IS THERE A CORRELATION BETWEEN THE USE OF ACCELERATED READER IN THE

CLASSROOM AND STUDENT ACHIEVEMENT IN READING COMPREHENSION?

by

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ABSTRACT

Student achievement in reading comprehension has been an important topic for the past several years due to the importance of reading in education. School districts in South Carolina have had enormous amounts of pressure put on them to increase student reading comprehension through the implementation of SLOs and the Read to Succeed initiative. The School District of Pickens County has chosen to use the Accelerated Reader program in an attempt to help boost student reading comprehension. The quasi-experimental design was used during the quantitative research process to determine the effect of Accelerated Reader on student reading comprehension and student achievement. The measuring instrument used was student MAP test data from the 2014-2015 and 2015-2016 school years. Overall RIT scores of students were compared during the Fall, Winter, and Spring administrations of MAP during both school years. The results of the study showed an increase in overall RIT for both the experimental and control groups, but there was no significant increase in student reading comprehension with students systematically exposed to Accelerated Reader and students that were not.

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CHAPTER 1

INTRODUCTION

Reading comprehension is one of the most important skills that students develop throughout their time in elementary school. Without adequate skills in reading, students can easily fall behind and experience difficulty in the majority of their classes. Schools have tried for years to find ways to increase the amount of reading students do while trying to maintain the joy those students find in reading. New and innovative programs have arisen to help find the balance between reading achievement and the fun of reading. One of those programs is Accelerated Reader (AR). AR is a program that promotes reading by requiring students to read books and take short comprehension assessments in order to earn points for what they have read. The aim of the program is to promote student reading comprehension while providing students with a fun and motivational tool. The study analyzed student MAP scores during the 2014-2015 and 2015-2016 school years to determine if there was a correlation between

Statement of the Problem

With the increase of pressure put on school districts in South Carolina through the use of Student Learning Objectives (SLO) and the Read to Succeed Program, school districts have more pressure than ever to find innovative ways to bolster teacher performance and student achievement. The state of South Carolina has recently put more emphasis on student literacy than it did in previous years causing many districts throughout the state to incorporate new reading programs to improve student reading performance. The districts measure this achievement through the completion of standardized tests such as the Palmetto Assessment of State Standards

(PASS), the more recent ACT Aspire test, SC Ready test, and the Measures of Academic

Progress (MAP) test.

The School District of Pickens County has chosen to continue to support the Accelerated

Reader (AR) program. Dacusville Elementary School (DES) uses this program regularly under

the pretense that student reading comprehension can, in fact, be bolstered if the program is used

properly. Students spend several hours per week reading books that are on their reading level,

taking (and retaking if needed) tests about the book they previously read, then grabbing the next

book to do it all over again. Teachers must spend valuable instructional time making sure

students are reading "AR" books and running reports to make sure all students are participating

properly. Additionally, one must account for the amount of time that district office employees

spend to make sure all students within the district have access. Even though making reading fun

for students through immediate positive rewards of points is important, is it possible that if

positive results are not achieved on testing that the time and effort spent on this program could

be spent in other areas of education? Does Accelerated Reader truly bolster student achievement

on standardized testing?

Significance of the Study

The purpose of this study is to determine the effectiveness of the Accelerated Reader

program through use of the Measures of Academic Progress (MAP) test. The study will analyze

MAP data from 2014-2015 and 2015-2016 to determine how many students increased in their

reading comprehension through consistent use of the Accelerated Reading program. The study

will show to what extent students' reading comprehension increased or decreased during their

fourth grade year in which Accelerated Reader was consistently and systematically implemented

into the classroom as compared to their peers who were not consistently and systematically

exposed to the program. The study also looks at the differences in reading comprehension growth in the fifth grade when AR was used only as a supplemental aid in the classroom. The study will also show how much the control group increased or decreased without consistent use of Accelerated Reader in the 2014-2015 or 2015-2016 school years.

Justification for Study

Several years ago the School District of Pickens County implemented the Accelerated Reader program and provided access to all schools within the district. The Accelerated Reader program can be costly when used systematically and intentionally. Additionally, teachers, students, parents, and even district office employees spend countless hours using AR in an attempt to assist students in reading comprehension skills. Since its time of implementation, very little to no research and factual support has been provided to prove its validity. Though access to the AR program has been consistently available to students at Dacusville Elementary School, teachers have a great deal of flexibility on how extensively they employ the program. This study will attempt to determine whether consistent and systematic use of the AR program does indeed significantly affect reading achievement in the area of reading comprehension and; subsequently, whether or not that achievement justifies both the time and expense of maintaining the program.

Hypothesis and Research Questions

It is hypothesized by the researcher that students will not make significant gains in reading comprehension when rigorously using the Accelerated Reader program in fourth grade during 2014-2015 school year compared to a much less systematic and regular use of the Accelerated Reader program in fifth grade during the 2015-2016 school year as measured by the MAP test given both years.

Research Questions:

1. What percentage of students at Dacusville Elementary School met or exceeded their reading goals on MAP testing from Fall to Spring in 2014-2015 year after reading for a minimum of 60 minutes per day while participating in the Accelerated Reader program for one year?

2. What percentage of students at Dacusville Elementary School did not meet or exceed their reading goals on MAP testing from Fall to Spring in 2014-2015 after reading for a minimum of 60 minutes per day while participating in the Accelerated Reader program for one year?

3. What percentage of students did not meet or exceed their reading goals on MAP during the 2014-2015 year but did make gains in their overall Rasch Unit score (RIT) while participating in the Accelerated Reader program?

4. What percentage of students at Dacusville Elementary School met or exceeded their reading goals on MAP testing from Fall to Spring in the 2015-2016 year after receiving regular reading instruction without regularly participating in the Accelerated Reader program for one year?

