Workshop

Nancie Atwell introduced the reading workshop approach in 1987 (Fountas & Pinnell, 2001). Atwell's approach to teaching reading was a systematic and easily implemented active approach to IR (Fountas & Pinnell, 2001). Over the years, many reading experts have devised reading workshop models.

Lucy Calkins is the founding director of the Teachers College Reading and Writing Project (TCRWP) (Calkins, 2006). Over the past 30 years, Calkins has collaborated with colleagues to develop a balanced literacy approach along with units of studies for educators to use to implement the ELA standards, such as CCSS (Calkins, 2006). The reading workshop model consists of a mini-lesson, guided reading groups or strategy lessons, independent reading (IR) time, student conferencing, and then a summary or gathering of the whole-class (Calkins, 2006). In the mini-lesson, teachers focus on a specific reading strategy in a whole group atmosphere (Calkins, 2006). After the 15-minute mini-lesson, students begin IR practice, which Calkins considers the most crucial part of the reading workshop (Calkins, 2006). During IR, the teacher will focus instruction on guided reading or strategy lessons in small groups to practice reading strategies to build comprehension (Calkins, 2006). Conferencing also takes place during the IR block, and it allows the teacher explicitly to teach reading strategies to one student. Calkins (2006) wrote, "It is by talking about books that children learn to conduct a dialogue in their minds, to think about books even when they read alone" (p. 75). Reader's workshop always closes with the class coming back together and students

sharing the strategies they practiced reinforcing the teaching points throughout the day (Calkins, 2006). According to Calkins (2011),

> The reading workshop provides children with time to read, with a mentor who is a passionately engaged reader and wears his or her love of reading on the sleeve, with opportunities to talk and sometimes write about reading, and with explicit instruction in the skills and strategies of proficient reading. (p. 11)

Jennifer Serravallo (2010), a partner of Calkins at the TCRWP, believed that reading instruction should match five tenets: match the individual reader; teach toward independence; teach strategies explicitly so that readers become proficient and skilled; value time spent, volume, and variety of reading; and follow predictable structures and routines. These five tenets are interwoven throughout the entire readers workshop time.

Units of study. With the adoption of the CCSS, Calkins reworked her units of study for fifth grade so that the reading work had higher levels of agency, along with continuing to build independence, engagement, and stamina (Calkins, 2011). Calkins (2011) divided the units of study into different genres so that readers encounter a wide range of vocabulary in historical fiction, science fiction, fantasy, nonfiction, realistic fiction, and mysteries. Specific skills, strategies, and teaching points evolve in each unit of study to scaffold learning (Calkins, 2011). The mini-lesson focuses each day's instruction based upon the genre for the given unit of study. The students then choose books to read to match the unit of study and practice the skill from the mini-lesson during IR. This action research takes place in a suburban 5th-grade classroom. Calkins's (2011) fifth grade units of study are as follows:

1. September – Agency and Independence: launching reading with experienced readers. During this unit, teachers will launch the reader's workshop and establish routines and procedures. This will also be the time to collect initial assessment data (p. 18).
2. October – Following Characters into Meaning: synthesize, infer, and interpret. During this unit, readers will think with more complexity to generate character theories and to develop their skills of synthesis and inference to develop themes (p. 32).
3. November – Nonfiction Reading: using text structures to comprehend expository, narrative, and hybrid nonfiction. This unit spotlights the skills of determining importance, finding the main ideas and supportive details, summary, synthesis, and reading to learn (p. 54).
4. December – Nonfiction Research Projects: teaching students to navigate complex nonfiction text sets with critical analytical lenses. Building on the previous unit, readers will now increase their expertise through interpretation, cross-text comparisons, synthesis, research, and nonfiction projects (p. 70).
5. January/February – Historical Fiction Book Clubs or Fantasy Book Clubs. Teachers choose which genre of study will be most beneficial to their students at this time. The other study takes place later in the year. The goal in this unit is for readers to develop confidence in tackling complicated literature (p. 81).
6. February/March – Interpretation Text Sets. In these units, students will deepen their analytical skills and further develop their ability to determine central ideas or themes and to analyze the development of those themes (p. 110).

7. March/April – Test Preparation. This unit brings forward strategies for each genre that teachers have taught throughout the year and supports students in thinking logically and flexibly and transferring all they know to their test-taking (p. 129).
8. May – Informational Reading: reading, research and writing in the content areas. During this unit, students learn to become skilled readers in science and social studies (p. 155).
9. June – Historical Fiction or Fantasy Fiction. This relates to the option in January to finish the year with what best serves the students (p. 173).

The basis of the units of study is the CCSS. Research has proven that vocabulary development enhances comprehension, and therefore exposure across different genres contributes to a richer vocabulary (Calkins, 2011). Following the structure and units of study set forth by Calkins, teachers must all develop their implementation styles of the key components to a successful reader's workshop.

Engagement and volume in just right books. Serravallo (2014) defined engagement as a reader's motivation and desire to read and his or her ability to read for sustained amounts of time. Research studies conducted by Allington (2002), Guthrie and Wigfield (1997), Calkins (2001), and Serravallo (2010) all showed positive correlations between student achievement and the amount of actively engaged time students spend reading and enjoying just right books. Matching children with comprehensible texts contributes to reading comprehension growth (Calkins, 2001). Just because a child is in fifth grade does not mean that student is reading on a fifth-grade reading level, so it is important for the teacher to assess all students' independent reading abilities (Calkins,

2001). Books should also be of high interest to the reader to support engagement (Calkins, 2001). Reading high interest books may increase a student's reading stamina, which may also increase their reading comprehension. Teachers must take the time to teach students how to choose "just right books."

To evaluate each student's just right reading level, Calkins (2006) recommended completing running records. Running records are one-on-one assessments the teacher gives to assess the student's reading fluency and comprehension (Calkins, 2006). These assessments take time to complete, but they provide the teacher with both a reading level and qualitative data on the student's reading ability (Calkins, 2001). The qualitative data gathered during student-teacher conferences allows the teacher to determine if the student is reading a "just right book." Qualitative assessment measures may aid the teacher to reflect on the data and identify themes of each child's learning progress.

Numerous research studies have evaluated the importance of the engagement, volume, and book choice. "Independent Reading and School Achievement" by Cullinan (2000) reviewed the literature to find supporting evidence for independent reading (IR), specifically in the upper elementary grades. As cited by Cullinan (2000), Anderson, Fielding and Wilson found that the amount of time fifth-grade students read outside of school positively impacted reading achievement. Greaney and Hegarty along with Tunneli and Jacobs also found similar results with fifth-grade students, giving support to the use of IR (as cited by Cullinan, 2000). Cullinan (2000) also cited many studies by Krashen, all showing that more reading develops literacy skills and increases reading achievement. Allington (2002) studied data from highly effective literacy teachers across six states to determine components of elements of effective instruction. Allington stated,

> Extensive reading is critical to the development of reading proficiency. Extensive practice provides the opportunity for students to consolidate the skills and strategies teachers often work so hard to develop. Exemplary elementary teachers' students did more guided reading, more independent reading, more social studies and science reading than student[s] in less effective classrooms. (p. 742)

Reader's workshop provides more time for students to actively engaged and practice reading strategies with just right books.

Teacher-Student Conferencing

Even though there are many different reader workshop models, educators who implement the readers workshop believe that the teacher-student conference is the most crucial piece. Serravallo and Goldberg (2007), colleagues of Calkins, further explained the conferencing piece in the reader's workshop. There are three types of conferences: research-only, research and compliment, and research-decide/compliment-teach (Serravallo & Goldberg, 2007). In research-only conferences, the teacher quickly moves around the room observing readers and asking questions to learn about reading processes (Serravallo & Goldberg, 2007). This type of conference is beneficial in getting to know students and planning instruction and grouping strategies (Serravallo & Goldberg, 2007). During research and compliment, the teacher observes the student reading and looks for what the reader is doing well to reinforce that strategy positively (Serravallo & Goldberg, 2007). The research-decide/compliment-teach conference is crucial in helping students to move to the next reading level (Serravallo & Goldberg, 2007). The teacher uses all previous knowledge on a student to compliment the observed reading strategies and then teaches or reinforces to continue building each student's newer level of demands

(Serravallo & Goldberg, 2007). Reading logs, observation records, and assessment data are tools the teacher can use to research about a student prior to the conference (Serravallo & Goldberg, 2007). During all teacher-student conferences, the teacher keeps anecdotal records of the conference to record each conversation and to make inferences about reading progress.

A goal-setting conference is also helpful at the first teaching opportunity when meeting with a student (Serravallo, 2014). This conference is beneficial at the beginning of each unit of study or after collecting new assessment data. Before this conference, the teacher has already analyzed all reading assessment data on each student and knows which skills that reader has mastered and which skills needed further enhancement (Serravallo, 2014). The teacher and student discuss together which specific skill the student wants to focus on to increase reading achievement, and they develop a plan together to reach the goal by a specific date (Serravallo, 2014). Serravallo (2014, p. 96) stated, "Once a goal is established, you teach and provide feedback to the student over time about his progress toward that goal. Feedback is shown to have a major influence on performance (Serravallo, 2014). The dialogue between the teacher and student may foster an intrinsic motivation to become a better reader and continue to reach goals.

The conference component is a balanced give-and-take relationship between the reader and teacher. Fountas and Pinnell (2001) explained the purpose of conferencing during reader's workshop,

> Engage in meaningful interaction that supports the reader's ability to process a text with understanding and fluency. Teach the reader, not the text. Become a set of ears, a guide, and a sounding board. Help the student solve problems. (p. 138)

A central philosophy of Lucy Calkins and all her colleagues is that comprehension is the thinking we do before, during, and after reading (Fountas & Pinnell, 2001). Conferencing with students provides a structured time for each student to talk and think about what he or she is reading with the teacher to increase reading comprehension.

Explicit instruction. During explicit literacy instruction, the teacher models a specific strategy using a systematic procedure, students then practice using that strategy with guidance, then over time, the teacher stops providing guidance so that the student can perform that skill or strategy independently (Calkins, 2011). Allington (2002) also found explicit instruction in exemplary classrooms. Allington (2002) wrote,

> The exemplary teachers in our study routinely gave direct, explicit demonstrations of the cognitive strategies that good readers use when they read. They modeled the thinking that skilled readers engage in as they attempt to decode a word, self-monitor for understanding, summarize while reading, or edit when composing (p. 473).

Explicit instruction takes place in mini-lessons, guided reading, and conferring. Explicit instruction and guided practice occurs numerous times for students until they have mastered particular skills at their own level. Conferences are the times during which teachers can provide modeling and support to readers of these skills so that each reader can further enhance his or her own reading strategies. Serravallo (2010) understood the demands on classroom teachers and supported group conferencing as an efficient method to accomplish the same goals as an individual conference. This method varies from guided reading, because the students are all still choosing their own text on their own level, but they are all working on the same strategy (Serravallo, 2010). The group

conference allows the teacher explicitly to teach each child one strategy, but to remain on each student's independent reading level (Serravallo, 2010). Strategy lessons link new information based on what a reader already knows and can do independently (Serravallo, 2010). Allington (as cited by Serravallo, 2010) stated,

> According to research, when students are allowed to choose their own reading materials, they tend to read more. Instead of assigning books as guided reading or reading groups do, most small-group conferences work with children's self-selected reading material. (p. 12)

Dole et al. (1996) found that students receiving explicit instruction in strategy groups showed statistically significant gains in reading comprehension in comparison to groups receiving instruction from the basal reader, or from story-content instruction. Students can show what skills they already have, and the teacher can identify the quality of that comprehension skill and then further enhance instruction to deepen meaning (Serravallo, 2010). Students may begin to feel good about themselves as a reader and develop the intrinsic motivation to continue to be actively engaged readers which may lead to an increased comprehension level.

Conferencing Research Studies

Akmal (2002) and Apland (2016) both explained the benefits of using conferencing with students during independent reading, such as building positive relationships, monitoring academic, social, and personal growth, and customizing instruction to reach the diverse needs of all the students. Student conferencing allows the teacher to examine the student experience of learning. Costello (2014) decided to implement student conferencing with self-selected silent reading to examine students

based on activation of prior knowledge, identification of important ideas and themes, questioning the text, visualizing and other sensory imaging, inferences, retelling, and fix-up strategies. Throughout the five-month study, Costello (2014) conferenced with students before, during, and after reading based on student needs, and Costello kept a journal detailing each conference. Costello (2014) explained the student-centered approach,

> I based my instructional decisions on student learning, not a teaching manual or generic lesson plan. I met with some groups more than others. Students were able to ask for times to meet or to let me know that they were doing fine with their reading and did not need to meet that day. During each conference, it was comprehension-as-sense-making that was the focus. Students were using the strategies to strengthen their understanding of the book. (p. 49)

Costello (2014) gained insight into students' reading personas by using conferencing and transformed the experience to meet the needs of each student. Costello's study was completely qualitative, which differs from the action research study of this dissertation. Qualitative data is valuable but integrating the quantitative data into the student-teacher conference may strengthen comprehension even more.

Denton, Vaughn, and Fletcher (2003) identified studies in which students with learning disabilities made significant gains when receiving explicit instruction in a one-to-one situation. There was no scripting of the explicit instruction, and its basis was the students' strategy needs (Denton et al., 2003). The duration of the treatment was two 50-minute sessions for a period of eight to nine weeks (Denton et al., 2003). Even though this could not occur for all readers in a regular education classroom, the researchers

supported identifying struggling readers as early as possible and engaging with explicit instruction in a one-to-one ratio, such as a conference, to make the maximum reading gains possible (Denton et al., 2003). A student-teacher conference allows for a one-to-one ratio of explicit reading instruction. This study provided that for each student at least once a week.

Student-teacher conferencing provides explicit feedback to enhance reading further. Nicholas and Paatsch (2014) conducted a study on feedback and conferencing during the first year of schooling and found that even young students can act upon the feedback they receive. Research suggests that phonemic awareness and letter knowledge are the best school predictors of how students will learn to read, but Nicholas and Paatsch showed that students receiving explicit feedback during student-teacher conferences surpassed the expected level of growth, indicating that the teacher can positively influence a child's reading potential.

Teacher-student conferencing provides qualitative data on each student. Gill (2000) conducted a case study on a second-grade female student struggling to read. The study took place over the course of a four-month period, and Gill coded all anecdotal notes into three sections: choice of text, use of reading strategies, and roles of the teacher (Gill, 2000). Gill found patterns in all categories. By the end of the period, the student was on the current expected reading level of a 2nd grader. Gill asserted, "Individualized reading conferences can provide opportunities for increasing students' interest and motivation, for discussions about books, and for instruction and assessment" (p. 502). Intrinsically motivating students to read may be accomplished through conferencing more so than earning an extrinsic reward.

There is insufficient research on Lucy Calkins's reader's workshop model; however, studies of all the components of the model show increases in comprehension. Many districts have adopted the use of the Lucy Calkins' reader's workshop model along with the units of study, so more research may be available in the future. The basis of conferencing studies is qualitative data. This action research integrated AR and the conferencing tool from the reader's workshop and gathered both qualitative and quantitative data using evidence based-instruction to increase reading comprehension in 5th-grade students.

