Effects of teachers' active role in Accelerated Reader with elementary students

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EFFECTS OF A TEACHER'S ACTIVE ROLE IN ACCELERATED READER
WITH ELEMENTARY STUDENTS

by

Sarah L. Lenko

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
Rowan University
May 13, 2005

Approved by
Professor

Date Approved May 13, 2005

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The purpose of this study, which took place in an elementary school and included seven first grade classes, eight second grade classes, and one autistic class as the sample ($n = 16$), was to determine the success of the Accelerated Reader (AR) program by examining the way in which teachers implemented the program and studying the relationship between that implementation and student success, as measured by the percent of student quizzes passed and the average book level read by the students in the class.

Three variables were researched and compared: the kind and amount of each participant's training with AR, the amount and the kind of reading motivation techniques that each participant used with their classes to encourage the use of AR, and each participant's attitude toward AR. The participants received surveys with instructions to complete and return them to the researcher's mailbox in the school's main office. Survey responses were recorded in tables and descriptively analyzed for their results. However, no correlations could be made between the variables studied and the degree of student success as recorded in the AR Management program.
DEDICATION

There are many people that I would like to thank for all of their help and support that brought me to this exciting milestone in my life. First, I want to thank Dr. Shontz for tirelessly reading and rereading this thesis, for calming me when I panicked, and for generally being a wonderful teacher and guide through the completion of my degree. Next, I want to thank my parents for their constant pride in my accomplishments and for always being my biggest cheerleaders as I worked on my “book reports.” Finally, and most importantly, I want to thank my husband, Jared. You dealt with night after night of leftovers, listened to me complain about how I’d never finish anything on time, encouraged me that I would, rejoiced with me when I did, and best of all, you prayed for me to have strength, patience, and endurance. Always know how much I love you.

I can do all things through Christ who gives me strength.

Philippians 4:13
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CHAPTER I

STATEMENT OF THE PROBLEM

Significance of the Topic

One of the most common and frustrating problems that elementary school teachers face is the student who hates or refuses to read. Most teachers believe that when a child is turned off by reading he/she misses out on the opportunity to learn more about the world in which they live, as well as the worlds and experiences of others (Gambrell, 1999). Mary Dixon (2003) identified three potential “stumbling blocks” that keep students from becoming skilled readers: the idea that written spellings represent spoken words, the failure to transfer listening comprehension skills to reading comprehension skills, and the absence or loss of a motivation to read. She believed that a child’s motivation to read was the most crucial obstacle to surpass.

With this in mind, it becomes imperative for teachers to find ways to motivate their students to read. Through the years, educators have tackled this dilemma on a daily basis by developing reading motivation programs that seek to improve a reluctant reader’s attitude and motivation toward reading. It may be through the use of such programs that teachers can overcome the stumbling block of motivation.

One reading motivation program that has continued to garner attention in the field of education is Accelerated Reader (AR), a computer-based program developed to electronically allow teachers to manage their students’ reading progress. The goal of AR, according to The Accelerated Reader Catalog, is to raise students’ motivation to read.
quality literature and help them become better readers (Persinger, 2001). Furthermore, the Accelerated Reader Program provides teachers with a large collection of titles toward which to guide their students in making reading selections as well as a means to monitor their students' successes and/or failures. When used correctly, teachers work with individual students to find books within their reading levels, or their Zone of Proximal Development (ZPD). By doing so, students find the most success with the Accelerated Reader Program. In this way, through the proper use and implementation of the AR program, teachers should, in theory, find a variety of ways to motivate their students toward reading success.

Both research reviewed and teacher testimonies showed that students generally liked the program and were eager to check out AR books. According to the Accelerated Reader website (Renaissance Learning, 2004), the program is used in over 60,000 schools, further demonstrating its popularity. Lynn Rogers (2003) stated that a computerized reading management program (such as AR) can be successful because "students enjoy using computers to take tests; they like the immediate feedback from computerized record keeping; they love to accumulate points (evidenced by the popularity of video games); and they seem interested in working toward realistic goals" (¶ 4).

This was one of many positive responses recorded about the AR program. Therefore, whether students are motivated by the thought of receiving recognition or are reading because they enjoy it, the argument stands that they are still reading. An article from October 2000 in Time magazine titled "The Cat in the Hat and All That" illustrated this idea. The article focused on a rural town in southern Georgia that claimed to have
read more books per capita than any other town in the United States. Despite an illiteracy rate of 30-40% of the population, the implementation of the Accelerated Reader Program in the school system encouraged both children and adults alike to read (and take AR quizzes for) what translated into roughly 1 million books (Lopez, 2000).