5. What percentage of students at Dacusville Elementary School did not meet or exceed their reading goals on MAP testing from Spring to Spring in the 2015-2016 after receiving regular reading instruction without regularly participating in the Accelerated Reader program for one year?

6. What percentage of students did not meet or exceed their reading goals on MAP during the 2015-2016 year but did make gains in their overall Rasch Unit score (RIT) while

receiving regular reading instruction without regularly participating in the Accelerated

Reader program for one year?

7. Was there a significant amount of growth indicated for those who regularly and

systematically participated in AR such that the time and expense involved is justified?

CHAPTER 2

REVIEW OF LITERATURE

Introduction

Although literacy is one of the most important skills that students can gain in public schools, there are several different programs that can help achieve a high level of reading comprehension. Accelerated Reader (AR) is one of the more widely popular reading comprehension programs in the School District of Pickens County that is available to both teachers and students. According to the most recent Dacusville Elementary School (DES) report card released by the South Carolina Department of Education, DES had 40% of its students score below basic in reading, compared to a national average of 33% (South Carolina Department of Education, 2014). This shows decline from the previous year in reading comprehension at the school, which has caused them to rely more heavily on AR to bring these scores up. Before automatically assuming that this product is a "fix-all", it is important for one to understand how this program works and the specific skills that it focuses on to truly understand its effect on student achievement. According to Kathryn Solley, "Accelerated Reader's impact on student reading achievement has been debated in educational circles for some time (Solley, 2011, p. 47)." Although Accelerated Reader can be a useful tool when used properly, it really has been debated as to whether it is achieving higher-order thinking.

In order to understand how this innovative program works, it is important know how the program is designed, how it works, and what it does for students and teachers. To fully understand the program, a complete breakdown of everything Accelerated Reader accomplishes from student motivation to valuable data is required. Also, describing all of the ways that

Accelerated Reader can be effectively used in the classroom is important. There are several different ways that AR can be used effectively, but this does not prove how effective it can be in increasing student performance.

What is Accelerated Reader?

"The Accelerated Reader (AR) is a learning information system designed to help teachers manage literature-based reading" (Solley, 2011, p. 46). Dacusville Elementary School is one of several schools in the School District of Pickens County that uses AR regularly as a way to bolster student reading literacy. As the United States Department of Education pushed down the Common Core State Standards, which eventually evolved into the South Carolina College and Career Ready (SCCCR) standards, the push for increasing literacy has come to an all-time high. Many believe that Accelerated Reader is the key to addressing these ever-changing standards. The first question that is generally asked is "why is reading so important?" According to one author reading is important because the more students read, the more they love to read and the more books they read on the individual reading level, create students that are motivated to achieve (Solley, 2011). Studies show that, "…more young people who use AR say that they enjoy reading than young people who do not use AR" (Clark, 2014, p. 10). Although motivating students to read is one of the most important aspects of AR, when students read large quantities, they strengthen their critical-thinking skills (Solley, 2011). As students' critical-thinking skills increase through their amount of reading, their performance in other areas of learning will also increase.

For Accelerated Reader to have the opportunity to be successful, it must be administered the proper way. Teachers must remember that "…AR is to be used as a teaching tool for guided reading practice" (Solley, 2011, p. 47). Generally language arts teachers, reading specialists, and

librarians are the ones who implement the program. Accelerated Reader is intended to be used as an intervention in which teachers work closely with students (Education Commission of the States, 1999). It can also be a tool for monitoring the independent reading of students (Clark, 2014). "A primary best recommendation for use of Accelerated Reader is a dedicated 30-60 minute block of time for reading practice" (What Works Clearinghouse, 2008, p. 2). To designate an accurate beginning reading level for students "Each student starts out by taking the STAR test, a companion program to AR, to determine his or her instructional reading level" (Solley, 2011, p. 47). Just like with any subject or topic, it is important to determine this reading level before beginning instruction to increase student comprehension. On a more important note, as students begin achieving success, their level of reading increases to allow them to continue to grow. "Accelerated Reading is designed to be used as supplemental instruction and does not take the place of a main reading program" (Education Commission of the States, 1999, p. 6). The books that are chosen for Accelerated Reader are given a reading level and point value (Pavonetti, Brimmer, & Cipielewski, 2000). The point value varies depending on the reading level and even length of the book (What Works Clearinghouse, 2008). As students accumulate points based on completion of books and as they pass quizzes, these points are intended to motivate student learning and even influence teachers to create a reward system for their students (What Works Clearinghouse, 2008). One example is that, "… points are recorded for each student in the computer database. After a certain period of time (six weeks or a quarter), students can "cash" their points in for prizes…" (Poock, 1998, p. 33).

In a regular classroom, the most common problems that are associated with reading are: knowing if students are comprehending what they read, motivating them to read, and diagnosing and solving the problems that prevent students from succeeding (The Institute for Academic

Excellence, 1998). "AR quizzes were designed to help teachers address these issues… (The

Institute for Academic Excellence, 1998)" "Accelerated Reader (AR) is a tool for monitoring and

managing independent reading practice" (Clark, 2014, p. 7). To begin, "children using the

programs select a book, read it, and then take a computer-generated test" (Carter, 1996, p. 22).

The quizzes given to the students are composed of all multiple-choice questions It is believed

that "…multiple-choice questions focusing on literal comprehension serve the purpose of AR

quizzes more efficiently than open-ended questions would" (The Institute for Academic

Excellence, 1998). Because the students can take these quizzes quickly in the classroom, mostly

in a matter of minutes, they receive several more valuable minutes to continue reading and gain

more practice (The Institute for Academic Excellence, 1998). By giving students more time to

practice, they can continue to build their reading skills which achieves the goal that Accelerated

Reader strives toward (The Institute for Academic Excellence, 1998). Along with quizzes,

"several reports help teachers monitor student reading progress" (Education Commission of the

States, 1999, p. 3). These reports include a Diagnostic Report, Literacy-Skills Chart, and Student

Report Record to assist teachers in interventions and data collection (Education Commission of

the States, 1999).