Summary

Learning to read and reading to learn are two fundamental elements at any elementary school. Districts across the United States implement different reading programs and series based on research studies that provide a balanced literacy approach. It seems America has plateaued in literacy development. AR and Lucy Calkins's reader's workshop are just two programs in use to ensure that the United States does not remain a nation at risk according to national reading reports. Each program uses a different method of data collection and combining the elements of the programs may lead to a clearer picture of the whole child. Only using the point system of AR to extrinsically motivate students to learn does not foster comprehension development. Qualitative data collection in a classroom of 25 plus students can be overwhelming to a teacher. Using the quantitative data from AR in the teacher-student conference may enhance the level of dialogue.

In conclusion, the mixed evidence of AR research studies neither proves nor disproves the effectiveness of the program to build reading comprehension. AR is a

supplementary program that works best when educators pair it with a balanced literacy approach. There is no previous research on AR and specific teacher-student conferencing with Lucy Calkins's reader's workshop, so pieces from previous research informed the methodology for this study, as outlined in Chapter 3. Rogers and Wolf (2014) used conferencing at least once a week for every student. Many of the studies did not account for gender, race, learning-disabled students, or socioeconomic status, but this study included an analysis of population data. This study also followed that format, and the researcher provided at least 30 to 45 minutes of IR time each day. Nunnery et al. (2009) used the AR reports as tools for teachers in the treatment group to work with students needing intervention. For this study, the researcher used the AR reports as the research component when conferencing with students. Many studies used the STAR assessment to determine whether there was a significant difference. This study also used STAR assessment to measure the independent reading levels of both the pre- and posttest data, but also included data generated from weekly data reports about book level, book volume, engaged time per day reading, and comprehension. Due to the lack of a description of specific conferencing techniques along with reports from AR in previous research, the researcher detailed the implementation and methodology so that other researchers and educators can replicate this research study with high validity and evaluate the effectiveness of integrating teacher-student conferencing with the AR program to increase comprehension.

Chapter 3: Methodology

Introduction

Chapter 2 explained the literature that supports the creation of this action research project. This chapter describes in detail the research methodology the researcher utilized to answer the research question over an eight-week period. Planning, Stage 1 of the action research study, focused on explaining the evolution of the research topic along with the development of the research plan and the ethical considerations the researcher took into account. Stage 2, the acting stage, clarified the collection and analysis of data in the research context. Stage 3 legitimized the actions of the study. The final stage, reflecting, outlined revisions to move forward in the future.

The purpose of this action research study was to determine whether integrating the tool of student-teacher conferencing during reader's workshop with the AR program increased reading comprehension. The following research question directed this study: what impact do the student-teacher conferences from the Lucy Calkins workshop have on reading comprehension as measured by the AR program? The problem of practice is that schools are not implementing the AR program as an active learning experience to increase reading comprehension. The action research methodology is the most appropriate framework for this study. As Mertler (2014) stated, "The purpose of action research is for practitioners to investigate and improve their practices and [it] allows them to create their own living educational theories of practice" (p. 4). Action research is continuous, flexible, and constantly evolving (Mertler, 2014).

Action Research Design

Action research follows four phases in the research process: the planning, acting, developing, and reflecting stages (Mertler, 2014). This triangulation study took place over the first eight weeks of the 2017-2018 school year. A triangulation study is one that uses multiple sources of data to enhance inquiry and to gain different perspectives (Dana & Yendol-Hoppey, 2014). By using both quantitative and qualitative measures, the researcher calculated whether student-teacher conferencing with AR had a significant impact on reading comprehension. The participants completed a pre- and posttest using STAR to calculate the results and to provide validity and fidelity to the study. The action plan for this study was as follows (Table 1):

Four Stages in the Research Process

Stage 1: Planning. This stage consists of four steps: identifying and limiting the topic, gathering information, reviewing the literature, and developing a research plan (Mertler, 2014). During this phase, it was necessary to look over practices within the researcher's classroom that needed improvement. Upon gathering previous research and writing a review of the literature, as explained in Chapter 2, the researcher developed a specific research topic.

Evolution of the research topic. Currently the school district in this study implements reader's workshop, as designed by Lucy Calkins. Each year, elementary school teachers participate in extensive professional development to become accomplished teachers implementing reader's workshop and building students' reading comprehension. During the 2017-2018 school year, all elementary schools in the district where the study took place used Lucy Calkins's units of study.

Table 3.1

Action Plan

	Week 1	Week 2	Weeks 3-7	Week 8	Report
Look	– Students take the STAR pretest assessment – Students begin participation in the AR program – Researcher observes reading behaviors	– Students observe explicit instruction of AR and reader's workshop procedures and routines	– Students observe explicit instruction strategy lessons – Researcher gathers AR data and observes students' reading behaviors	– Students take the STAR posttest assessment – Researcher gathers data results from STAR and AR reports	– Researcher gathers and observes all data over the course of the study
Think	– Researcher analyzes student data from STAR and AR reports	– Students and researcher participate in a goal-setting conference to analyze STAR and AR reports	– Students and researcher reflect on and analyze immediate data from AR results	– Student and researcher analyze student activity with AR and results from the data	– Researcher analyzes student activity and progress collected through the data of AR and STAR
Act	– Researcher begins to plan goals and strategies for each student – Researcher teaches structure and procedures of AR and reader's workshop	– Students and researcher conference to evaluate data, set an AR and strategy goal, and plan how to meet the goal – Researcher gives explicit instruction to begin developing strategy	– Students and researcher conference to evaluate AR weekly success and strategy development – Researcher provides explicit instruction to begin releasing the student to independent strategy use	– Students and researcher conference using data to evaluate student success in meeting AR and strategy goals and to collaborate to set new goals for further development of strategies and comprehension	– Researcher evaluates the pre- and posttest STAR results – Using the results, the researcher plans the next step and makes recommendations for future studies

Since 2012, a reader's workshop model following Calkins' method has been in place, but this is the first year for the units of study. According to Calkins (2011), any time there is a change in standards or testing, the results take time to emerge. Currently in North Carolina, average reading scores are increasing, but the increase is still not significant (North Carolina School Report Card, 2017.

Accelerated Reader had long since been mandated by the district. Incorporating AR during the IR time of reader's workshop, ranging from 15 to 45 minutes, was a natural move. Students read their self-selected AR book while the teacher met with small guided reading groups or conferenced with students about their reading progress according to the data. It is notable that Renaissance Learning (2007) recommended small moments of one-on-one time for the teacher to meet with each student and discuss the TOPS report (see Appendix C). The TOPS report provided quantitative data on the most recent AR comprehension test and cumulative data from previous tests (Renaissance Learning, 2007). This quantitative data drove the conference between the researcher and student.

Another valuable piece of literature for this action research study evolved from *The Art of Teaching Reading* by Lucy Calkins. Calkins (2001) described how to confer with readers using the research, decide, and teach method. Using Calkins's strategy, the researcher based this study on all other knowledge of the reader along with the actual moment of listening to the student reading during the conference, after which the teacher decides a teaching point, and then teaches the reader to influence his or her next read. During conferences, the researcher kept anecdotal notes about the discussion with each student. The teacher-student conferences included quantitative data from the TOPS,

diagnostic (See Appendix D), and student reports (See Appendix E) to discuss with students their comprehension within AR, along with a teaching point based on a reading skill deficit. Then the teacher and student would collaborate of what the student needed to practice during independent reading. This made the conferences longer, but it may have led to gains in comprehension.

Development of the research plan. During this phase of the planning stage, the researcher must determine how to design a study to answer the research question: what impact do the student-teacher conferences from the Lucy Calkins workshop have on reading comprehension as measured by the AR program? The independent variable for the research question was the method of instruction of using student conferencing. The dependent variable was the researcher's students' comprehension as measured by the various quantitative data reports from AR. The students took a pre- and posttest to measure comprehension during the time of the study. The researcher did not claim social science validity and generalizability, since the sample size was small and the researcher was directly involved in the short time-framed study.

Ethical considerations. Following ethical guidelines during an action research study is extremely important. The first step when considering ethical considerations was to examine the researcher's district's policy for research in the classroom and to adhere to those guidelines (Dana & Yendol-Hoppey, 2014). The researcher also followed the Institutional Review Board (IRB) process, set forth by the University of South Carolina, along with the Family Educational Rights and Privacy Act (FERPA). Students in the study were under eighteen, so their parents/guardians received a written consent form (see Appendix F) to explain the study and to explain that their choice of participation

would in no way affect their child's grades. The researcher also obtained written consent from the students of their full understanding of the study and to ensure that their participation in the study was voluntary. At the beginning of the year open house presentation, the researcher met with all parents and students to explain the study. After the meeting, participants could ask any questions about the study. The researcher gave out the letters of consent that night, and students returned them during the first week of school. All parents and students signed the consent form and agreed to participate in the study. Parents and students participating in the study understood that their privacy would be protected. All data were confidential, with pseudonyms replacing student names, and the researcher represented all members in the study fairly (Mertler, 2014). In research, no participants should be exposed to emotional harm, and therefore, it was important to maintain their privacy so that they could reveal their emotions throughout this study (Mertler, 2014).

In no way did this study interfere with the teaching of students participating in this study. This action research further enhanced the teaching of reading comprehension skills to the students by developing a closer relationship between the teacher and student in the process of teacher-student conferencing. The classroom population consisted of students from diverse backgrounds, including regular education, AIG, students with special learning needs requiring individualized educational plans (IEPs), and medical conditions involving 504 plans. This action research plan was beneficial to all students in the classroom where the study took place and to all students who participated.

Stage 2: Acting. The acting phase consisted of collecting and analyzing data (Mertler, 2014). Each day for eight weeks, the researcher provided students with 30-45

minutes of IR. During the IR time, the researcher conferenced with students to discuss reading progress. The conference modeled the research-decide/compliment-teach method, which the researcher described in detail in Chapter 2. The research-decide/compliment-teach conference is crucial in helping students move to the next reading level (Serravallo & Goldberg, 2007). The teacher uses all previous knowledge on a student to compliment the observed reading strategies and then to teach or reinforce to continue building each student's newer level of demands (Serravallo & Goldberg, 2007). The researcher analyzed diagnostic and TOPS reports from previous days and observations the researcher made while children were reading aloud, and then decided what strategy to use to compliment the reader. The researcher also kept anecdotal notes during each conference, allowing her to reflect on the conference and to prepare explicit instruction for the next meeting. The feedback given in a conference is meant to create a sense of intrinsic motivation to be a better reader.

The researcher used the engaged time each day to order the conferences. Students with the least amount of time spent reading had conferences first. Students would also meet with the teacher when taking an AR or vocabulary test. Immediate feedback was a crucial component of this action research study. Based on the students' needs, the researcher used data to drive instruction. The researcher aimed to teach reading skills with explicit instruction during the conference and to increase reading comprehension. By analyzing the data from the STAR pre- and posttest (see Appendix G), along with the weekly comprehension measures from the TOPS and diagnostic report, the researcher was able to determine how effectively the study answered the research questions. Qualitative data provided insight into conversations during each conference to truly get to

know each reader. The qualitative data allowed the researcher to determine themes that emerged throughout the study. The researcher examined the quantitative data with statistical analysis, including standard deviation and *t* tests, to justify how effectively the data measured reading comprehension growth. The researcher collected data through Reading Renaissance Software, and she accessed it daily while conferencing with students.

Research context. The elementary school where the researcher teaches served as the context of the action research study. The researcher's role in the school is that of a fifth-grade, self-contained classroom teacher. The researcher has worked as a third-, fourth-, and fifth-grade classroom teacher and has implemented AR every year. All students in this study's population were 5th-graders, and the school administrator assigned them to the researcher's classroom.

The researcher's current school district is the ninth largest school district in the state with more than 32,000 students (pre-kindergarten through high school). The district contains a total of 55 schools: 29 elementary/primary schools, two intermediate schools, 11 middle schools, 11 high schools, one special needs school, and one alternative school. According to the district's North Carolina School Report Card (2017) the demographic population consists of 21.4% African American, 0.2% American Indian, 1.4% Asian, 61.1% White, 11.6% Hispanic, 4.2% Multiracial, and 0.1% Hawaiian or Pacific Islander. The district has a high-school graduation rate of 86.3% (North Carolina School Report Card, 2017. The vision of the district is to inspire success and a lifetime of learning. The delivery of the mission of the district is in the hands of outstanding employees and community partners, and it is necessary to provide innovative educational opportunities

for all students in a safe and nurturing learning environment. The district's beliefs include diversity, innovation, collaboration, excellence, and safety along with the following goals:

- Every student will graduate prepared for post-secondary opportunities.
- Every member of the diverse student population has the opportunity for individualized instruction.
- Every employee is capable and committed to the education of the whole child.
- Every school has up-to-date technology to support teaching and learning.
- Every student has the opportunity to learn in a safe school environment. (Superintendent's Report, n.d.)

The school where the research study took place is one of the 29 elementary schools in the district. The school's student population consisted of 629 students. Average classroom size ranges for each grade level: 19 students per five kindergarten classrooms, 19 students per five first-grade classrooms, 20 students per six second-grade classrooms, 20 students per five third-grade classrooms, 25 students per four fourth-grade classrooms, and 27 students per four fifth-grade classrooms. The school's demographics were 20% African American, less than 1% American Indian, 2% Asian, 68% White, 4% Hispanic, 6% Multiracial, and less than 1% Pacific Islander or Hawaiian (North Carolina School Report Card, 2017.). On faculty and staff, there are 34 classroom teachers, one counselor, two administrators, one nurse, eight paraprofessionals, one social worker, and one resource officer. The school counselor, resource officer, and two paraprofessionals account for the 8% African American staff and faculty population, while the other 92% are White.

The school's vision statement is to empower student success as lifelong learners. The mission of the school is that by working with all stakeholders, it will motivate, nurture, and inspire children to meet their highest potential. The school follows these beliefs:

- Education is a shared responsibility. It is a partnership of the student, home, school, and community.
- All children can learn given appropriate time, instruction, and access to resources.
- Students must be assessed in a variety of ways to demonstrate their achievement.
- Students and staff will feel safe, cared for, and accepted in our learning environment.
- The school community will recognize and celebrate the individuality of every learner. (School Improvement Plan, n.d.)

Sample. The goal of this study was to determine what impact conferencing with students has on comprehension. The sample for this study was the fifth-grade students in the researcher's classroom as assigned by the administrator at the beginning of the school year. Therefore, the action research study used convenience sampling. Mertler (2014) explained that convenience sampling relies on data collection from population members who are conveniently available to participate in a study. All the students in the class with parental consent participated in the study.

In the sample population of 27 students, 14 were males and 13 were females. Nineteen students were White, six were African American, and two were Hispanic.

Seven students had previously received a diagnosis of a learning disability in reading, and three students were AIG. Thirteen students were eligible for free and reduced lunch based on their socioeconomic status.

Data collection. The researcher collected data over an eight-week period in the fall of 2017. The researcher gave the pretest during the first week of school, beginning August 29, 2017. The implementation of student conferencing along with AR took place for eight weeks from August 29, 2017 through October 16, 2017. The researcher gave the final posttest in the week of October 26, 2017.