Purpose of the Study

Research has determined that in many elementary schools teachers used the Accelerated Reader Program as a reading motivation technique. In such a setting, students can choose from a marked collection of books, read them, and then take a computerized test to evaluate their comprehension of the book. Teachers can use the results of these tests for record keeping and as a measure of reading/comprehension progress. Additionally, while not noted as part of the AR program, teachers can develop reward systems to encourage student participation. The purpose of this study was to determine the success of the Accelerated Reader program by examining the way in which teachers implemented the program and studying the relationship between that implementation and student success, as measured by the percent of student quizzes passed and the average book level read by the students in the class.

Research Questions

The Accelerated Reader Program was in effect at C.J. Davenport Elementary School in Egg Harbor Township, New Jersey since the late 1990s. For the most part, the Accelerated Reader Program at C.J. Davenport Elementary School seemed to be a success. However, there was a need to determine under what conditions of teacher use this computer-based program was the most successful. This study determined if the degree of student success, as measured by the percent of student quizzes passed and the
average book level read by the students in the class, when using the Accelerated Reader Program was related to three selected factors:

1. What kinds and/or amounts of training in the Accelerated Reader program did teachers have?

2. In what ways did teachers motivate students to use the Accelerated Reader Program beyond set requirements?

3. What attitudes did teachers have toward the Accelerated Reader program?

4. Were there relationships between student success and these three variables listed (teacher training, motivational techniques, and teacher attitudes)?

Definition of Terms

For purposes of this study it is important to define some of the key terms that were used. These terms were divided between standard and operational definitions.

Standard Definitions

- **Accelerated Reader Program**: a learning information system that enables freestanding computer-assisted assessment of student comprehension of “real” books (Topping; 1999).

- **Elementary schools**: a school for the first four to eight years of a child’s formal education, often including kindergarten (*American Heritage Dictionary*); for purposes of this study, only first and second grade teachers were included.

- **Reading comprehension**: the act or fact of grasping the meaning, nature, or importance of; understanding (*American Heritage Dictionary*).

- **Student**: one under the direct supervision of a teacher or professor (*American Heritage Dictionary*).
Teacher: one who teaches, especially one hired to teach (American Heritage Dictionary).

Teacher training: to coach in or accustom to a mode of behavior or performance (American Heritage Dictionary), for purposes of this study, an in-service program provided to teachers that provides instruction in Accelerated Reader.

Zone of proximal development (ZPD): the level of (reading) practice that is challenging but not frustrating and leads to optimum growth (Renaissance Learning).

Operational Definitions

- Computer-based program: a program that uses a computer as the primary component of assessment.
- Reading motivation program: a technique that encourages students to read.

Assumptions and Limitations

Some assumptions were made for this research. One assumption was that reading is a good and necessary part of the elementary school student's curriculum, and therefore it is necessary to motivate students to read. Another assumption made was that most students did actually read the books for which they take the Accelerated Reader quizzes (as opposed to only looking at the pictures, or simply “skimming” the text). One final assumption was that the Accelerated Reader program was a good reading motivational tool and that teachers should somehow incorporate that program into their classroom instruction.

Some limitations existed over the course of this study. One limitation involved the logistics of the study. Since the research was only conducted at one elementary
school, the conclusions drawn from this study applied only to the population of students and teachers at C.J. Davenport Elementary School. Another limitation to the study was the close relationship between the researcher and the subjects. Since the research was conducted "in-house", the subjects might have had some reservations about giving candid responses to the survey.
Reference List


CHAPTER II
REVIEW OF THE LITERATURE
Teacher Training and Accelerated Reader

Computerized reading-management programs (like Accelerated Reader) got their start in the early 1980s when a school librarian wanted to know if kids were actually reading all of the books that they checked out. She and her instructional-designer husband collaborated to design the first computer program that could test students on a book that they read (Everhart, 1998). The Electronic Bookshelf was born and became a hit, and Accelerated Reader and other similar programs soon followed. The advantages of these programs were their ability to score tests, award points, and keep records of results, but as Nancy Everhart (1998) stated, “The success of a reading-management program lies not so much in the features of the software as in the commitment of the people running it” (¶ 22). In other words, Accelerated Reader may be a useful tool to help monitor student reading, but unless teachers implement it with its intended purposes, the program is under utilized.

Accelerated Reader is a powerful tool that must be used properly to be effective. The literature produced by Renaissance Learning itself advised schools to participate in professional development seminars when implementing the Accelerated Reader program. In a review by the Education Commission of the States (2000) steps for a successful implementation of the Accelerated Reader program were outlined. First, schools should participate in a comprehensive staff development seminar. It was recommended that
principals, school librarians, and all classroom teachers receive training in the
Accelerated Reader program. Next, another seminar was suggested about six months
after implementation of the program for either the entire staff or for a few key staff
members. Additionally, the program advised that a Reading Renaissance Coordinator be
designated to become the school’s “expert” in analyzing reports and troubleshooting.
Additional workshops, consultation, telephone and online support must also be available
throughout the use of the program. Finally, schools were encouraged to achieve the goal
of earning Renaissance Model Classroom status for each classroom or for the whole
school by using the Model Classroom Checklist as a standard for implementation of the
program.