Many times when educators are attempting to build reading comprehension, they run into

the issue of student motivation. Generally if students are not motivated to read, they will not

read, or they will read books that are not appropriate for building strong reading comprehension.

"AR motivates students of all ages and abilities to read for pleasure" (Clark, 2014, p. 9).It is

widely believed that assessments are strong motivational tools for students and can be effective

(Nichols, 2013). It has also been determined that "…the use of a computer-aided reading

comprehension and management program can motivate students of all ages to read more and

better books" (Education Commission of the States, 1999). Several students that used

Accelerated Reader expressed that they enjoyed reading more than other students that did not use

AR (Clark, 2014, p. 9). The Institute for Academic Excellence explains that in order, "To

motivate a student the assessment instrument must meet three criteria: 1) it must provide

immediate feedback; 2) it must not threaten the student's ego; and 3) it must be designed well, so

that good performance results in a high score" (The Institute for Academic Excellence, 1998).

"Accelerated Reader's philosophy is that by using the system, students are motivated to read

more and better books" (Pavonetti, Brimmer, & Cipielewski, 2000, p. 3). One study also found

"…that children and young people who use AR tend to enjoy reading more, read more often,

read a greater variety of fiction texts and think more positively about reading than their peers

who do not use AR" (Clark, 2014, p. 7).

The Effectiveness of Accelerated Reader in the Classroom

Within a regular classroom, what Accelerated Reader is designed to achieve versus the

overall effectiveness of the program is sometimes vastly different. As the debate over the

program's effectiveness continues on, it is important for one to remember that "many of [the]

studies were conducted more than a decade ago…" (Nichols, 2013), which shows that

effectiveness then may not be the same as in the 21st Century. The What Works Clearinghouse

stated that, "Accelerated Reader was found to have no discernible effects on reading fluency,

mixed effects on comprehension, and potentially positive effects on general reading

achievement" (p.1). One study was administered in a small middle school in the eastern United

States to determine Accelerated Reader's true effectiveness (Huang, 2012). A survey was

provided to students and the results concluded that, "Seventy percent of the students reported

that AR almost never or rarely increased their reading levels and reading scores. Only thirty

percent of the participants indicated AR often or almost always increases their reading

achievement" (Huang, 2012, p. 231). Huang found that there was not significant change in either

direction, which indicated that AR had little to no impact on student performance (Huang, 2012).

Another report showed similar results and concluded that their test "…showed no significant

difference between groups" (Pavonetti, Brimmer, & Cipielewski, 2000, p. 9). What Accelerated

Reader promises and what it provides are vastly different and the study results showed that many

students who used Accelerated Reader in elementary school did not continue to have success

later in life (Pavonetti, Brimmer, & Cipielewski, 2000).

Even though other studies showed negative results with the Accelerated Reader program,

Renaissance Learning, the parent company for AR, shows significantly different results in their

research. According to the results from a report published in May 2015, Renaissance Learning

reported that the majority of students had done better than they had originally thought

(Renaissance Learning, 2015). A study by the National Literacy Trust provided positive results

stating, "Boys using AR…continue to enjoy reading more, read more often and thing more

positively about reading than boys not using AR…Girls show similar relationships" (Clark,

2014, p. 14). Not only do several studies show an increase in reading comprehension and

fluency, but many of them show an increase in other areas of academics. There is, "statistically

significant evidence that, in virtually every subject test (including reading, writing, math, science

and social studies), a majority of schools that owned Accelerated Reader performed better than

socioeconomically comparable schools that did not own the software" (Education Commission

of the States, 1999, p. 4). Due to the fact that reading is a foundational skill that is necessary for

success, other areas of academics will improve as reading skills improve (Pavonetti, Brimmer, &

Cipielewski, 2000, p. 3). Providing the tool to assist in student reading means that, "…students

who read well will do better in math, science, social studies, and language arts" (Education

Commission of the States, 1999, p. 3). "It is important that teachers develop in their students a

reading habit that will endure and help to produce lifelong readers" (Pavonetti, Brimmer, &

Cipielewski, 2000, p. 4).

There are many concerns about the effectiveness of Accelerated Reader and the proper

way to administer the program to achieve maximum results. Dr. Better Carter believes that

"…computerized reading programs don't teach a love of reading" (Carter, 1996, p. 22). She

continues by giving several examples of why Accelerated Reader does not provide adequate

results such as: devaluing reading, how tangible rewards diminish motivation, and by limiting

title choices, students are not exposed to all of the resources available (Carter, 1996). In another

case, "books not in the school's Accelerated Reader program were not selected for recreational

reading" (Pavonetti, Brimmer, & Cipielewski, 2000, p. 5). Also when having students choose

books that they enjoy, many of the newer titles are not available for them to choose, so they

ignore them (Pavonetti, Brimmer, & Cipielewski, 2000). Also, in another instance, students

enjoyed reading certain books from a series but only read the first two because the others were

not on the Accelerated Reader list (Carter, 1996) This causes the concern that, "…children

[aren't] motivated to read, but they [are] motivated to earn" (Carter, 1996, p. 23). Students must

not "…be driven by promises of short-term gains" (Pavonetti, Brimmer, & Cipielewski, 2000, p.

13) but instead should be driven to be successful readers. Another concern is the cost of the

program, which varies depending on the size of the kit and ranges from a Starter Kit of $399 to

the Super Kit which cost $2,999 (Education Commission of the States, 1999). "The average

annual cost of full implementation…ranges from $2,000 to $10,000 per school year" (What

Works Clearinghouse, 2008, p. 2). With all of that cost schools could find a way to use their

money and staff in different ways that could be more effective (Carter, 1996, p. 24).