The researcher gave the STAR test (see Appendix G) to all students to determine their independent reading levels (IRLs) and zone of proximal development (ZPDs). The STAR test consists of 34 comprehension questions that students take on a computer (Renaissance Learning, 2007). From the STAR test, each student had a ZPD and an IRL based on his or her responses to the test (see Appendix G). The researcher used the state standards report (see Appendix I) and the instructional planning report (see Appendix J) to set goals and to plan strategy lessons. During each week over the course of the study, the researcher used the TOPS report (see Appendix C) when conferencing with students and the diagnostic report – reading practice (see Appendix D), which detailed the students' comprehension percentage according to AR tests along with estimated engaged time per day spent reading. The researcher analyzed this data to determine students' progress over time and to adjust conferences to meet their needs. Another report that was useful when conferring with students was the student record report (see Appendix E). Throughout the study, the basis of the number of conferences per student was the data. Students reading below grade level met with the teacher more than students reading on or

above grade level, but all students met with the teacher at least once a week to confer using the TOPS report and the diagnostic report – reading practice. The teacher-student conferences were semi-structured.

The leading factor was the engaged time per day spent reading from the diagnostic report. Students with the least reading time met with the teacher at the beginning of the week to discuss increasing reading stamina and book volume. Students kept a reading log throughout the study to track the books and time they spent reading both at home and school (see Appendix K). The teacher and student compared what the student was recording on his or her log to see if the log matched the data from AR. If necessary, the researcher would mark daily page reading goals to complete the book in a timely fashion. According to Calkins (2011), fifth-grade students should be able to read a chapter book per week. Once all the students had had conferences based on stamina, the researcher used book level as presented by the diagnostic report to meet with students. Engaged time per day (stamina), book volume, and book level drove the conferences for this study. At the end of the study, students took the STAR posttest to identify their IRLs after the end of the action research.

Statistical analysis. Using the data, the researcher looked for patterns or themes that emerged. Descriptive statistics allowed the researcher to determine the answer to the research questions. The researcher used central tendencies, such as mean, to analyze each week's comprehension progress for all individual students and the class as a whole (Mertler, 2014). The researcher used an independent samples *t*-test to analyze the pre- and posttest data from the STAR test. A *t* test compares two means and gives statistical data to explain how different the means are (Mertler, 2014). The researcher kept a

qualitative data journal to allow for anecdotal note taking, reflection, and preparation for the next conference. Patterns and themes did develop in the qualitative data and contributed to a deeper understanding of each reader.

Stage 3: Developing. Mertler (2014) described the next stage of action research as the developing stage. At this point, the researcher determined future actions based on the results of the study. Teacher-student conferencing with AR data during the IR component of Lucy Calkins's reader's workshop showed a growth in comprehension, even though it was not statistically significant. This continued to be a part of the daily routines during IR. The researcher shared the results with administration. According to Brubaker (2004), three forces drive a curriculum leader: a choice maker, intentionality, and a sense of self-efficacy and intentionality. A curriculum leader uses these three forces to establish a unified vision. Brubaker added,

> The creative curriculum leader is expected to give attention to both personal and organizational vision. As Lloyd Duvall (1989) said, "If you don't care where you are going, any trip will do! But, adults and children interested in a school are not content to have leaders who are simply happy wanderers. Members within the school culture want to assign meaning to their activities, and it is this sense of direction or vision that can, if developed and articulated well, provide such meaning." (p. 80)

The sense of direction within leadership gives purpose to the vision. Curriculum leaders must be able to identify and develop their talents and areas of improvement.

Stage 4: Reflecting. This is the final stage of the action research study (Mertler, 2014). For future studies, the action researcher must remain on the cyclical path and

reflect to decide the next steps to begin the process again. According to Hendricks (2013),

> When educators reflect as part of the action research cycle, they have the opportunity to develop new knowledge about teaching and contribute to the knowledge based on best practices. The reflective inquiry that is at the heart of action research can professionalize the work of educators by encouraging them to collaborate, by giving a voice to those who engage in the practice, and by providing educators with opportunities to examine the professional purposes and possibilities of their work. (p. 29)

During this phase, the researcher reflected upon each step to determine the answer to the research questions and to determine what revisions were necessary to move forward. The researcher has voiced findings with other colleagues to allow an exchange of pedagogical practices. Teachers are the leaders who bring the curriculum alive to students, whether it is the arts, literature, mathematics, science, or social studies. The dialogue a teacher has with his or her students may spark a flame of knowledge. Each year we mold our craft of teaching because true educators love the students and their profession and constantly reflect upon their practices.

Summary and Conclusions

The purpose of this study was to determine whether integrating student-teacher conferencing with the AR program increases reading comprehension. Conducting action research allows a teacher to become a leader within the school. Educational leadership can be seen in every school in many ways, and it includes a shared vision in the learning community. A shared vision of continual growth of reading comprehension could change

reading instruction strategies across the country. Chapters 4 and 5 report the findings of this study along with the future implications of this study.

Chapter 4: Findings from Data Analysis

Chapter 3 has detailed the action research plan for this study. Chapter 4 explains the data that emerged from the statistical analysis. The purpose of the present action research study was to determine whether integrating the teacher-student conferencing tool from Lucy Calkins's reader's workshop along with the AR program would increase fifth-grade reading comprehension. To examine the potential effects of teacher-student conferencing on AR and comprehension, the following research questions guided this study:

> RQ 1: What impact does Lucy Calkins's teacher-student conference tool in collaboration with the AR program have on elementary students' reading comprehension?
>
> RQ 2: What impact does Lucy Calkins's teacher-student conference tool in collaboration with the AR program have on specific student groups (learning disabled, AIG, race, gender, and socioeconomic status)?
>
> RQ 3: What impact does Lucy Calkins's teacher-student conference tool in collaboration with the AR program have on students' engaged time per day reading, book level, and book volume?

This chapter explains the findings of the study. It gives the overall class results from the STAR data along with an analysis of each specific student group: learning disabled, AIG, race, gender, and socioeconomic status. It includes an analysis of weekly diagnostic reports and student records as measured by the engaged timer per day, book level, book

volume, and comprehension. The researcher analyzed a weekly timeline of the themes that emerged from the qualitative anecdotal records and drew the final interpretation of the results from the STAR quantitative data.

The researcher examined the integration of the teacher-student conferencing tool from Lucy Calkins's reader's workshop along with the AR program to increase the reading comprehension of 27 fifth-grade students. The problem of practice for this study stemmed from teachers not integrating the mandated literacy curriculum successfully to increase reading comprehension. The teacher-researcher conducted the study during the reader's workshop class time, which the district mandates. The teacher-researcher used AR data to conference with students about their IR.

During the eight-week period of data collection, from August 29, 2017, through October 16, 2017, the teacher-researcher conferenced each of the 27 students multiple times per week during a 30- to 45-minute IR period of reader's workshop. Over the course of the data collection period, students read books and took comprehension tests using the AR program. Students recorded books, pages, and time spent reading on a reading log (see Appendix K). The researcher used both the AR data and the reading log to conference with students each week. The teacher-researcher also collected anecdotal field notes to add qualitative data on each student's progress. The researcher also administered a pre- and posttest using the STAR test from Reading Renaissance.

Findings of the Study

This report of the findings of the study includes *t* test results from the pre- and posttest STAR data along with the growth for each student. It also includes subcategories of findings for students with learning disabilities, academically gifted students, race,

gender, and students receiving free and reduced lunch. Next, there is a discussion of the themes that emerged each week during the study: engaged time per day, book level, book volume, and comprehension.

Overall Results from STAR Data

The results from the STAR pre- and posttest data indicated that 18 of the 27 participants increased their IRL as measured by the STAR test (see Figure 4.1). The class overall increased its IRL average from 4.4 to 4.8. The *t* test did not indicate a significant difference in the data with $p = 0.73$. At the beginning of the study, the reading levels of the participants ranged from 1.8 to 10. Following the study, reading levels measured 2.6 to 11.3.

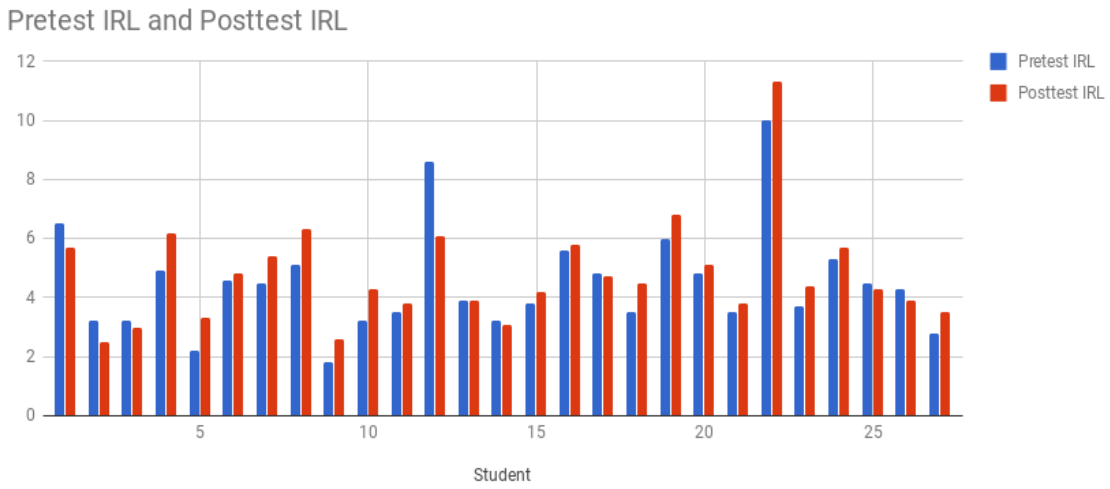

Figure 4.1. Overall results of the STAR data.

Learning disability participants. Seven of the 27 participants had diagnoses of learning disabilities in reading, which means they are two levels below 5th-grade level. Six of those seven students showed growth in their IRLs. The *t* test data did not show a

statistical difference, with a value of $p = 0.9$. The pretest data range was from 1.8 to 3.5, and it increased to 2.5 to 4.3 (see Figure 4.2).

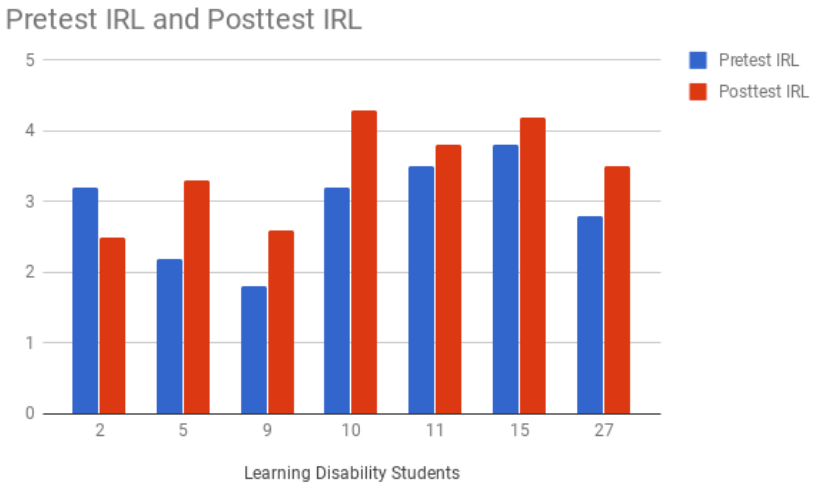

Figure 4.2. Students diagnosed with a reading or learning disability.

AIG Participants. Three participants were academically gifted (AIG), which means they are working two grade levels above 5th-grade level according to an IQ assessment. Two of the three AIG students showed growth between the pre- and posttest (see Figure 4.3). The *t* test did not show a significant difference, with a value of $p = 0.51$. The pretest data ranged from 4.9 to 10, while the posttest range was from 6.1 to 11.3.

Race. The researcher categorized participants in the study as White, African American, or Hispanic based on racial identities as noted by the parents. Nineteen of the participants were White, and their *t* tests showed no significant difference with a value of $p = 0.72$. Thirteen of the White students showed growth between the pre- and posttest (see Figure 4.4). The pretest range of data was from 1.8 to 10, with a posttest range of 2.6 to 11.3.

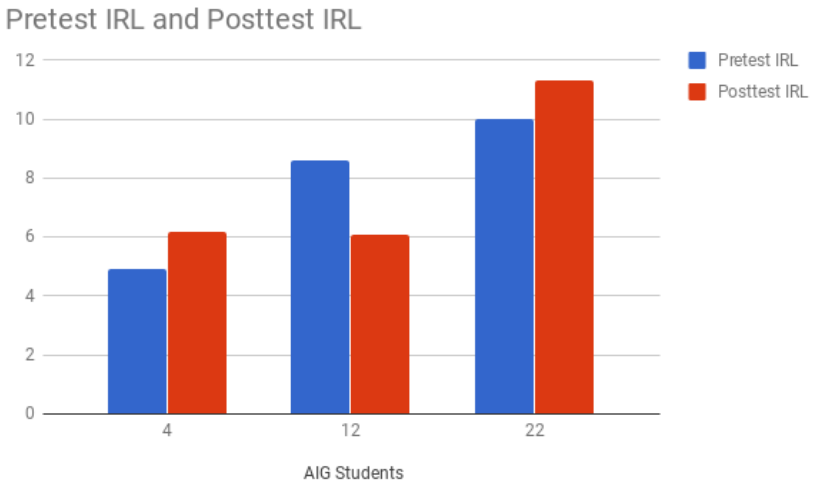

Figure 4.3. Academically intelligent students.

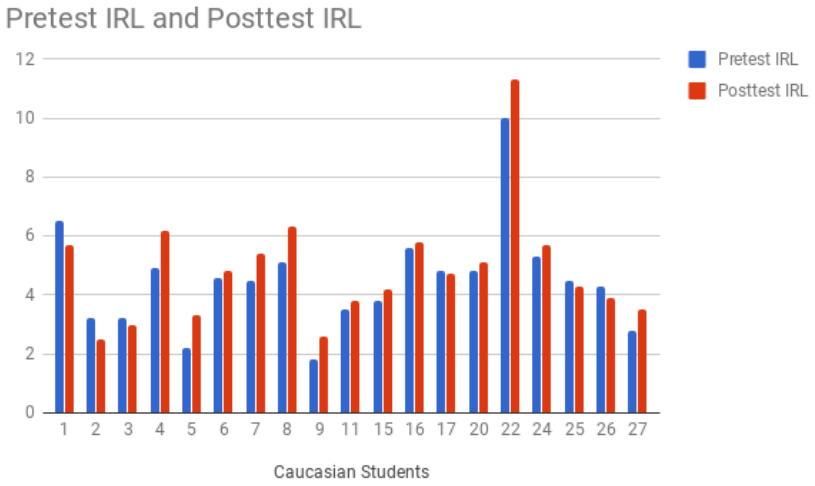

Figure 4.4. White students.

Three of the six African American participants showed growth from the pre- to the posttest, but there was no significant difference with a value of $p = 0.52$ (see Figure 4.5). The pretest range was from 3.2 to 8.6 and the posttest range was from 3.1 to 6.8. The two Hispanic participants both showed growth during the study, even though the *t* test showed no significant difference, with a value of $p = 0.84$ (see Figure 4.6). The pretest range was from 3.5 to 3.7, and the posttest range was from 3.8 to 4.4.