Keith Topping (1999) further commented on the need for the Accelerated Reader
program to be properly implemented by trained teachers. Topping included in his list of
“general guidelines to good implementation” the need for all teachers to be trained in the
use of the program and that the criteria for the “Model Classroom” status be met. The
Model Classroom Checklist (see Appendix A) is a list of encouraged standards and
techniques that a teacher should use to correctly implement the Accelerated Reader
program. For the Model Classroom status to be met, teachers must be fully implementing
a majority of the 10 keys to success, and therefore utilizing the training and techniques
taught to them. For instance, a properly trained teacher understands that AR books are
organized by readability levels based on length and difficulty and that all students should
be reading within his/her zone of proximal development (ZPD). Furthermore, if a
properly trained teacher sees a student reading outside of his/her ZPD, they must
immediately intervene to find a book that is a suitable alternative. By implementing such
techniques (that come as a result of training), the status of Model Classroom can be awarded to individual classrooms or entire schools. Topping and Sanders (2000) found that teachers who had completed Reading Renaissance training were significantly more effective than their counterparts who had not. Additionally, their study found that Model-certified classrooms were also more effective than those classrooms that were not certified. In summary, Topping and Sanders concluded that:

Locating intelligent software in classrooms clearly does not guarantee it will be used intelligently, reinforcing the view that information technology is not a replacement for the professional teacher, but a tool to potentially enhance the effectiveness of teachers. Appropriate quality and quantity of training and support for teachers is needed if implementation integrity is to be sustained at the level necessary to raise student attainment (p. 331).

When comparing results from schools that used Accelerated Reader according to the Reading Renaissance training methods and those that did not, the numbers were significant. A study conducted in Georgia (Holmes & Brown, 2003) demonstrated the difference that Renaissance training could make. The study examined four schools: two schools which were designated “treatment schools,” meaning they were both using Reading Renaissance and had a faculty that had been trained in its methods; and two schools which were designated “contrast schools,” meaning they owned Accelerated Reader and appeared to use it, but had a faculty with little to no training by the company. While all four schools reported that the AR program was effective in helping to foster a greater love of reading in their students, the treatment schools outperformed the contrast schools on the results of standardized tests. In every comparison done involving
standardized test scores in reading and language arts, the treatment schools’ students outperformed the contrast schools’ students. Therefore, it was concluded that the Reading Renaissance teacher-training program was effective in raising the performance of these elementary school students.

Other articles built on these findings and cited examples of the importance of teacher training in the use of the Accelerated Reader program. One article, an editorial written by a teacher named Lynn Rogers, was in response to another article written by Steven Krashen. In her editorial, Rogers (2003) claimed that for a computerized reading management program (CRMP) such as Accelerated Reader to improve student skills in reading, both teachers and administrators responsible for the program must be trained in both its use and techniques (such as the need for students to be reading in his/her zone of proximal development). Rogers also stated that the use of a CRMP must be monitored to ensure that teachers were using it correctly. In another article, Suzanne Libra (2000) surveyed a group of librarians about the use of the Accelerated Reader program in their schools. The surveys indicated that librarians felt that AR can be an effective program and was most successful when it was properly and carefully implemented.

In another research article discussing the effects of reading comprehension and Accelerated Reader, Stacy Vollands, Keith Topping, and Ryka Evans (1999) discussed the intended teacher use of Accelerated Reader for more effective instruction. While discussing the amount of immediate and detailed feedback on reading performance that was available to the teacher through the use of the Accelerated Reader program, Vollands, et al., commented that teachers must generate only minimal effort to identify “at-risk” students and quickly intervene. However, they stated that all of this information
was insignificant if it was not acted upon. Therefore, teachers must be trained in how to
use the AR system to not only monitor student successes and/or failures, but to also
intervene when necessary and subsequently, to use the AR system to track the effects of
their intervention.

In a study conducted by Renaissance Learning (2003) that examined Guided
Independent Reading (GIR) as implemented in Reading Renaissance, researchers
discovered that teachers were the single most important factor in accelerating reading
growth of all students. Past research assumed that students who were good readers read
more books because their initial reading ability was higher than that of their peers.
However, in this study, the researchers found that if teachers were using the Reading
Renaissance techniques in which they were trained, it was the teachers themselves, who
determined how much reading their students did – not their initial reading ability. In
other words, in a classroom where the teacher was using the techniques taught by
Reading Renaissance, students with low reading ability would read almost the same
amount of time as students with high reading ability. Additionally, the study concluded
that high implementation of Reading Renaissance techniques, particularly in certified
"Model Classrooms," led to the greatest growth for all students. These findings are
particularly supportive of the need for teachers to be trained in the use of Accelerated
Reader and Reading Renaissance techniques.