CHAPTER 3

METHODOLOGY

Statement of the Problem

With the increase of pressure put on school districts in South Carolina through the use of Student Learning Objectives (SLO) and the Read to Succeed Program, school districts have more pressure than ever to find innovative ways to bolster teacher performance and student achievement. The state of South Carolina has recently put more emphasis on student literacy than it did in previous years causing many districts throughout the state to incorporate new reading programs to improve student reading performance. The districts measure this achievement through the completion of standardized tests such as the Palmetto Assessment of State Standards (PASS), the more recent ACT Aspire test, the Measures of Academic Progress (MAP) test, and the newly implemented SC Ready test.

The School District of Pickens County has chosen to continue to support the Accelerated Reader (AR) program. The district spends thousands of dollars per year as well as hundreds of valuable hours to incorporate Accelerated Reader into schools to boost student reading performance. Dacusville Elementary School (DES) uses this program regularly under the pretense that student reading comprehension can, in fact, be bolstered if the program is used properly. Students spend several hours per week reading books that are on their reading level, taking (and retaking if needed) tests about the book they previously read, then grabbing the next book to do it all over again. Teachers must spend valuable instruction hours making sure students are reading "AR" books and running reports to make sure all students are participating properly. This does not even take into account the amount of time that district office employees must

spend to make sure all students within the district have access. Even though making reading fun

for students through immediate positive rewards of points is important, is it possible that if

positive results are not achieved on testing that the time, money, and effort spent on this program

could be spent in other areas of education?

Research Participants

The participants in this study are fifth grade students. Two groups of students that

experienced consistent use of Accelerated Reader in fourth grade were chosen as the

experimental group based on information provided by their fourth grade teachers. It was

determined that they read a minimum of 30 minutes per day in class along with a minimum of 30

minutes per day at home as measured by a daily reading log, which is the amount of time

recommended by Renaissance Learning. The control group was the remaining students within

the grade level that did not participate in the Accelerated Reader program regularly. The purpose

of choosing these two groups was to show any increase or decrease in overall RIT based on the

Measures of Academic Progress (MAP) test given in the fall of 2014 and then again in the spring

of 2015 in fourth grade. This test was also given during the fall of 2015 and again during the

spring of 2016 in fifth grade. The researcher will use this group to determine if the students made

progress or declined based on the overall RIT score in fifth grade after not being exposed to

regular use of AR. The principal of Dacusville Elementary School evenly distributed these

students throughout the multiple classrooms without bias and did not take student demographics

into consideration. The experimental group of 47 students (table 3.1) is very similar, in

comparison to the control group of 43 students (table 3.2)

Table 3.1: **Experimental group demographics**

Class: Experimental Group		
Factor *(e.g., gender, SES, reading levels, learning styles)*	**Description** *(in terms of your students)*	**Source(s)**
Gender	26 boys 21 girls	Observation
Ethnicity	46 white 1 African American	Power School
Socio-economics	19 Free lunch 3 Reduced lunch 25 Pay in full	Cafeteria Supervisor/Enrich
Special Education Services	7 Resource Support daily	Resource and student IEPs.
MAP Data-2014 (RIT)	Reading 15 200-219 10 190-199 3 180-189 7 170-179 4 <169 8 Not tested	Enrich Spring 2013 data
MAP data-2015 (RIT)	Reading 17 200-219 5 190-199 7 180-189 2 170-179 8 <169 8 Not tested	Enrich Spring 2014 data
Medical Conditions	1 Auditory Processing Disorder 15 ADD/ADHD 5 Asthma	Parents

Table 3.2: **Control population demographics**

Class: All other 5th grade students		
Factor *(e.g., gender, SES, reading levels, learning styles)*	**Description** *(in terms of your students)*	**Source(s)**
Gender	26 boys 17 girls	Observation
Ethnicity	40 Caucasian 2 mix 1 Hispanic	Power School
Socio-economics	26 Free lunch 3 Reduced lunch 14 Pay in full	Cafeteria Supervisor
MAP Data	Reading 15 200-219 21 190-199 7 180-189	Enrich Spring 2014 data
MAP Data	Reading 16 200-219 22 190-199 5 180-189	Enrich Spring 2015 data

Research Instruments and Data Collection Methods

The instrument used in the study will be the analysis of Measures of Academic Progress (MAP) test data. This data was chosen because it is an indicator of growth over time, thus more accurate than the state accountability assessment given only at the end of the year. All students will have taken the fall MAP test to determine their beginning reading level for beginning instruction. Students will then be provided with daily reading instruction which focuses on skills

required to increase reading comprehension. As each student completes the fall, winter, and spring MAP test during the 2015-2016 school year, the researcher will gather results from the NWEA and Enrich programs and record the results. The researcher will use the data to determine their increases and decreases in overall RIT score. This will be completed for both the experimental group as well as the control group.

During the 2014-2015 school year, each student received 30 minutes of silent sustained reading per day and were required to complete 30 minutes of individual reading at home per day as measured by a daily reading log. Based on the research by Renaissance Learning, 60 minutes of reading per day yields optimal results. The students were required to take the fall, winter, and spring MAP test and their data was recorded in the NWEA and Enrich programs. The researcher will view and record this data to determine the increase or decrease in overall RIT score for all students in the experimental and control groups. This data will be compared to the data from the 2015-2016 school year to determine the increases or decreases between the school years. A T-test will be conducted to determine the significance or lack thereof of the achievement gains as a means of proving or nullifying the hypothesis. Additionally the research will determine the cost effectiveness of the program based on the significance of the achievement gains in reading comprehension. The researcher will record all results in a data notebook.