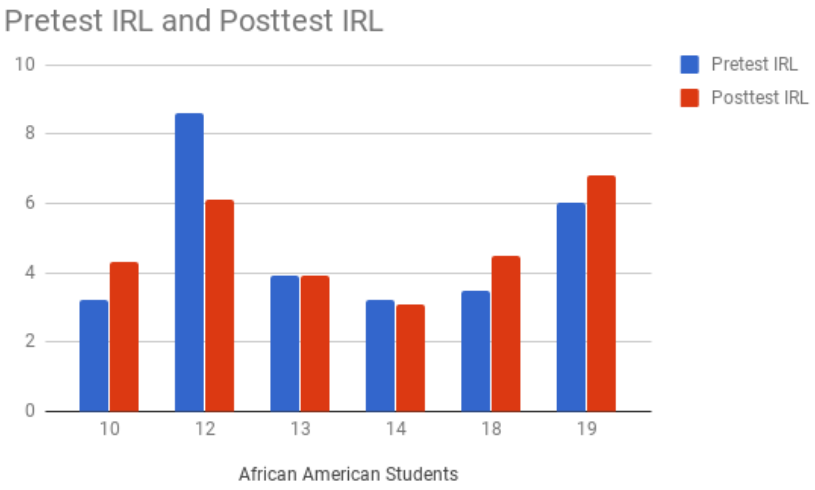

Figure 4.5. African American students.

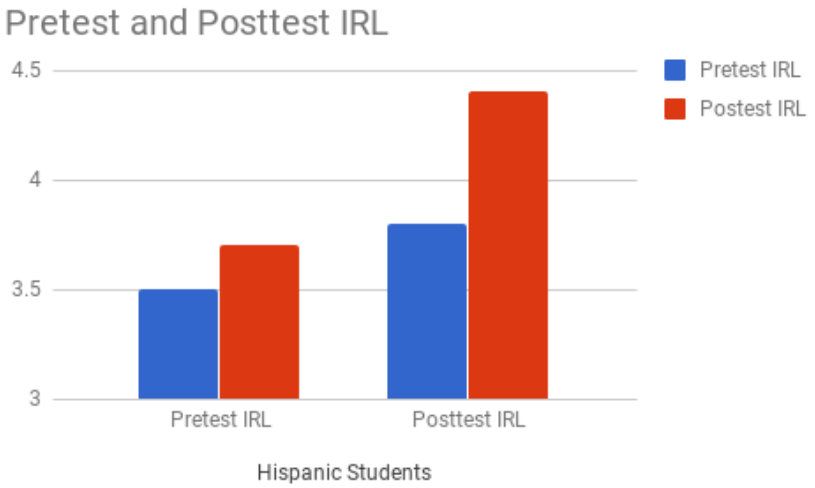

Figure 4.6. Hispanic students.

Gender. Neither the male nor the female *t* test data indicated a significant difference with $p = 0.65$ and $p = 0.69$, respectively. Nine of the 13 females gained in their IRLs with scores ranging from 3.2 to 8.6 on the pretest and 3 to 6.8 on the posttest (see Figure 4.7). Nine of the 14 males showed growth, with scores ranging from 1.8 to 10 on the pretest and 2.5 to 10.3 on the posttest (see Figure 4.8).

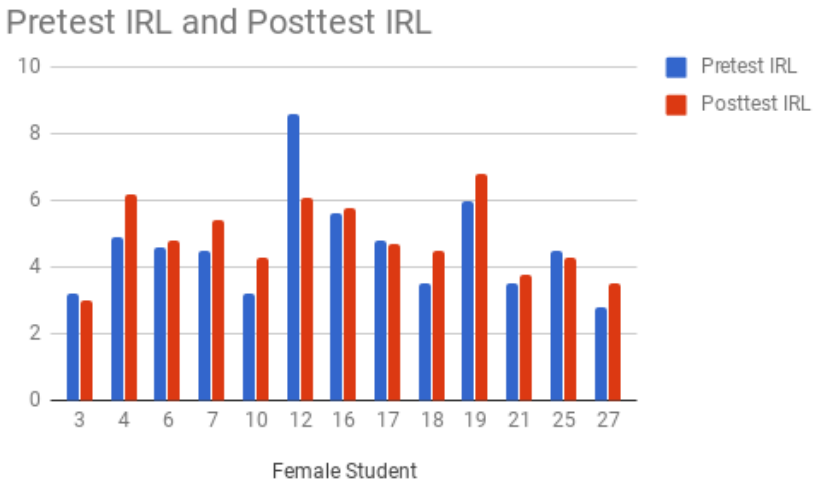

Figure 4.7. Female students.

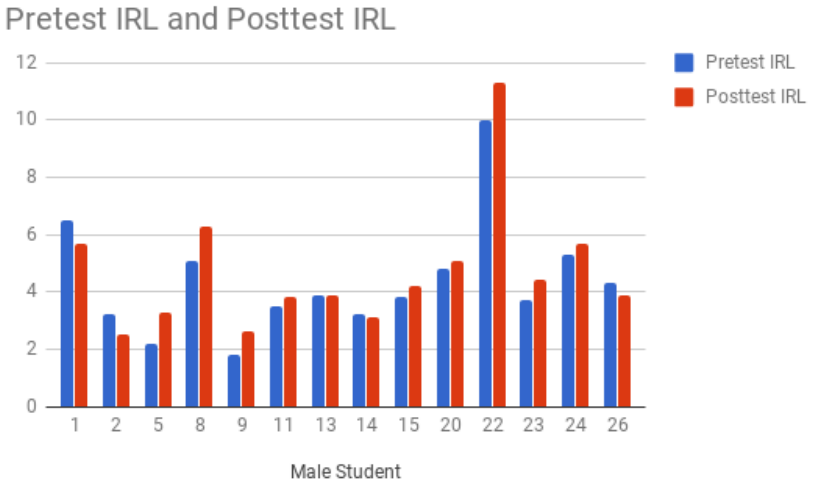

Figure 4.8. Male students.

Free and reduced lunch participants. Thirteen of the 27 participants qualified for free and reduced lunch based on income eligibility guidelines. The *t* test did not indicate a significant difference with a value of $p = 0.69$ even though 10 of the 13 students showed growth in their IRLs (see Figure 4.9). The pretest range was from 1.8 to 8.6 and the posttest range was from 3.0 to 6.8.

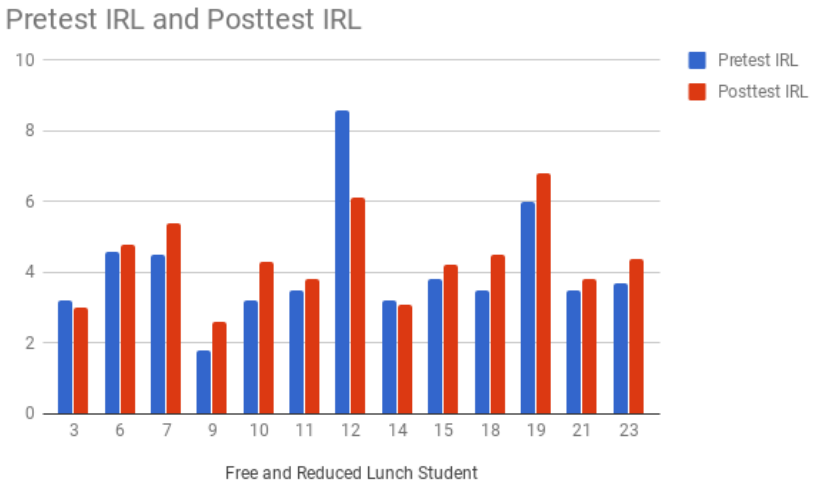

Figure 4.9. Free and reduced lunch participants.

Analysis of Weekly Diagnostic Report and Student Records

To analyze the data in this study further, the teacher-researcher examined the collected data according to engaged time per day, book level, book volume, and comprehension. These are both components of AR and Lucy Calkins's reader's workshop. The researcher analyzed these data according to the diagnostic report, the students' reading logs, and anecdotal notes kept during the study. The results of this data show the weekly changes when the researcher integrated the conferencing tool with the data from AR.

Engaged time per day. Increasing reading stamina is a major goal of both Lucy Calkins's reader's workshop and AR. Engaged time per day is an estimated measurement from the diagnostic report reading practice (see Appendix D). Calkins (2011) and Renaissance Learning (2014) promoted students being engaged in IR for at least 30-45 minutes per day. The final class average of engaged time per day was 46 minutes (see Figure 4.10). The class of participants increased their engaged time per day each week during the study from 5 to 14, 22, 29, 31, and 46 minutes. Twenty of the 27 students had

an engaged time per day over 30 minutes. Thirteen of the 27 students had an engaged time per day over 45 minutes. The range of time spanned from 4 to 113 minutes. Krashen (2004) reported that increased time reading will increase comprehension. Barrett and Kreiser (2002) also found a positive correlation between time spent reading and achievement.

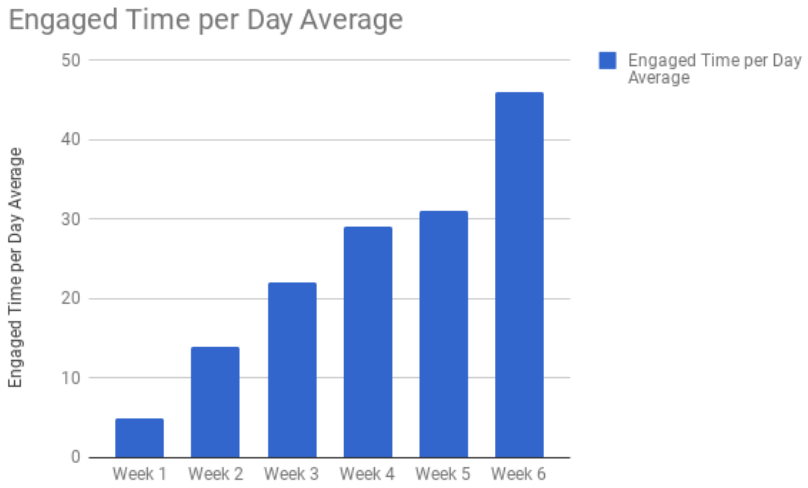

Figure 4.10. Engaged time per day average.

Book level. The researcher gave each of the 27 participants in study a ZPD range and an IRL based on the STAR pretest. Data from AR tests averaged each participant's book level based on the reading level of each book tested using the AR software. During the first week of the study, the book levels of the participating class ranged from 3.2 to 6.2, whereas in the last week of the study the range was from 3.0 to 6.2. The class average at the end of the study was 4.6 (see Figure 4.11). Sixteen of the 27 participants' average book level was higher than their IRL, but still within the top range of their ZPD. Over the course of the eight-week study, the class grew a total of 3 months in book level.

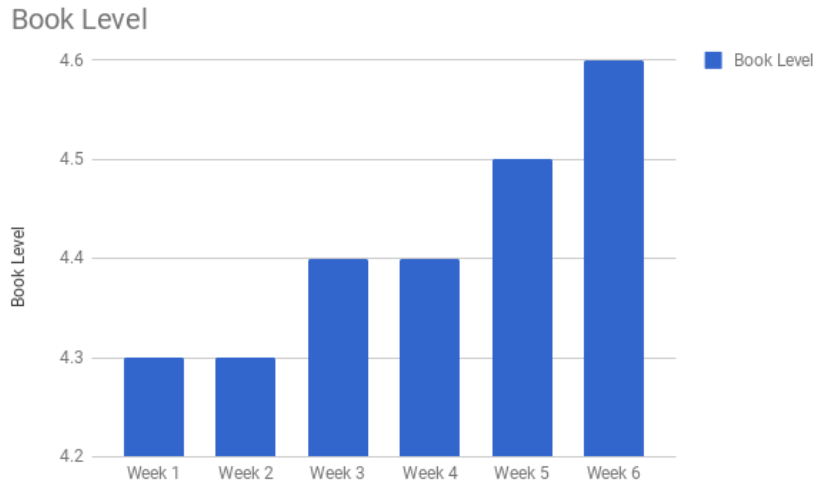

Figure 4.11. Book level.

Book volume. Calkins (2011) explained that students in the fifth grade should be able to read one chapter book a week. In the given study of a six-week period with 27 students, the students should have read a total of 162 books. According to the diagnostic report-reading practice (see Appendix D), the 27 participants in this study read a total of 238 books and scored a 60% or above on the AR test on 204 of those books (see Figure 4.12). The participants increased their book volume each week of the study but one, but they then increased to the highest number of books read during the last week of the study. All students set a goal of number of books to read, and 20 of the participants met or exceeded the goals they set for the number of books they wanted to read. Topping, Samuel, and Paul (2008) found that high engaged reading volume showed statistically significant gains over groups with lower reading volumes.

Comprehension. Due to a range of reading levels in one classroom, managing comprehension ability can be a struggle. The diagnostic report-reading practice (see Appendix D) allows teachers to gather an average of each student's average comprehension score based on AR test data.

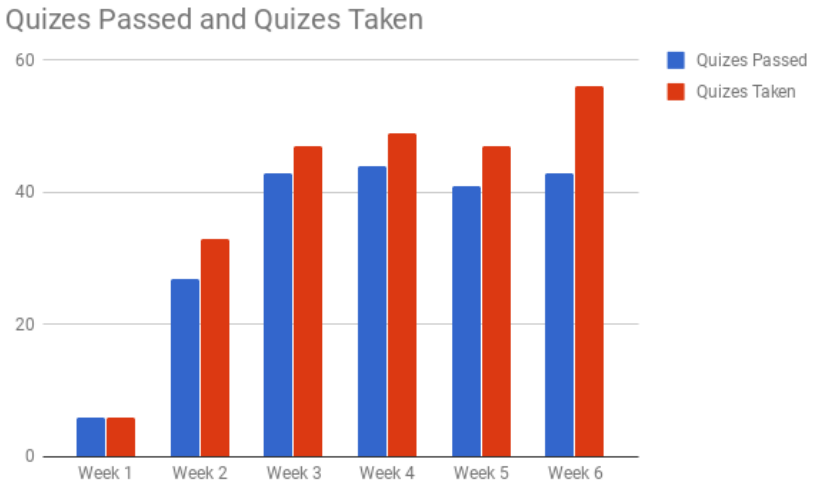

Figure 4.12. Book quizzes passed and quizzes taken.

The school in which the study took place prefers that students' AR comprehension level is 80%, correlating to a letter B on the district's grading 10-point grading scale. The final class average in comprehension was 80% (see Figure 4.13). Participants in the class ranged from 57.5% to 96.3%, with 20 of the participants having an average comprehension score above 80%.