Research Methods

The research design used in this study is a quantitative design. A quantitative design was chosen because the researcher's goal is to determine if student achievement on the reading MAP test correlates with the regular use of Accelerated Reader within the classroom. The researcher will collect numerical data from the reading MAP test which qualifies the test as quantitative. The independent variable in the study is the use of the Accelerated Reader program in the

classroom. The dependent variable is the results of the reading MAP test given. The group of students targeted is the controlled variable in the experiment.

Assumptions and Limitations

The researcher must assume that while taking the MAP test, the environment in which they test remains consistent. The researcher must also assume that many of the students come from similar backgrounds which factor into how well the student performs on the test. Limitations are minimal in this study. The students can only read for a certain amount of time in class due to class scheduling and the researcher cannot control how much reading takes place outside of the classroom. Due to the scheduling within the school, the amount of time allotted for completing the MAP test is limited. Also, it must be taken into consideration that although students were required to read 30 minutes per night at home in fourth grade, some did not due to lack of teacher supervision.

CHAPTER 4

RESULTS

Chapter 4 shows the results of quantitative research on the effects of systematic use of Accelerated Reader on student reading comprehension. The research problem was that with strict requirements for student reading achievement, the School District of Pickens County has chosen to use the Accelerated Reader program for the past several years without valid research to support their decision. The researcher developed seven research questions. What percentage of students at Dacusville Elementary School met or exceeded their reading goals on MAP testing from Fall to Spring in 2014-2015 year after reading for a minimum of 60 minutes per day while participating in the Accelerated Reader program for one year? What percentage of students at Dacusville Elementary School did not meet or exceed their reading goals on MAP testing from Fall to Spring in 2014-2015 after reading for a minimum of 60 minutes per day while participating in the Accelerated Reader program for one year? What percentage of students did not meet or exceed their reading goals on MAP during the 2014-2015 year but did make gains in their overall Rasch Unit score (RIT) while participating in the Accelerated Reader program? What percentage of students at Dacusville Elementary School met or exceeded their reading goals on MAP testing from Fall to Spring in the 2015-2016 year after receiving regular reading instruction without regularly participating in the Accelerated Reader program for one year? What percentage of students at Dacusville Elementary School did not meet or exceed their reading goals on MAP testing from Spring to Spring in the 2015-2016 after receiving regular reading instruction without regularly participating in the Accelerated Reader program for one year? Was there a significant amount of growth indicated for those who regularly and systematically participated in AR such that the time and expense involved is justified? The researcher also

developed the null hypothesis, which states that there will be no significant increase in student

achievement with the systematic use of Accelerated Reader.

Summary of Findings

Table 4.1 displays the data from the students in the experimental group's 2014-2015

MAP tests during the Fall, Winter, and Spring administrations. The mean RIT during the Fall

administration was 198.17, Winter was 202.89, and Spring was 207.72. The table also shows the

overall increase or decrease of overall RIT of each student and the mean RIT increase/decrease

was 9.87 points. The percentage of students that met or exceeded their reading goals was 62%,

while the percentage that did not meet or exceed their reading goals was 38%. The percentage of

students that did not meet or exceed their reading goals, but did increase in overall RIT was 34%.

Table 4.1: Experimental Group Overall RIT 2014-2015

Experimental Group: 2014-2015			
Student	Overall RIT Fall	Overall RIT Winter	Overall RIT Spring	Overall Increase/Decrease
Student 1	192	214	214	22
Student 2	183	195	206	23
Student 3	203	205	214	11
Student 4	199	209	207	8
Student 5	198	201	203	10
Student 6	209	211	224	15
Student 7	201	204	207	6
Student 8	198	199	204	6
Student 9	185	192	189	7
Student 10	203	211	211	8
Student 11	209	203	216	7
Student 12	188	185	198	10
Student 13	201	205	230	29
Student 14	210	219	215	9
Student 15	198	204	203	5
Student 16	205	213	219	14
Student 17	199	208	209	10
Student 18	205	186	196	-9
Student 19	184	193	200	16
Student 20	202	209	216	14
Student 21	202	204	205	3
Student 22	212	213	214	2
Student 23	202	207	209	7
Student 24	223	226	227	4
Student 25	199	201	211	12
Student 26	202	207	205	3
Student 27	179	187	200	21
Student 28	193	215	222	29
Student 29	186	185	190	4
Student 30	180	198	195	18
Student 31	213	214	222	9
Student 32	161	175	180	19
Student 33	189	190	193	4
Student 34	193	205	214	21
Student 35	166	182	188	22
Student 36	219	218	216	-3
Student 37	218	226	232	14
Student 38	177	179	180	3
Student 39	208	207	213	5
Student 40	207	206	210	3
Student 41	186	195	195	9
Student 42	208	196	210	2
Student 43	201	211	214	13
Student 44	207	211	212	5
Student 45	211	209	220	9
Student 46	194	195	196	2
Student 47	206	208	209	3
Mean	198.17	202.89	207.72	9.87

Table 4.2 displays the data from the control group of students 2014-2015 MAP tests during the Fall, Winter, and Spring administrations. The mean RIT during the Fall administration was 201.23, Winter was 207.09, and Spring was 210.65. The table also shows the overall increase or decrease of overall RIT of each student and the mean RIT increase/decrease was 10.60 points. The percentage of students that met or exceeded their reading goals was 67%, while the percentage that did not meet or exceed their reading goals was 33%. The percentage of students that did not meet or exceed their reading goals, but did increase in overall RIT was 19%.