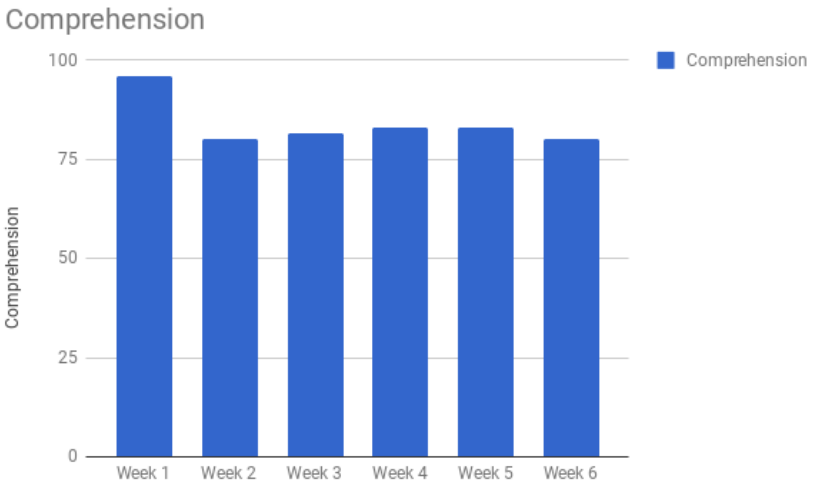

Figure 4.13. Comprehension.

Teacher-Student Conferences

Teacher-student conferences took place during the IR session of reader's workshop. At the beginning of the first week of the study, the IR time was 30 minutes. Students were in the process of building their reading stamina. The IR timeframe was 30 minutes for Week 2, 35 minutes for Weeks 3 and 4, 40 minutes for Week 5, and 45 minutes for Week 6. The teacher-researcher met with each of the 27 participants at least once per week. Student materials included books, bookmarks, a reading log, and a reader's notebook. Teacher materials included the diagnostic report-reading summary (see Appendix D), student record (see Appendix E), and anecdotal notes from previous conferences. There were times when group conferences took place when all the participants needed to focus on one area of reading practice. Participants would also show the teacher-researcher their TOPS reports (see Appendix C) anytime throughout the day after taking an AR test to conference quickly about their results.

Week 1 – Goal setting conference. After the STAR pretest, students received ZPDs and IRLs. A teacher-student conference then took place with each participant to discuss the book the student had already chosen to read, IRL, and goals during the next four weeks. The common theme during the conferences was choosing "just right books" that were on the participants' IRLs or higher. Sixteen of the 27 participants had chosen books below their IRLs, even though they had received their reading levels before choosing a book. The books were within the ZPD, but on the lower level.

Weeks 2 and 3. The teacher-student conferences this week focused on choosing just right books and pacing the book to finish in one week. The teacher-researcher went to the library with three students and paced out books by marking where to read to each

day with seven students. Fourteen of the students still had books below their IRLs, but they had second books to read that were above their IRLs.

Weeks 4 and 5. These two weeks of conferences consisted of a focus on reading stamina based on the diagnostic report-reading practice (see Appendix D). The researcher used reading logs with the participants to order the conferences, beginning with students with the lowest ranking stamina in the class. The teacher used a pacing strategy (Serravallo, 2014) to mark books and to set a goal date to finish one book. During Week 4, all students analyzed their reading records and set new goals for the next four weeks.

Weeks 6 and 7. At this point of the study, the process of reader's workshop and conferencing was a classroom routine. Explicit instruction was taking place during most of the conferences because most students were choosing just right books and keeping up with their stamina, book volume, and comprehension levels. Week 8 consisted of the posttest.

Interpretation of the Quantitative Results of the Study

Even though none of the *t* test calculations showed significant differences, the multiple reporting categories did evolve themes along with the anecdotal field notes the teacher-researcher recorded each week. The participating class showed growth on average for all categories over the eight-week period of the study. Engaged time per day, book volume, and book level had positive correlations each week. The class was also able to stay in the 80-percentile range of comprehension, which is comparable to a B letter grade, which is above average. Students could see their weekly progress with the AR reports, and they became intrinsically motivated to increase in all subcategories during this study. They did not receive any rewards for increasing progress or reaching goals.

STAR data. Educators far too often overlook growth. The participating class grew its IRL from 4.4 to 4.8. The increase in reading levels of the participating class indicates a reading environment that continues to show reading growth through the school year. At the beginning of the study, the reading levels of the participants ranged from 1.8 to 10. Following the study, reading levels measured 2.6 to 11.3. Rogers and Wolf (2014) also showed gains in ZPD in their study.

All students can work towards a common goal of increasing their book level, which will in turn increase their reading comprehension. Even with a wide range of reading levels in a classroom, all students can work on the same goal using the student-teacher conferencing method with AR data. Two of the AIG students grew the most in the class, increasing their reading levels by 1.3 points, but two students with learning disabilities also increased their reading levels by 1.1 points, showing that all students may benefit from the integration of student-teacher conferencing with AR.

The participants with reading learning disabilities showed the least significant difference with a value of $p = .90$. This indicates that students with a reading learning disability can increase their reading comprehension when reading on their IRLs and conferencing about their progress. The average of this subcategory of the population of participants increased their IRL by .53 points. The two Hispanic students showed the next lowest value of significant difference with $p = 0.84$. These data represent a very small population, but both participants live in Spanish speaking homes and English is their second language. Both students increased their IRLs during the study.

The AIG students showed the most significant difference in data. Since AIG students are already working two grade levels above their current grade level, this is

perhaps not surprising. The African American participants were the next highest subcategory with a value of $p = 0.52$. There is a large disparity between the races according to significant difference. This could be due to an uneven population distribution or a need to conference with lower performing students more often.

Engaged time per day. Krashen (2003) and Calkins (2011) have explained the importance of the time children spend reading and its positive correlation to reading comprehension. The participating class increased its engaged time per day average each week to 46 minutes. This research period took place during the first eight weeks of school, so the class had to work to rebuild its reading stamina from over the summer break. The reading logs provided the teacher with a tool to conference with students about the amount of time it took to read a book along with the amount of time reading at home. The students were realizing that to increase their book volume, they also needed to increase their engaged time per day reading and they had to be "real" readers. The researcher used the diagnostic report-reading summary (see Appendix D) each week to conference with students to monitor their stamina progress. The report allowed the teacher and student to discuss strategies for the student to increase his or her engaged time per day reading. Students began to become intrinsically motivated to increase their stamina each week. The teacher-researcher would also conference with students at the beginning of the week based on the least amount of progress towards reading stamina. Continuing to increase the engaged time per day for the class leads to an increase in comprehension.

Book level. Every student in the class worked to grow his or her book level based on the average from his or her student record report (see Appendix E). Students received

ZPD ranges along with IRLs after the STAR pretest. Sixteen of the 27 students were choosing books below their IRLs, but they were on their ZPDs. The first two weeks of conferencing focused on choosing books at least on their IRLs. Students would explain that the book was in their ZPD range, and they had trouble understanding that to increase reading comprehension, students must push themselves to read more difficult books (Calkins, 2011). Participants had learn to choose just right books based on their reading skill with the goal of increasing their book level and not amassing AR points. There was also an issue of students having higher reading levels, but addressing the content of the book as appropriate for the 5th grade. This was not an issue during this study, but it could be one that develops.

Book volume. The number of books that the 27 participants read over the eight-week period showed their dedication to becoming better readers. During the first goal-setting conference, most students could hardly imagine reading four chapter books over the study duration, but the students took the challenge and worked to reach their book volume goals. The participants read a total of 238 books in eight weeks. During teacher-student conferencing, the researcher used the student record report (see Appendix E) to meet with students about the time since the last book they read, along with the reading log. Students were excited to set goals to finish the book, and they would strive to finish the book before the set date. Participants would meet with the teacher on their own, without being called to conference, because they wanted to show their progress in the books they were reading and how much more they had to do to finish.

Comprehension. From the first to the second week of the study, the class comprehension dropped from 96% to 80%, but during the first week, only six students

had taken AR tests to contribute to the data. After the second week, the comprehension increased each week except for the last, but that was also the week when the most tests took place. When using the AR data of an average of percentage correct on AR tests, the class held a solid average in the 80-percentile range, which is comparable to a B on the district grading scale. It is also possible to calculate comprehension if the students are reading above their IRLs and still comprehending the books. Also, the researcher planned explicit instruction of skills and standards throughout the conferencing period, but the first four weeks of the study focused on explicit instruction of book choice and stamina. Actual reading skill instruction did not occur until Weeks 5 and 6. With book choice and stamina being skills that received less focus, explicit instruction on the specific standards may grow comprehension more for the rest of the year now that the study is complete. Twenty of the 27 participants had a reading comprehension level at 80% or above. Four students were in the 70-percentile comprehension range, which correlates to a C average range. Only three students had a percentile range below 69. Students in this range need more conferencing with the teacher to develop strategies to improve comprehension.

Emerging Themes from Qualitative Data

Book Choice. Book choice was a conversation the researcher had with each student on numerous occasions throughout this study. Until this year, students chose books within their ZPD range and chose books based on the AR points that would accumulate. The students in this study were unaware of their IRL or what the term meant. Students really did not understand what their ZPD was, just that was the range they were supposed to choose books. The primary concern was always just earning AR points. This could be a factor as to why the average of the class on the pretest was 4.4 which is below

the expectancy of a 5.0. The focus of AR had been the extrinsic reward of earning points. Students begin using AR in the 2nd grade at this school. For the past three years, the students' motivation to read was based on an extrinsic reward system.

Explicit Instruction on Book Choice. After seeing this theme with all students, the researcher prepared a mini-lesson for the beginning of reader´s workshop to teach students the meaning of the ZPD, their level of learning, along with the meaning of their IRL, the text level they can read a text independently. During this lesson, the teacher explained that students needed to choose books at their IRL or above to grow their IRL and comprehension. Students could check their average book level on their TOPS report to see their reading progress. Once the understanding of growing their IRL would grow their comprehension students were no longer sharing their point value with the researcher during the conference, they were sharing their book level progress. Students were building intrinsic motivation to read based on the teacher feedback and TOPS report that reading was more than just earning AR points. There was a value to their accomplishment of reading more complicated texts.

High Level of Interest. Another component of book choice the researcher would conference with the students about were topics there were a high-level interest to the student. Again, the most powerful motivation for book choice was based on the amount of AR points a book was worth. Some students were not even reading the title or looking at the cover before checking a book out, they were only looking at the AR point value. The researcher conferred with each student about the topics that were of a high interest level. One female student did not like reading but loved dogs. The discussion revolved around reading books about dogs and the student chose the books *Where the Red Fern*

Grows and *Old Yeller* when she visited the library that afternoon. A male student loved to read about cars, but he was choosing books above his level of understanding. The researcher went to the library with this student to choose books about cars on his IRL. Having knowledge of what each student was interested in allowed to the researcher to make book suggestions that could be a high interest level to the student and aid in that student developing and intrinsic motivation to read.

Conclusion. Conferring about book choice gave the researcher insight into each reader as to who they are. The one-on-one time with each student was invaluable to building a trusting relationship to teach the students that there is so much more to reading then just earning AR points. Students yearned for the individual time and feedback from the teacher and changed their behavioral pattern of choosing books to a cognitive chose that would grow their reading level because they now understood the importance of comprehension growth. Students were eager to show the researcher how much they read each day or how much their book level had increased since the previous conference. Students were no longer choosing books for point value but chose a book of high interest that was a higher reading level then the book they just finished. The anecdotal notes for this study showed how powerful the relationship between a teacher can student can positively impact achievement just as in Barrett and Kreiser (2002), Costello (2014), and Rogers and Wolf (2014).

Active Engagement. Many of the anecdotal notes during this study were about the active engagement during reading. Students would record the number of pages read during each IR session. Students should be able to read about 1 page in one minute. In 45 minutes of independent reading, a student should read at least 35 pages. Students that

were recording they were reading for 30 minutes, but only recording 10 pages, met with the researcher to discuss this progress. The teacher would time the student reading for minute to determine if the student was able to read about a page in one minute. This was task students were able to accomplish. The issue the researcher noticed was a loss of engagement while reading. After about 10 minutes of IR, some students would lose focus. Based on years of experience, the students developed a habit of "fake" reading and being able to look like they were reading.

Teaching Students to be Actively Engaged Readers. Explicit instruction was given to students using sticky notes as a tool to visually mark pages in the book. Once the student reached the sticky note, he/she could take a brain break and draw a picture of what they read. Then the next sticky note would be a few pages longer. This strategy was used to increase active engagement while reading so that students were monitoring the number of pages they were reading regarding the time they were reading. Over time, the students did not need to visually mark their books and developed their reading stamina to be actively engaged while reading. They were so proud of their ability to keep their focus while reading.

Note-taking Strategies. Students were also taught methods to takes notes while reading to show the teacher what they were thinking while they were reading. Then during the conferences, the researcher and student could create a dialogue about the notes taken and the student could explain their thought process when they were reading independently. This allowed the researcher no gain more insight into the reader and monitor comprehension.

Students would be so excited to share their thoughts with the teacher. Instead of the researcher having to start the conference by questioning the student about what they read, the student would take charge and show what they were thinking in days past about what they were thinking, predictions they had made, and whether they were correct. The students had taken ownership of their independent reading and were completely actively engaged because they wanted to be and had developed an intrinsic motivation to read.

Conclusion. Teaching students about choosing just right books and how to be actively engaged readers transformed the participants of the study. Over the time of this study, the students were intrinsically motivated to read and developed confidence to tackle more complicated texts through the support of the researcher. Even though the quantitative data from AR drove the order of the student conferences and gave concrete evidence of reading progress, the quantitative data was used to develop the participants into intrinsically motivated readers that wanted to become better readers for themselves. This led the researcher to question how AR has been implemented as an extrinsic reward system and how this can be changed in this elementary school and district.

Conclusions

Teacher-student conferencing has been the most insightful experience for the teacher-researcher in the past 14 years in education. The one-on-one relationship that develops between the participant and the researcher builds a rapport that strengthens a community of trust. An open discussion of reading progress can take place, focusing on elements that are working and improvements that are possible to grow reading comprehension. This researcher believes the teacher-student conferences led to an intrinsic motivation to read by the participants in this study.

Chapter 5: Summary and Overview of the Study

Chapter 4 presented an analysis of the data that emerged during this action research study. There was an overall gain in comprehension of the class according to the STAR assessment, but there was no significant difference. All student subgroups also showed an increase from the pre- to posttest, but again there was no significant difference. Chapter 5 explains the questions that arose during the study and an action plan to develop this action research study further. This chapter also includes recommendations for future studies.

The purpose of this action research study was to determine whether integrating the teacher-student conferencing tool from Lucy Calkins's reader's workshop along with the AR program would increase fifth-grade reading comprehension. The action-researcher is a classroom teacher with 14 years' experience, trying to integrate required ELA programs to eliminate the problem of practice. The main research question that guided this action research study was what impact do the student-teacher conferences from the Lucy Calkins workshop have on reading comprehension as measured by the AR program?

The aim was to determine whether over an eight-week study at the beginning of the 2017-2018 school year, reading comprehension in fifth-grade students would significantly increase with weekly student-teacher conferencing during the IR portion of reader's workshop using quantitative data from the AR software. The administration of the suburban elementary school in North Carolina assigned all student participants to the

action-researcher's fifth-grade classroom. The action-researcher also used qualitative, anecdotal notes to keep a record of student conferences for further discussion with the student during the next conference. Student-teacher conferences included reading aloud, data analysis using AR reports and student reading logs, goal setting, discussion of book volume and reading stamina, and explicit instruction to build reading skills. The researcher collected pretest and posttest data using the STAR test.

The STAR data indicated that 18 of the 27 students increased their IRLs over the course of the eight-week study. The ZPD of the class increased by from 1.8 to 10 to 2.6 to 11.3. The class book level also increased from 4.4 to 4.8. The *t* test did not show a significant difference in data with $p = 0.73$ for the class. Subsets of the population included learning disabled, AIG, race, gender, and free and reduced lunch, and the *t* test for each group also showed no significant difference in the data. There was overall growth in the AR reports of data, and the anecdotal notes the action-researcher kept indicated a foundation for the beginning of the year reading instruction to continue growth throughout the year.

Questions and Suggested Additional Research

For an action-researcher, reflective thinking spirals throughout the research process leading to questions to guide further research (Mertler, 2014). Limiting factors to this study contributed to some of the questions that arose. This eight-week action study took place at the beginning of the school year, from August to October. This is a transition time for the student and teacher to become acquainted with one another and to develop routines and procedures. This study would have been better suited as a yearlong study with six-week marking periods for growth monitoring using the STAR test.

Book Choice. One question that arose during the study was why fifth-grade students need help to choose books that they can read independently and continue to grow their reading comprehension. For the first four weeks of the study, most of the conferences revolved around book choice based on the students' ZPDs as obtained by the STAR test. Students were choosing books below their IRLs. During the first goal-setting conference after the pretest, 19 students were reading books below their IRLs. Even after the first conference, the researcher still needed to push students to choose more complex texts. Why are these students continuing to choose books below their reading levels? The action-researcher took six students to the library to choose books from the shelf. The researcher showed other students how to use the website AR book finder to look up books and their level, based on what the student was interested in reading. This cohort of students has been in school since the implementation of the CCSS and Lucy Calkins's reader's workshop in this district. The action-researcher believes that teachers are teaching students to choose just right books, but the monitoring of what students are reading falls to the wayside with the implementation of all other curriculum needs. The weekly consistency of student-teacher conferencing led to students learning how to choose just right books and challenge themselves to choose more complex texts to increase their reading comprehension. Calkins (2011) compared being a teacher to a guide for hikers; there will be anticipated difficulties and challenges, but the teacher is here for the student and the conference helps the student to learn to trust the teacher and him- or herself as a strong reader.

Book Volume. There was a discussion on book volume at every student-teacher conference using AR reports. The question that became apparent during the study was

why students need a visual mark of where to read each day to finish a book. Calkins (2006) maintained that students in the fifth grade should be able to read one chapter book a week on their IRL when spending a sufficient amount of time reading both at school and home. In the action-researcher's observations, the students have learned how to look like they are really reading, but then when monitoring the engaged time spent per day reading through AR reports, students were falling behind. It was surprising that the students would write down their beginning and ending page and always that they read for 30 minutes, but in actuality they were only reading five pages. This allowed for a real conversation about the type of reading that was taking place at school and home. Krashen (2003) directly linked the amount of time spent reading to increased comprehension, but that time must really be spent reading and not just looking at the pages.

The action-researcher used a stamina lesson from Serravallo (2014) to conference with the students and to mark how many pages the student should read at home and school each day to finish the book in a week. The teacher and student would then set a goal of when the student needed to finish the book. Using the student record report along with the diagnostic reading report, the student and teacher could discuss the engaged time per day the student was really reading. Calkins (2011) wrote, "But once we have experienced the efficiency and power of linking assessment and teaching, we are on the road toward a lifetime of learning" (p. 138). It is extremely important at the beginning of the year to lay the foundation for increased comprehension growth.

Fidelity. As the researcher was introducing the first reader's workshop unit, she used data from the STAR pretest along with curriculum standards to develop an action plan of explicit instruction to take place during conferences. Explicit instruction using

standards did not take place until Week 4 of the study, because of the need to give explicit instruction on book choice based on book level, book volume, and engaged time per day spent reading. Is readers workshop being implemented with fidelity? Are teachers having to skip integral components of reader's workshop and the AR program to accomplish all curriculum requirements of their district? According to Serravallo (2010),

> Reading workshop makes independent reading an instructional time. It is [a] highly structured and predictable framework in which we as teachers provide direct, explicit instruction at the beginning called mini-lesson, which supports students in conferences and small groups, allows time for students to discuss their books and reading work with others in partnerships and book clubs, and ends with a reading share. The TCRWP's vision of reading workshops is one that follows units of study, about one per month, where the whole class is engaged in inquiry into a common topic such as a genre, story element, or a reading habit or skill. (p. 200)

The skill for Unit 1 in fifth grade is character analysis, but the goal for this study turned into choosing just right books and monitoring book level to build reading stamina. Integrating both the AR program and reader's workshop with fidelity could lead to increased comprehension that spirals throughout the elementary grades.

Eliminating AR Points. Over the course of this study the researcher realized how the importance of earning AR points were affecting reading progress of students. Should the focus of AR implementation of earning points be eliminated and changed to increasing book level or engaged time per day spent reading? If AR is going to continue to be mandated along with readers workshop, the focus of AR must change. Students

must learn how to enjoy reading. Reading easy books to earn AR points will not grow reading comprehension. This is a question that must be addressed.

Action Plan

Teacher-student conferencing is essential in growing reading comprehension of students. The relationship built creates a trusting environment and support system read more complicated texts where students are intrinsically motivated to read. The use of the AR program has created extrinsically motivated readers. There are valuable quantitative data tools in the AR program, but based on the qualitative data from this study, the researcher would like to change how the AR program is used.

If AR and Lucy Calkins Reader´s Workshop is going to continue to be mandated by the district, then the researcher would like to change the focus of the AR program from a behavioral implementation approach. The quantitative data reports are a quick method for teachers to monitor comprehension progress, which the researcher finds very valuable. Having an accountability tool in place so that the students can receive instant feedback after reading book is important to the researcher. On the TOPS report, students are given instant feedback to their average level, therefore instead of setting a goal for the number of points read over time, a goal could be set to grow their book level over time. This would make the focus of the AR program become about text complexity. The Diagnostic Reading Summary also could be used to set goals for time engaged reading. Teachers could set goals for students to make progress for time they spend actively engaged in reading.

Change AR. To change the AR program focus, the whole school must undergo a complete mind change. The researcher experienced this mind change due to this action

research study. All teachers would need professional development to make this change. Teachers would need to understand the importance of students reading at their independent reading level (IRL) or above and not just choosing books in their ZPD range. Teachers would also need to receive staff development of the importance of high level books of interest and how children need to be taught how to choose ¨just right books¨ to increase comprehension. By making this change in 2nd grade, students would never develop the habit of choosing books because of the value of AR points. This would create a vertical alignment so that in each year of grade progression, teachers would have to spend less time on book choice and be able to focus on other skills to grow comprehension.

Teaching Strategies. Another component that teachers would need to be trained on is the value of active engagement and the strategies used in this study. When students are actively engaged in reading then their time spent reading will increase along with their comprehension (Krashen, 2003). The action plan below exemplifies how this mind change could successfully take place (Table 5.1):

Once this action plan has taken effect, a growth comparison from the previous year could be completed to determine if this new focus of the AR program along with the Lucy Calkins conferencing tool was effective in comprehension growth. If this plan is successful at this elementary school, then sharing at a district level would be the next plan of action. This study was too short, and the researcher completed it at a transitional time of year. Due to factors beyond the researcher's control, she had to conduct the study at this time. Future studies should span a longer period and start once the teacher has established the reading routines of the class.

Table 5.1

Action Plan

	August	September	October-May	June
Action Plan	-professional development for all teachers on new implementation plan -each grade level will now track monthly average book level along with engaged time per day -professional development on choosing just right books	-modeling lessons by curriculum facilitator on how mini-lessons and conferencing for each grade level PLC -continue monthly data tracking	-curriculum facilitator and PLC´s observe each teacher conferencing techniques -depending on needs of each PLC will drive modeling lesson and observations -continue monthly data tracking	-professional development and feedback of the changes taken place over this year -develop an action plan for next year to continue progress

Since this is the first year the actual units of the Lucy Calkins units of study were in use in the researcher's district, the vertical alignment should improve with teacher instruction each year, so gains in comprehension of curriculum vertical alignment should become evident as teachers mold and develop their craft. The units of study have been adopted by many districts over the country, so more research should be accumulating. One recommendation based on this study would be to fully implement the units of study and not pick and choose which units of study to implement. In order to fully adopt the mindset of the Lucy Calkins' reader's workshop method, then other programs that do not align within that constructivist mindset should be eliminated.

Including the librarian or media specialist as another adult to aid the students in choosing just right books and having status of the class meetings using the AR data could lead to another teacher-student conference. The librarian and classroom teacher could

collaborate on student and class progress. The librarian could aid in the extra conferences with the subsets of student groups that did not show as much growth.

A future study focused on comprehension in literature and then a second study on informational reading using all the same subsets within the same class to monitor reading comprehension from two different genre perspectives would be useful. Because the units of study are each a different genre the changes in growth could be monitored for teacher effectiveness of each genre. Most students during this study were reading literature books.

Conclusion

This study indicates that more research is necessary using the teacher-student conferences tool from Lucy Calkins's reader's workshop along with the AR program to increase reading comprehension. Student participants in this study were disappointed if it was not their day to conference with the teacher, and many would still share with the teacher what they read or how many pages they were able to read. Students wanted that one-on-one time to brag about what they had accomplished and to receive feedback from their teacher. Students developed an intrinsic motivation to read. Whenever taking an AR test, they would share those results and discuss their next book with the action researcher. It is not possible to measure the impact of a relationship, but student-teacher conferencing develops a strong relationship that can lead to enhanced learning. Akmal (2002) explained how learning is bimodal in student-teacher conferencing, which allows for customized instruction for each student. Calkins (2011) wrote,

> Imagine reading instruction that depends on the voices of kids, their passions and foibles, hopes, and heartaches, and that depends on the face-to-face interactions

between teachers and students around a book. Imagine reading instruction for which these moments of flickering amusement or amazed understanding are not happy offshoots but are at the root of how teachers teach reading. (p. ix)

The student-teacher conferencing tool was the most valuable tool this researcher has used in the 14 years spent in the elementary classroom. Making time with each student contributed to the growth over the course of this study.

Districts need to evaluate programs that are being implemented based on what is occurring in the classrooms. Teachers must truly understand the conceptual framework of curriculum programs in order to implement with fidelity. Finding ways to implement programs successfully is possible through action research. Understanding the components and how they work together can lead to complex learning. Reflective thinking develops through conversations during student-teacher conferencing. District officials must work together with the teachers to develop the best practices for student achievement.

As this action research study has demonstrated, student comprehension can grow using student-teacher conferencing during reader's workshop along with AR data. Once the teacher has laid this foundation, then explicit reading instruction can take place to develop reading skills further and to continue to grow comprehension to more complex texts as the years progress. The AR quantitative data was very beneficial to give the researcher a quick starting point for the conference, but the qualitative data led the researcher to develop a deeper understanding of the needs of participants of the study. Between the two programs, this researcher believes that the Lucy Calkins reader's workshop is more beneficial in the elementary classroom than AR when trying to increase reading comprehension.

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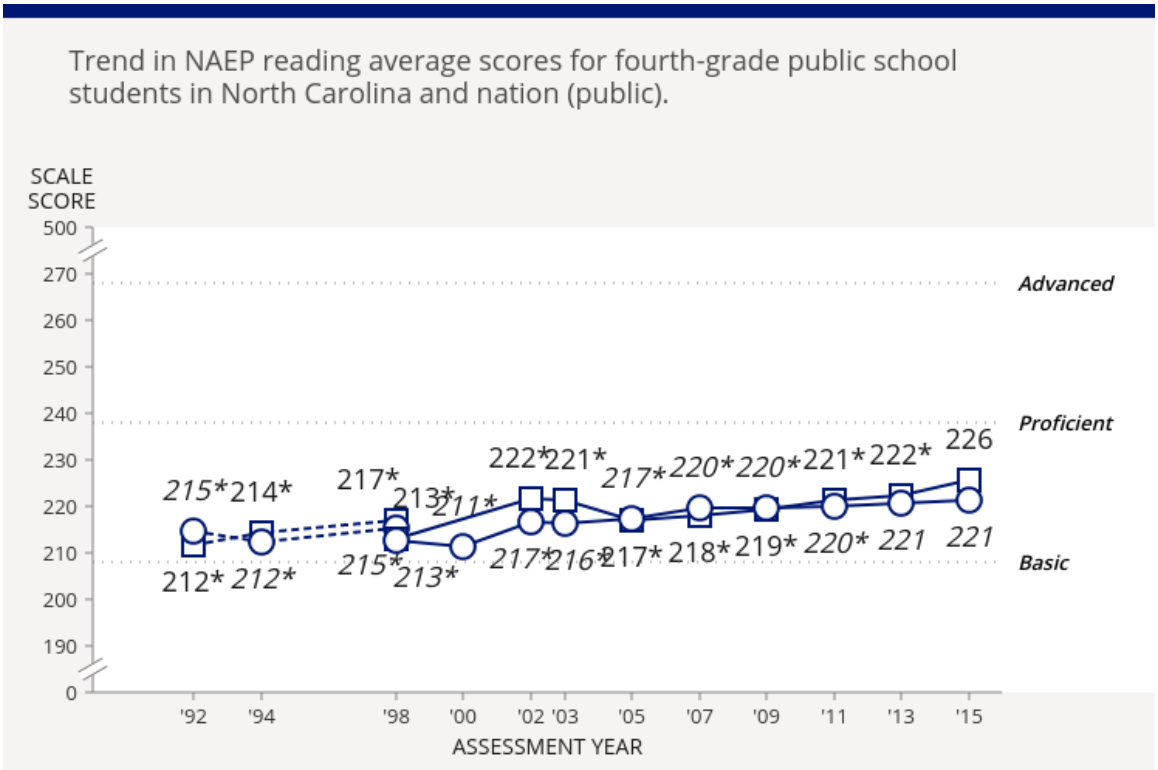
Appendix A