Table 4.2: Control Group Overall RIT 2014-2015

Control Group: 2014-2015			
Student	Overall RIT Fall	Overall RIT Winter	Overall RIT Spring	Overall Increase/Decrease
Student 1	209	213	216	7
Student 2	210	212	210	2
Student 3	221	221	221	0
Student 4	223	236	220	13
Student 5	189	194	204	15
Student 6	212	226	222	14
Student 7	214	209	219	5
Student 8	202	225	209	23
Student 9	215	207	214	-1
Student 10	211	215	218	7
Student 11	185	199	199	14
Student 12	194	205	208	14
Student 13	217	214	208	-9
Student 14	208	216	216	8
Student 15	208	208	214	6
Student 16	213	217	229	16
Student 17	209	201	203	-6
Student 18	196	199	210	14
Student 19	191	196	198	7
Student 20	172	194	201	29
Student 21	204	209	215	11
Student 22	194	192	192	-2
Student 23	195	212	208	17
Student 24	200	208	217	17
Student 25	194	195	196	2
Student 26	181	187	203	22
Student 27	174	185	189	15
Student 28	225	228	224	3
Student 29	169	174	184	15
Student 30	206	202	202	-4
Student 31	202	210	225	23
Student 32	227	227	226	-1
Student 33	169	202	204	35
Student 34	204	208	210	6
Student 35	201	212	209	11
Student 36	208	210	220	12
Student 37	181	188	194	13
Student 38	195	202	205	10
Student 39	188	203	215	27
Student 40	201	214	212	13
Student 41	217	214	232	15
Student 42	203	201	213	10
Student 43	216	215	224	8
Mean	201.23	207.09	210.65	10.60

Figure 4.3 shows the mean RIT comparison between the control and experimental

groups. The figure shows the mean RIT for the Fall, Winter, and Spring administrations of the

MAP test. The line graph shows the overall increase and difference between the two groups. The

control group began and ended the 2014-2015 school year with a higher overall RIT than the

experimental group. The experimental group made a greater gain between Winter and Spring.

The overall gain for the experimental group was five RIT points as compared to three RIT points

with the control group.
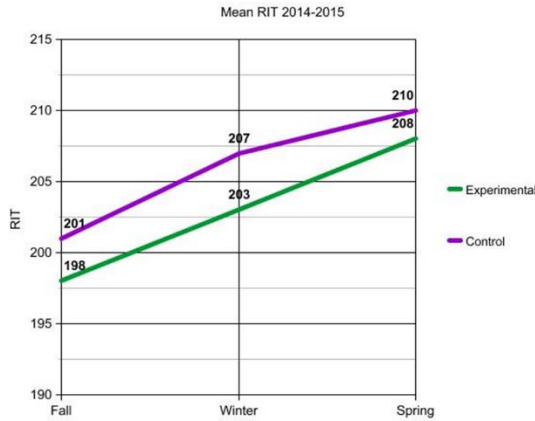
Figure 4.3: Mean RIT 2014-2015

Table 4.4 shows a t-Test used to determine whether or not there is a significant difference between the data collected for the experimental and control group. The P(T<=t) one-tail shows that the significance is .11 which is greater than .05, meaning that the null hypothesis, which states that there will be no significant increase in student reading comprehension, is accepted.

Table 4.4: T-Test 2014-2015

t-Test: Two-Sample Assuming Unequal Variances		
	Experimental	*Control*
Mean	207.723404	210.65116
Variance	144.421832	119.94684
Observations	47	43
Hypothesized Mean Difference	0	
df	88	
t Stat	-1.20921209	
P(T<=t) one-tail	0.11491007	
t Critical one-tail	1.66235403	
P(T<=t) two-tail	0.22982014	
t Critical two-tail	1.98728986	

Table 4.5 displays the data from the students within the experimental group from 2015-2016 MAP tests during the Fall, Winter, and Spring administrations. The mean RIT during the Fall administration was 209.21, Winter was 209.43, and Spring was 213.91. The table also shows the overall increase or decrease of overall RIT of each student and the mean RIT increase/decrease was 5.26 points. According to the data, the percentage of students that met or exceeded their reading goals was 51%, while the percentage that did not meet or exceed their reading goals was 49%. The percentage of students that did not meet or exceed their reading goals, but did increase in overall RIT was 36%.

Table 4.5: Experimental Group Overall RIT 2015-2016

Student	Overall RIT Fall	Overall RIT Winter	Overall RIT Spring	Overall Increase/Decrease
		Experimental Group: 2015-2016		
Student 1	215	226	229	14
Student 2	201	195	204	3
Student 3	219	219	209	-10
Student 4	213	214	208	1
Student 5	201	211	210	9
Student 6	217	218	224	7
Student 7	219	216	220	1
Student 8	202	209	202	7
Student 9	194	193	203	9
Student 10	200	204	211	11
Student 11	222	219	218	-4
Student 12	202	204	208	6
Student 13	213	221	226	13
Student 14	217	222	228	12
Student 15	210	205	208	-5
Student 16	214	222	228	14
Student 17	210	211	216	6
Student 18	205	186	196	-9
Student 19	201	196	206	5
Student 20	203	205	196	3
Student 21	202	204	205	3
Student 22	210	212	216	6
Student 23	212	198	215	3
Student 24	214	216	219	5
Student 25	212	211	215	3
Student 26	237	230	239	2
Student 27	209	205	216	7
Student 28	206	220	223	17
Student 29	203	213	211	10
Student 30	216	217	223	7
Student 31	203	202	202	-1
Student 32	203	198	204	1
Student 33	215	220	225	10
Student 34	185	192	189	7
Student 35	205	195	201	-4
Student 36	210	208	211	1
Student 37	191	194	197	6
Student 38	224	226	229	5
Student 39	232	221	233	1
Student 40	191	195	200	9
Student 41	206	201	220	14
Student 42	207	214	224	17
Student 43	204	196	205	1
Student 44	196	202	207	11
Student 45	219	217	223	4
Student 46	223	222	229	6
Student 47	220	218	223	3
Mean	209.21	209.43	213.91	5.26

Table 4.6 displays the data from the students within the control group from 2015-2016

MAP tests during the Fall, Winter, and Spring administrations. The mean RIT during the Fall

administration was 210.30, Winter was 213.70, and Spring was 214.98. The table also shows the

overall increase or decrease of overall RIT of each student and the mean RIT increase/decrease

was 6.19 points. According to the data, the percentage of students that met or exceeded their

reading goals was 65%, while the percentage that did not meet or exceed their reading goals was

35%. The percentage of students that did not meet or exceed their reading goals, but did increase

in overall RIT was 19%.