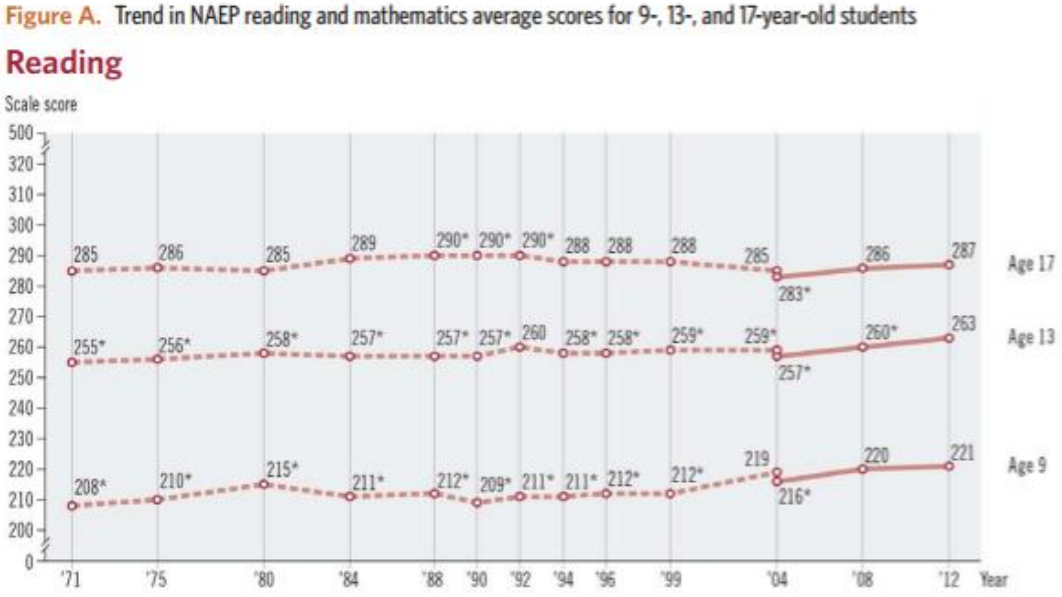
North Carolina NAEP Reading Results



Appendix B

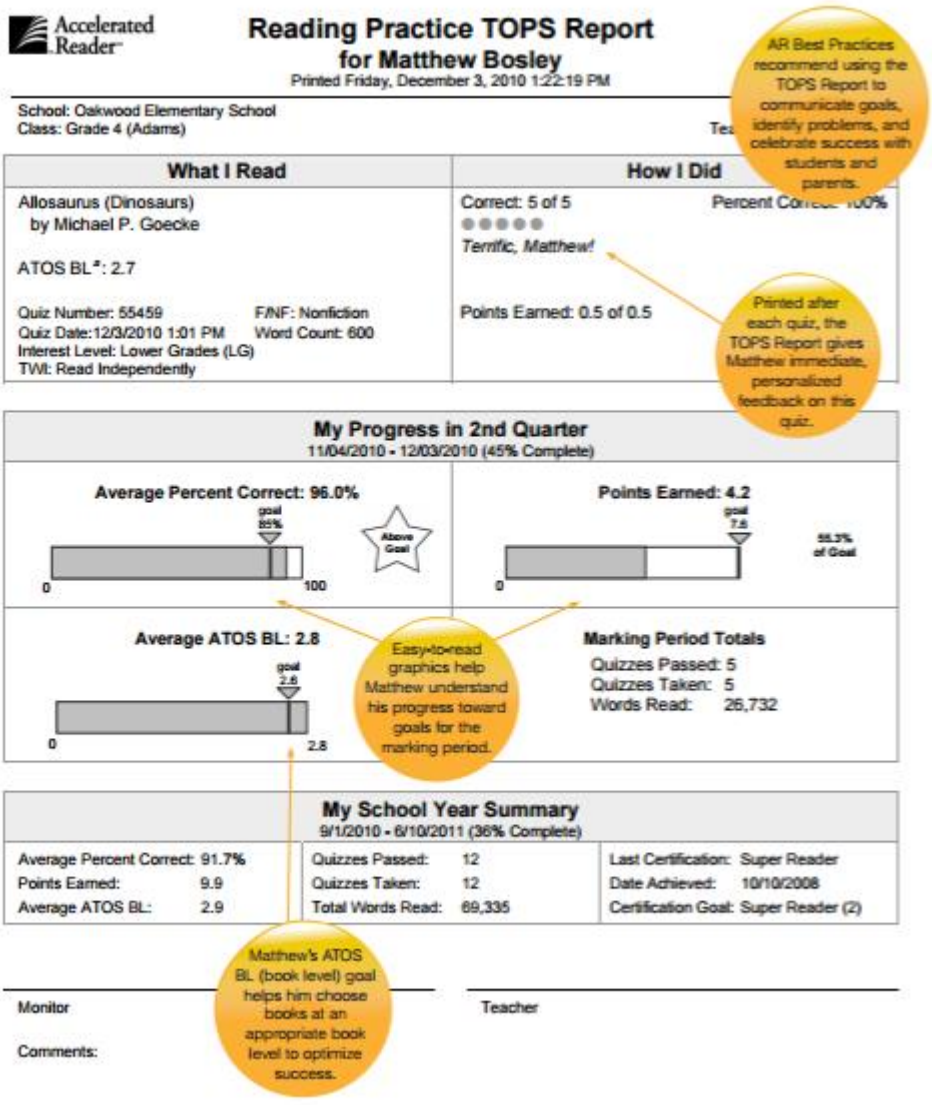
U.S. NAEP Reading Scores

Figure A. Trend in NAEP reading and mathematics average scores for 9-, 13-, and 17-year-old students



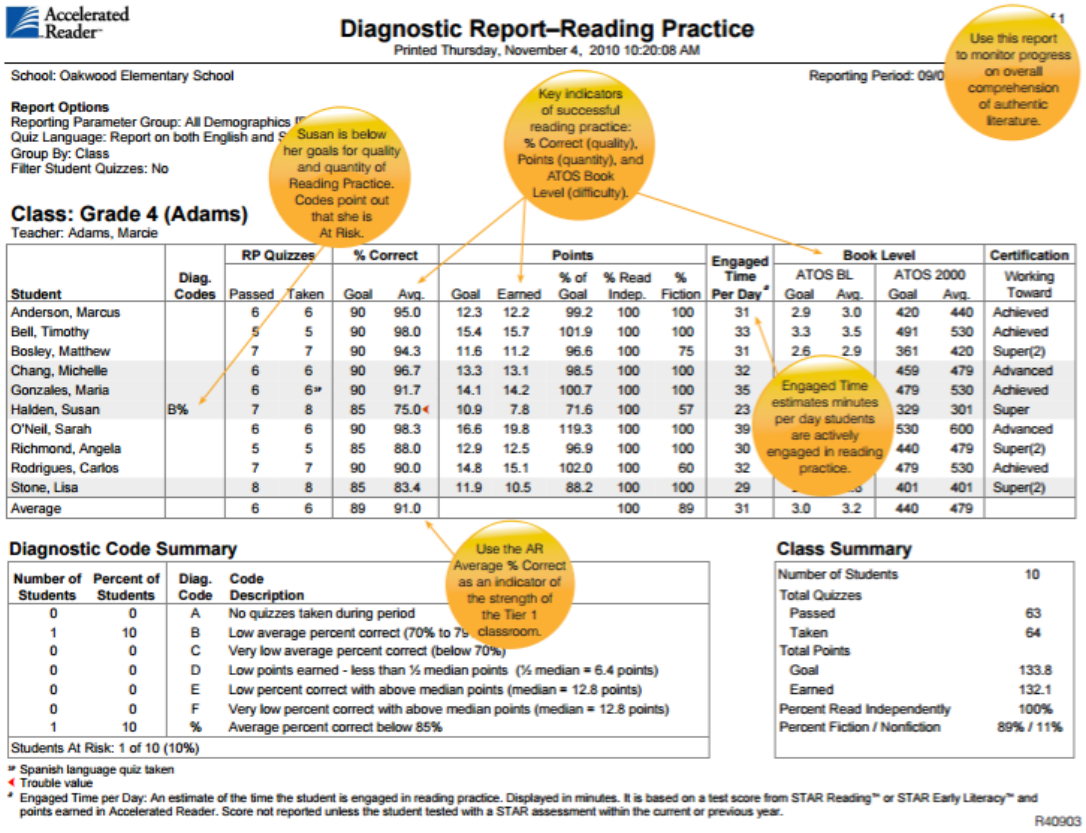
Appendix C

TOPS Report



Appendix D

Sample Diagnostic Report – Reading Practice Summary



Accelerated Reader

Diagnostic Report–Reading Practice

Printed Thursday, November 4, 2010 10:20:08 AM

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

School: Oakwood Elementary School

Reporting Period: 09/0

Report Options
Reporting Parameter Group: All Demographics
Quiz Language: Report on both English and S
Group By: Class
Filter Student Quizzes: No

Susan is below her goals for quality and quantity of Reading Practice. Codes point out that she is At Risk.

Key indicators of successful reading practice: % Correct (quality), Points (quantity), and ATOS Book Level (difficulty).

Class: Grade 4 (Adams)

Teacher: Adams, Marcie

Student	Diag. Codes	RP Quizzes Passed	RP Quizzes Taken	% Correct Goal	% Correct Avg.	Points Goal	Points Earned	Points % of Goal	Points % Read Indep.	Points % Fiction	Engaged Time Per Day*	Book Level ATOS BL Goal	Book Level ATOS BL Avg.	Book Level ATOS 2000 Goal	Book Level ATOS 2000 Avg.	Certification Working Toward
Anderson, Marcus		6	6	90	95.0	12.3	12.2	99.2	100	100	31	2.9	3.0	420	440	Achieved
Bell, Timothy		5	5	90	98.0	15.4	15.7	101.9	100	100	33	3.3	3.5	491	530	Achieved
Bosley, Matthew		7	7	90	94.3	11.6	11.2	96.6	100	75	31	2.6	2.9	361	420	Super(2)
Chang, Michelle		6	6	90	96.7	13.3	13.1	98.5	100	100	32			459	479	Advanced
Gonzales, Maria		6	6≠	90	91.7	14.1	14.2	100.7	100	100	35			479	530	Achieved
Halden, Susan	B%	7	8	85	75.0◂	10.9	7.8	71.6	100	57	23			329	301	Super
O'Neil, Sarah		6	6	90	98.3	16.6	19.8	119.3	100	100	39			530	600	Advanced
Richmond, Angela		5	5	85	88.0	12.9	12.5	96.9	100	100	30			440	479	Super(2)
Rodrigues, Carlos		7	7	90	90.0	14.8	15.1	102.0	100	60	32			479	530	Achieved
Stone, Lisa		8	8	85	83.4	11.9	10.5	88.2	100	100	29			401	401	Super(2)
Average		6	6	89	91.0				100	89	31	3.0	3.2	440	479	

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

Use the AR Average % Correct as an indicator of the strength of the Tier 1 classroom.

Diagnostic Code Summary

Number of Students	Percent of Students	Diag. Code	Code Description
0	0	A	No quizzes taken during period
1	10	B	Low average percent correct (70% to 79
0	0	C	Very low average percent correct (below 70%)
0	0	D	Low points earned - less than ½ median points (½ median = 6.4 points)
0	0	E	Low percent correct with above median points (median = 12.8 points)
0	0	F	Very low percent correct with above median points (median = 12.8 points)
1	10	%	Average percent correct below 85%

Students At Risk: 1 of 10 (10%)

Class Summary

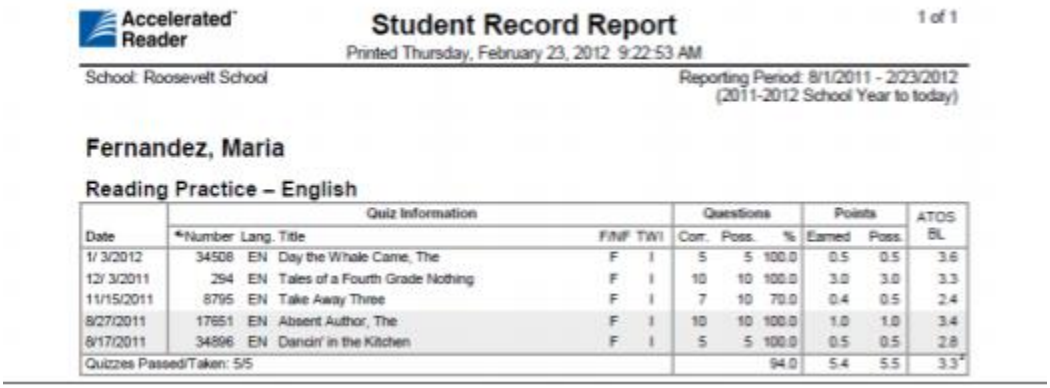
Number of Students	10
Total Quizzes	
Passed	63
Taken	64
Total Points	
Goal	133.8
Earned	132.1
Percent Read Independently	100%
Percent Fiction / Nonfiction	89% / 11%

≠ Spanish language quiz taken
◂ Trouble value
* 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 current or previous year.

R40903

Appendix E

Sample Student Record Report



Accelerated Reader

Student Record Report

Printed Thursday, February 23, 2012 9:22:53 AM

1 of 1

School: Roosevelt School

Reporting Period: 8/1/2011 - 2/23/2012
(2011-2012 School Year to today)

Fernandez, Maria

Reading Practice – English

Date	Quiz Information					Questions			Points		ATOS BL
	*Number	Lang.	Title	F/NF	TW/I	Corr.	Poss.	%	Earned	Poss.	
1/ 3/2012	34508	EN	Day the Whale Came, The	F	I	5	5	100.0	0.5	0.5	3.6
12/ 3/2011	294	EN	Tales of a Fourth Grade Nothing	F	I	10	10	100.0	3.0	3.0	3.3
11/15/2011	8795	EN	Take Away Three	F	I	7	10	70.0	0.4	0.5	2.4
8/27/2011	17651	EN	Absent Author, The	F	I	10	10	100.0	1.0	1.0	3.4
8/17/2011	34896	EN	Dancin' in the Kitchen	F	I	5	5	100.0	0.5	0.5	2.8
Quizzes Passed/Taken: 5/5								94.0	5.4	5.5	3.3*

Appendix F

Parental Consent Letter

Dear Parents,

My name is Laura Clawson. I am a doctoral student in the Education Department at the University of South Carolina. I am conducting a research study as part of the requirements of my degree in Curriculum and Instruction, and I would like to invite your child to participate.

I am studying the impact of the Lucy Calkins's reader's workshop student-teacher conferencing tool with the Accelerated Reader program to increase reading comprehension. Both AR and reader's workshop are parts of the daily elementary school curriculum. For the purpose of this study, I will meet and confer with your child at least once a week to set reading goals, discuss AR book choice, assessment scores, independent reading levels, and reading progress. The STAR reading assessment will be administered as a pre- and posttest to determine the impact on reading comprehension.

Participation is confidential. Study information will be kept in a secure location in the classroom. The results of the study may be published or presented at professional meetings, but your child's identity will not be revealed. Participation is anonymous.

Taking part in the study is your decision. Your child's data does not have to be in this study if you do not want to. Participation or nonparticipation will not affect your child's grades in any way.

I will be happy to answer any questions you have about the study. You may contact me by phone or e-mail if you have study-related questions or problems. If you have any questions about your rights as a research participant, you may contact the Office of Research Compliance at the University of South Carolina at 803-777-7095.

Please out the form below and return.

With kind regards,
Laura Clawson

_____ has my permission to participate in Laura Clawson's action research study on the impact of Lucy Calkins's reader's workshop student-teacher conferencing tool with the AR program to increase reading comprehension.