Table 4.6: Control Group Overall RIT 2015-2016

Control Group: 2015-2016			
Student	Overall RIT Fall	Overall RIT Winter	Overall RIT Spring	Overall Increase/Decrease
Student 1	223	215	221	-2
Student 2	206	213	217	11
Student 3	226	228	229	3
Student 4	223	236	220	13
Student 5	227	230	233	6
Student 6	199	203	204	5
Student 7	216	221	222	6
Student 8	221	221	222	1
Student 9	215	232	224	12
Student 10	218	224	220	6
Student 11	216	215	225	9
Student 12	197	202	203	6
Student 13	196	208	213	17
Student 14	210	209	210	0
Student 15	216	221	222	6
Student 16	218	209	218	0
Student 17	222	221	225	3
Student 18	211	209	210	-1
Student 19	203	211	212	9
Student 20	200	206	221	21
Student 21	191	198	208	17
Student 22	217	226	221	9
Student 23	208	192	203	-5
Student 24	199	205	205	6
Student 25	222	235	226	13
Student 26	201	198	191	-10
Student 27	203	200	200	-3
Student 28	214	214	222	8
Student 29	169	174	184	15
Student 30	206	202	202	-4
Student 31	214	214	222	9
Student 32	234	235	238	4
Student 33	193	200	202	9
Student 34	204	214	221	17
Student 35	208	222	197	14
Student 36	221	218	214	-7
Student 37	192	203	202	11
Student 38	207	212	215	8
Student 39	203	208	207	5
Student 40	213	213	220	7
Student 41	223	225	226	3
Student 42	222	219	222	0
Student 43	216	228	225	9
Mean	210.30	213.70	214.98	6.19

Figure 4.7 shows the mean RIT between the control and experimental groups. The figure breaks shows the mean RIT for the Fall, Winter, and Spring administrations of the MAP test. The line graph shows the overall increase and difference between the two groups. The control group began and ended the 2015-2016 school year with a higher overall RIT than the experimental group. The control group began one overall RIT point ahead of the experimental group and ended two overall RIT points ahead of the experimental group. The overall gain for the control group between Fall and Spring was five RIT points. The overall gain for the experimental group between Fall and Spring was four RIT points.
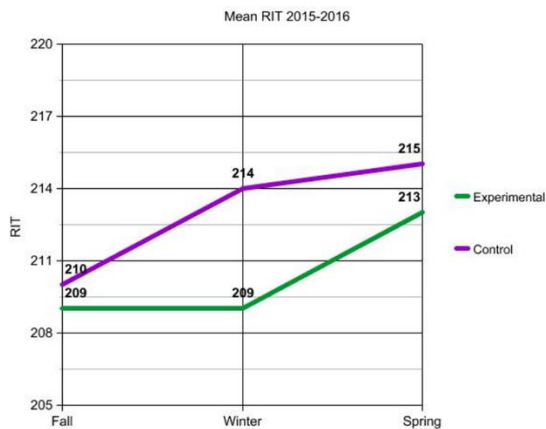
Figure 4.7: Mean RIT 2014-2015

Table 4.8 shows a t-Test used to determine whether or not there is a significant difference between the data collected for the experimental and control group. The $P(T<=t)$ one-tail shows that the significance is .33 which is greater than .05, meaning that the null hypothesis, which states that there will be no significant increase in student reading comprehension, is accepted.

Table 4.8: T-Test 2015-2016

t-Test: Two-Sample Assuming Unequal Variances		
	Experimental	*Control*
Mean	213.9148936	214.976744
Variance	129.4708603	130.404208
Observations	47	43
Hypothesized Mean Difference	0	
df	87	
t Stat	-0.441390861	
P(T<=t) one-tail	0.330012562	
t Critical one-tail	1.662557349	
P(T<=t) two-tail	0.660025124	
t Critical two-tail	1.987608282	

Figure 4.9 shows the mean RIT between the control and experimental groups. The figure

shows the mean RIT for the Fall, Winter, and Spring administrations of the MAP test during the

2014-2015 and 2015-2016 school years. The line graph shows the overall increase and difference

between the two groups. The control group began the 2014-2015 school year with a higher

overall RIT than the experimental group. The control maintained a higher overall RIT than the

experimental group throughout both years of MAP testing. Both groups made gains between Fall

2014 and Spring 2016. The overall gain of the experimental group between the two years was 15

RIT points whereas the overall gain for the control group was 14 RIT points. The control group

and experimental group had a three RIT point difference during the Fall 2014 MAP test

administration and a two RIT point difference after the Spring 2016 MAP test administration.

Figure 4.9 Mean RIT from Fall 2014 to Spring 2016
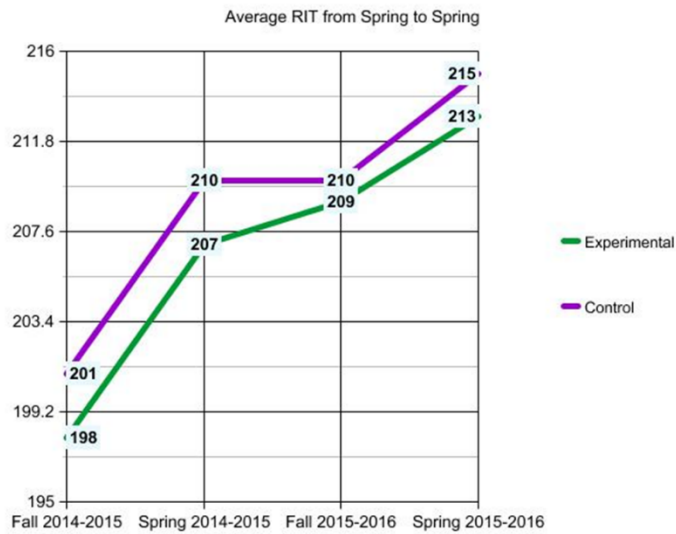
The quantitative data displayed in the chapter revealed an overall increase for both groups in reading as evidenced by two years of MAP data. Although there was an overall increase, the data does not show that the consistent and systematic use of the AR program made a significant difference in overall reading achievement, meaning that the null hypothesis was accepted.

CHAPTER 5

DISCUSSION

Summary

The purpose of this study was to determine the effectiveness of the Accelerated Reader program through use of the Measures of Academic Progress (MAP) test. The study analyzed MAP data from 2014-2015 and 2015-2016 to determine how many students increased in their reading comprehension through consistent use of the Accelerated Reading program. The study showed to what extent students' reading comprehension increased or decreased during their fourth grade year in which Accelerated Reader was consistently and systematically implemented into the classroom as compared to their peers who were not consistently and systematically exposed to the program. The study also looked at the differences in reading comprehension growth in the fifth grade when AR was used only as a supplemental aid in the classroom. The study also showed how much the control group increased or decreased without consistent use of Accelerated Reader in the 2014-2015 or 2015-2016 school years. The experimental group consisted of 47 fifth grade students and the control group consisted of 43 fifth grade students. The results of this study concluded that after systematic use of Accelerated Reader in fourth grade and less systematic use of Accelerated Reader in fifth grade, there was no significant increase in student reading comprehension.

Conclusions and Implications

With the increase of duties such as teaching higher-order thinking, increasing rigor, and being required by South Carolina to have students on or above their necessary reading level by third grade, many teachers do not have the time necessary to implement Accelerated Reader to

its fullest extent. The School District of Pickens County has also required all teachers to use

other programs such as Daily 5 and LLI in order to increase student reading strategies and

comprehension, thus taking away some of the necessary time needed for AR in the classroom.

Although Accelerated Reader can be a beneficial program when used properly, well-organized

classroom instruction can be equally as effective in increasing student reading comprehension.

Instead of attempting to find one program to help the students the most, several different

strategies, including Accelerated Reader, should be implemented.

In the beginning of the trial, 62% of the students in the experimental group met or

exceeded their reading goals in order to be on grade level for fifth grade. By the end of the trial,

51% of the same students met or exceeded their reading goals in order to be on grade level for

sixth grade. The control group started with 67% of students meeting or exceeding the reading

goals in 2014-2015 and ending with 65% of students meeting or exceeding their reading goals in

2015-2016. Although this data shows a slight decrease for both groups, there was a much less

significant decrease for the control group than the experimental group. When comparing the two

groups with increase of overall RIT, the control group had a higher increase than the

experimental group. The control group had a mean increase of 10.60 points as compared the

experimental group's 9.87 point increase in the 2014-2015 school year. The control group also

had an increase of 6.19 points compared to a 5.26 point increase by the experimental group.

Accelerated Reader is not an "end all" program to increase student reading comprehension, but

effective classroom instruction can be equally as effective in achieving similar results.

One major challenge with using Accelerated Reader to increase student reading

comprehension is the amount of time and effort it takes for a teacher to fully implement the

program to achieve the greatest results. AR requires that students read a minimum of 60 minutes

per day and must have a book that is on their individual reading level. With the amount of time it

takes for instruction of other subject areas, this is a difficult task. AR would essentially become

the majority of the reading instruction for the classroom. Some teachers combat the time

management by requiring students to read a minimum of 30 minutes during class and 30 minutes

at home, while documenting using a reading log. The problem with this method is that teachers

cannot monitor the effort students are putting into their reading or whether they are actually

reading at all. The data shows that proper classroom instruction can provide equal results, but

this also requires a large amount of time and effort. In order to use time in class wisely and

provide students with a quality reading instruction, there must be a balance between the use of

AR and classroom instruction.

Recommendations

The findings of this study indicated that there was no significant increase in student

reading comprehension while systematically using AR, when compared to less systematic use of

AR. Based on these findings and the current limitations of this study, the following

recommendations for further research are made:

1. As Accelerated Reader is used in all grade levels, this study should include its
   effects on students of different ages and demographics where possible.

2. As this study is limited to overall RIT increase, it should be expanded to include
   percentile increase in students.

3. The measurement of student reading comprehension in this study is measured by
   gains in overall RIT. Data collected should break down student scores into

categories, including reading comprehension, to see AR's effect on this specific area.

4. This study is limited to fourth and fifth graders from Dacusville Elementary School and should be expanded to other schools within the School District of Pickens County to see if there is a correlation.

5. This study should continue to track reading comprehension increases of the two groups of students throughout middle school to see if the overall increases are maintained or if the results change.

Appendix A
Request to Complete Project

October 3, 2016
Mrs. Robin Walsh
200 Cherokee Trail
Easley, South Carolina 29640

Dear Mrs. Walsh,

As you know, I am currently in the Masters of Education program at Southern Wesleyan University. Part of my requirements for completing the program is to research a topic of interest that would be beneficial when conducted in the classroom. I am interested in the effects of the Accelerated Reader on student reading comprehension.

I am requesting your permission to use the students currently enrolled in fifth grade, as the participants in this study; the students' identities will be kept confidential. In my opinion, I feel this will be an asset to my fellow teachers that are looking for reliable methods in helping boost student reading comprehension

When I am complete with this study, I will share the results with you and the rest of the teachers that use Accelerated Reader. I feel that this study will be of significant value as a potential catalyst to data driven instruction. Thank you for considering my request.

Sincerely,

Samuel Smith

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