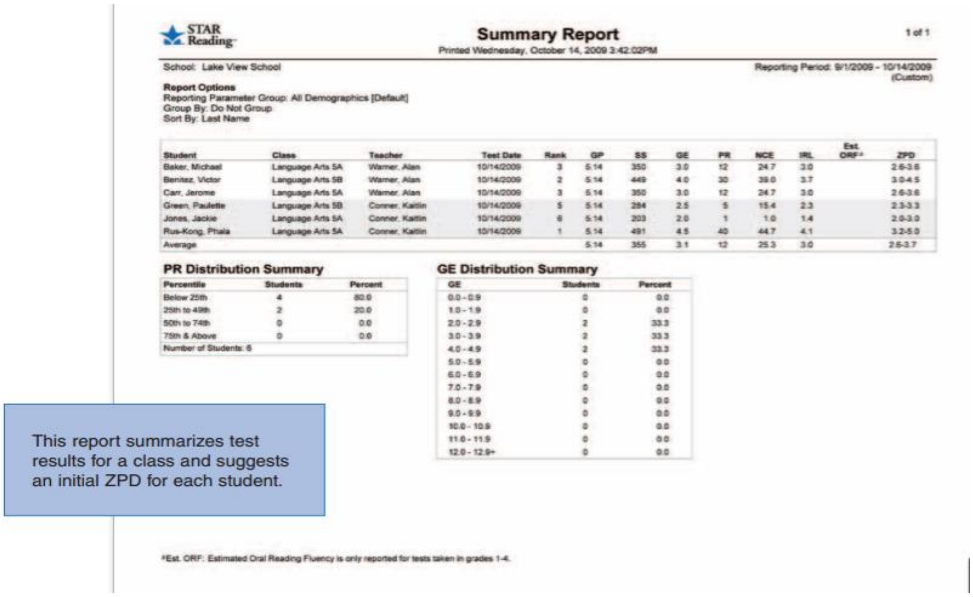
_____ **DOES NOT** have my permission to participate in Laura Clawson's action research study on the impact of Lucy Calkins's reader's workshop

student-teacher conferencing tool with the AR program to increase reading comprehension.

Parent Signature	Parent Name	Date	Student Signature

Appendix G

Sample STAR Summary Report



STAR Reading

Summary Report

Printed Wednesday, October 14, 2009 3:42:02PM

1 of 1

School: Lake View School

Reporting Period: 9/1/2009 - 10/14/2009 (Custom)

Report Options
Reporting Parameter Group: All Demographics [Default]
Group By: Do Not Group
Sort By: Last Name

Student	Class	Teacher	Test Date	Rank	GP	SS	GE	PR	NCE	IRL	Est. ORF*	ZPD
Baker, Michael	Language Arts 5A	Warner, Alan	10/14/2009	3	5.14	350	3.0	12	24.7	3.0		2.6-3.6
Benitez, Victor	Language Arts 5B	Warner, Alan	10/14/2009	2	5.14	449	4.0	30	39.0	3.7		3.0-4.5
Carr, Jerome	Language Arts 5A	Warner, Alan	10/14/2009	3	5.14	350	3.0	12	24.7	3.0		2.6-3.6
Green, Paulette	Language Arts 5B	Conner, Kaitlin	10/14/2009	5	5.14	284	2.5	5	15.4	2.3		2.3-3.3
Jones, Jackie	Language Arts 5A	Conner, Kaitlin	10/14/2009	6	5.14	203	2.0	1	1.0	1.4		2.0-3.0
Rus-Kong, Phala	Language Arts 5A	Conner, Kaitlin	10/14/2009	1	5.14	491	4.5	40	44.7	4.1		3.2-5.0
Average					5.14	355	3.1	12	25.3	3.0		2.6-3.7

PR Distribution Summary

Percentile	Students	Percent
Below 25th	4	80.0
25th to 49th	2	20.0
50th to 74th	0	0.0
75th & Above	0	0.0
Number of Students: 6		

GE Distribution Summary

GE	Students	Percent
0.0 - 0.9	0	0.0
1.0 - 1.9	0	0.0
2.0 - 2.9	2	33.3
3.0 - 3.9	2	33.3
4.0 - 4.9	2	33.3
5.0 - 5.9	0	0.0
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

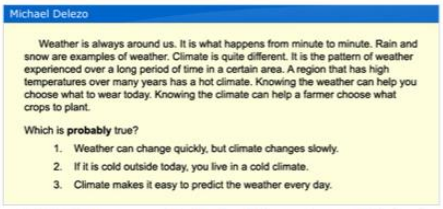
This report summarizes test results for a class and suggests an initial ZPD for each student.

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

Appendix H

Sample STAR Test

Highly trained designers, writers, and editors follow research-based practices to ensure STAR Reading's test items meet high standards for reliability and validity. STAR Reading's large item bank allows for multiple administrations without risk of overexposure, and new test items are continually developed and calibrated to support frequent testing. STAR Reading includes skills-based items to provide an even greater depth of reading assessment.


Michael Delezo

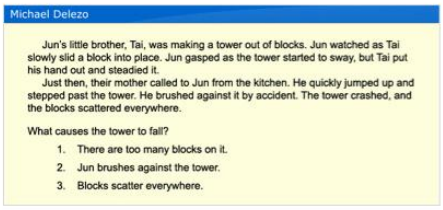
Weather is always around us. It is what happens from minute to minute. Rain and snow are examples of weather. Climate is quite different. It is the pattern of weather experienced over a long period of time in a certain area. A region that has high temperatures over many years has a hot climate. Knowing the weather can help you choose what to wear today. Knowing the climate can help a farmer choose what crops to plant.

Which is **probably** true?

1. Weather can change quickly, but climate changes slowly.
2. If it is cold outside today, you live in a cold climate.
3. Climate makes it easy to predict the weather every day.

This test item measures: **Understand Comparison and Contrast**

Grade 6: Draw conclusions based on similarities to another character.


Michael Delezo

Jun's little brother, Tai, was making a tower out of blocks. Jun watched as Tai slowly slid a block into place. Jun gasped as the tower started to sway, but Tai put his hand out and steadied it.

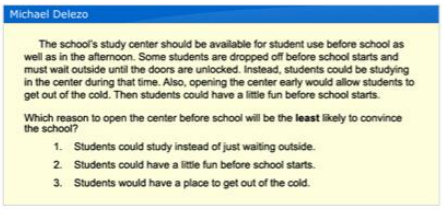
Just then, their mother called to Jun from the kitchen. He quickly jumped up and stepped past the tower. He brushed against it by accident. The tower crashed, and the blocks scattered everywhere.

What causes the tower to fall?

1. There are too many blocks on it.
2. Jun brushes against the tower.
3. Blocks scatter everywhere.

This test item measures: **Understand Cause and Effect**

Grade 4: Recognize cause-and-effect relationships by comprehending the meaning of a whole passage rather than by identifying individual cue words.


Michael Delezo

The school's study center should be available for student use before school as well as in the afternoon. Some students are dropped off before school starts and must wait outside until the doors are unlocked. Instead, students could be studying in the center during that time. Also, opening the center early would allow students to get out of the cold. Then students could have a little fun before school starts.

Which reason to open the center before school will be the **least** likely to convince the school?

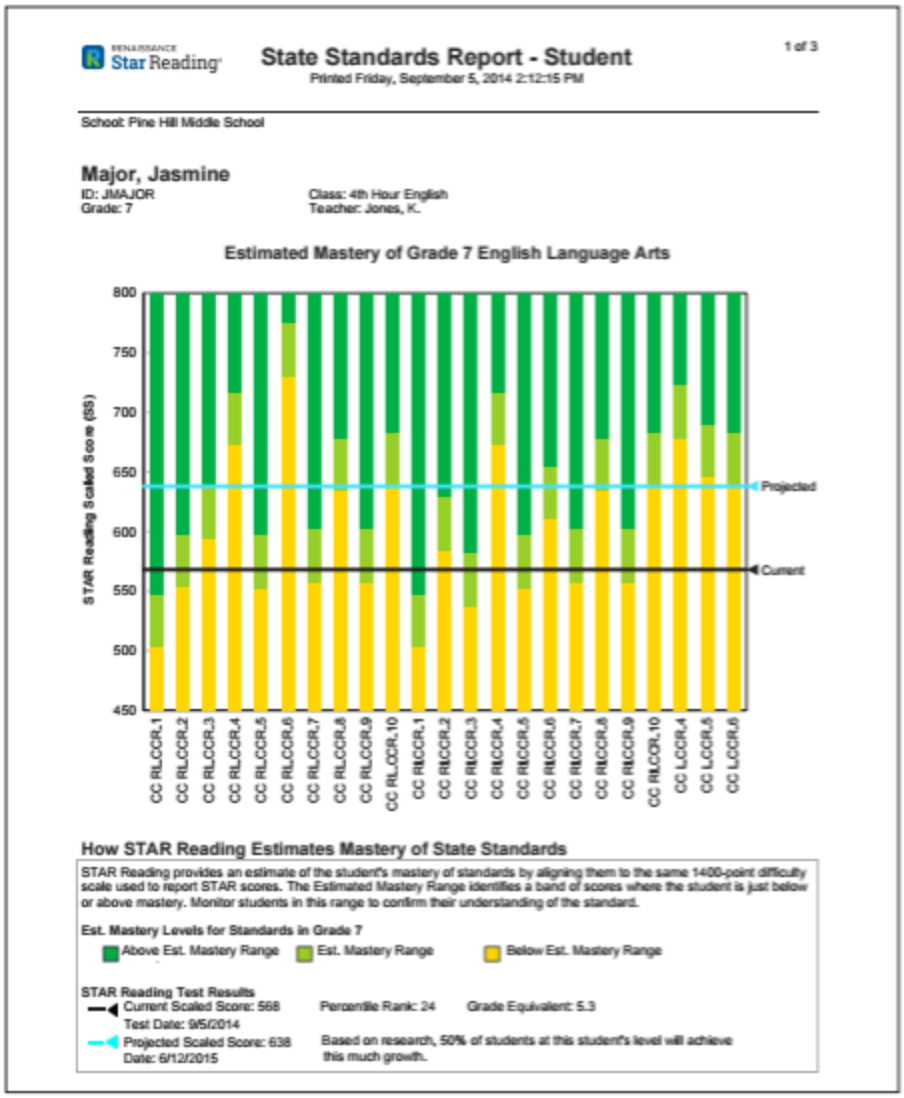
1. Students could study instead of just waiting outside.
2. Students could have a little fun before school starts.
3. Students would have a place to get out of the cold.

This test item measures: **Evaluate Reasoning and Support**

Grade 4: Recognize cause-and-effect relationships by comprehending the meaning of a whole passage rather than by identifying individual cue words.

Appendix I

Sample State Standards Report



Star Reading

State Standards Report - Student

Printed Friday, September 5, 2014 2:12:15 PM

1 of 3

School: Pine Hill Middle School

Major, Jasmine

ID: JMAJOR
Grade: 7

Class: 4th Hour English
Teacher: Jones, K.

Estimated Mastery of Grade 7 English Language Arts

How STAR Reading Estimates Mastery of State Standards

STAR Reading provides an estimate of the student's mastery of standards by aligning them to the same 1400-point difficulty scale used to report STAR scores. The Estimated Mastery Range identifies a band of scores where the student is just below or above mastery. Monitor students in this range to confirm their understanding of the standard.

Est. Mastery Levels for Standards in Grade 7

Above Est. Mastery Range | Est. Mastery Range | Below Est. Mastery Range

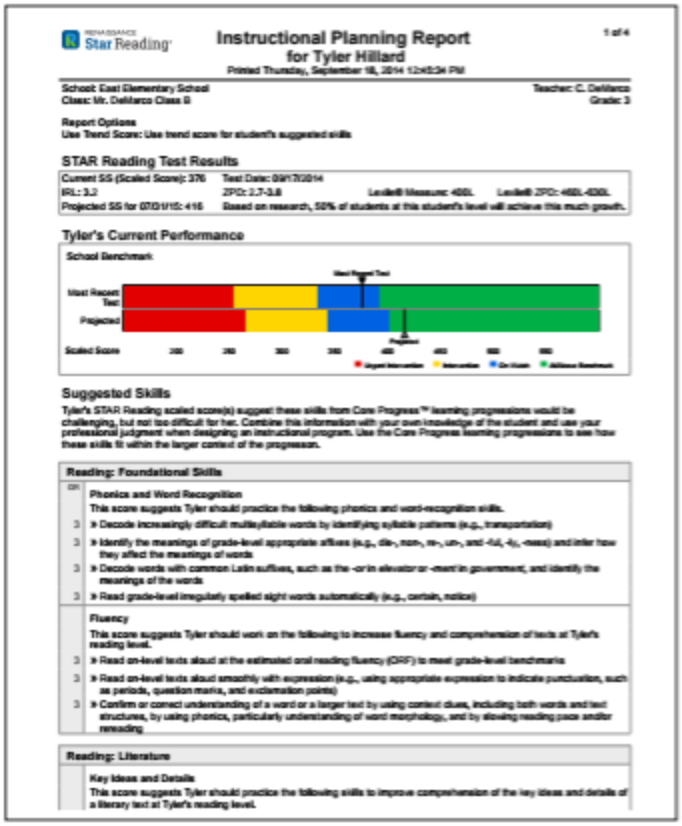
STAR Reading Test Results

Current Scaled Score: 568 — Percentile Rank: 24 — Grade Equivalent: 5.3
Test Date: 9/5/2014

Projected Scaled Score: 638 — Based on research, 50% of students at this student's level will achieve this much growth.
Date: 6/12/2015

Appendix J

Instructional Planning Report



Instructional Planning Report
for Tyler Hillard
Printed Thursday, September 18, 2014 12:55:34 PM

School: East Elementary School
Class: Mr. DeMarco Class B

Teacher: C. DeMarco
Grade: 3

Report Options
Use Trend Score: Use trend score for student's suggested skills

STAR Reading Test Results

Current SS (Scaled Score): 376 Test Date: 09/17/2014
IRL: 3.2 ZPD: 2.7-3.8
Projected SS for 07/01/15: 416 Based on research, 50% of students at this student's level will achieve this much growth.

Tyler's Current Performance

School Benchmark

Most Recent Test
Projected

Scaled Score

Suggested Skills

Tyler's STAR Reading scaled score(s) suggest these skills from Core Progress™ learning progressions would be challenging, but not too difficult for her. Combine this information with your own knowledge of the student and use your professional judgment when designing an instructional program. Use the Core Progress learning progressions to see how these skills fit within the larger context of the progression.

Reading: Foundational Skills

Phonics and Word Recognition
This score suggests Tyler should practice the following phonics and word-recognition skills.

- Decode increasingly difficult multisyllable words by identifying syllable patterns (e.g., transportation)
- Identify the meanings of grade-level appropriate affixes (e.g., dis-, non-, re-, un-, and -ful, -ly, -ness) and infer how they affect the meanings of words
- Decode words with common Latin suffixes, such as the -or in elevator or -ment in government, and identify the meanings of the words
- Read grade-level irregularly spelled sight words automatically (e.g., certain, notice)

Fluency
This score suggests Tyler should work on the following to increase fluency and comprehension of texts at Tyler's reading level.

- Read on-level texts aloud at the estimated oral reading fluency (ORF) to meet grade-level benchmarks
- Read on-level texts aloud smoothly with expression (e.g., using appropriate expression to indicate punctuation, such as periods, question marks, and exclamation points)
- Confirm or correct understanding of a word or a larger text by using context clues, including both words and text structures, by using phonics, particularly understanding of word morphology, and by slowing reading pace and/or rereading

Reading: Literature

Key Ideas and Details
This score suggests Tyler should practice the following skills to improve comprehension of the key ideas and details of a literary text at Tyler's reading level.

Appendix K

Student's Reading Log

Student Reading Log

Name: _____

Date	Title of Book	Level	Home or School	Page Started	Page Ended	Minutes Read	Genre