In a related study by Sandholtz and Reilly (2004), the technical expectations and
professional development opportunities for teachers came into question. Statistics from a
survey by the National Center for Educational Statistics showed that while 99% of public
school teachers reported having access to computers in their schools and 84% reported
having at least one computer in their classroom, only 20% of those teachers reported feeling well prepared to use that technology in their classrooms. The results of this study showed that many teachers felt that the technical management issues related to computer software were too daunting, and they often chose not to use the technology at all. Many teachers believed that they needed to be technical “experts” to use computers in the classroom, and might go for years using computers in minor and insignificant roles. The conclusions of this research were that teachers should be trained in how to use technology to effectively supplement their instruction rather than asking teachers to understand how the technology works and what to do if it stops working. These results can be useful when developing Accelerated Reader training sessions in that teachers should be trained in how to effectively use the program with their students, rather than asking them to understand how every aspect of the program works.

Reading Motivation Techniques and Accelerated Reader

Students are motivated to read in a variety of different ways. For a teacher to best encourage a student to participate in the Accelerated Reader program, it is important that teachers become familiar with the different aspects of a student’s motivation to read. A study affiliated with the National Reading Research Center (Wigfield & McCann, 1996/1997) studied children’s motivations to read. Using the results of a questionnaire called the Motivations for Reading Questionnaire, the researchers defined 11 possible dimensions of reading motivation and concluded that these different dimensions related to the frequency with which children read. The study concluded that since the more intrinsic dimensions of reading motivation relate most strongly to a student’s reading frequency, teachers should cultivate those dimensions of reading using instructional
programs. Accelerated Reader could act as one of these instructional programs if the proper techniques were applied.

Another article from the National Reading Research Center (Sweet & Guthrie, 1996) further explored the idea of reading motivation and how it related to literacy development and instruction. The research for this article began by questioning students as to why they were reading a certain book. The students responded with eight different motivations for their reading: involvement (with the text), curiosity (about a subject), challenge (to read a complex story/plot), social interaction (with peers), compliance (to meet a requirement), recognition (of reaching a goal), competition (with peers), and work avoidance. Each of these motivators was characterized as intrinsic or extrinsic motivation, which play different roles in a student’s learning. Overall, extrinsic motivation tends to be temporary, while intrinsic motivation is sustained over the long term. However, there are places for both kinds of motivation in classrooms. Sweet and Guthrie concluded that the teacher using the Accelerated Reader program must seek to balance a student’s intrinsic and extrinsic motivations when leading them in choosing which books to read.

To further build on the crucial aspect of intrinsic motivation, it is important to note that intrinsically motivated readers undertake reading for reading’s sake, and also due to their own curiosity (Applegate & Applegate, 2004). Additionally, Applegate and Applegate reported higher amounts of student reading related to higher levels of achievement in reading, better performance on standardized reading tests, and higher grades in school. Therefore, they concluded, it was important that a teacher’s reading motivation techniques draw on intrinsic motivation as a key foundation of any program.
Marian Staton (1998), a veteran librarian and classroom teacher, realized the need to motivate readers using different techniques when she became an elementary school librarian. In her article, she emphasized the importance of both immediate and positive feedback about a student’s performance. The Accelerated Reader program provided both of these through the grade reports that were available to both teachers and students immediately after a student has finished taking a test. She also expressed the importance of emphasizing individual student successes and goals. When developing motivational activities involving Accelerated Reader, students should seek to attain an individual goal, rather than competing against other students toward one broad goal for everyone. In this way, every student could be successful while achieving at his/her own level.

Another librarian, Paula Yohe (1997), also found success using a computerized reading management program in her junior high school. At her school, she and her teachers found that literature and technology can co-exist, and the combination was a strong influence in reading motivation. They used both classroom and school wide incentives programs, and students were rewarded weekly for their reading achievements. As a result of their program, reading activity continued to rise, and at the time of the article, 700 eighth and ninth grade students averaged reading 10 books annually. While incentives were offered as a part of the program, Yohe reported that student attitudes and motivations to read did change for the better. One English teacher was quoted as saying, “It’s as if you’re not cool, if you’re not reading” (p. 32).

A study by Linda B. Gambrell (1996) further stressed the importance of creating a classroom environment where students were motivated to read. In her research, she discovered that when teachers were surveyed about their top priorities in regards to
reading, the majority of respondents identified “creating interest in reading” (p. 15) as the most important. Since reading motivation was identified as a top priority among teachers, Gambrell and her colleagues developed a study that would look at the implementation of a classroom-based motivation program that was designed to increase reading motivation in first grade students. The program, called “The Running Start program” (p. 17), formed some parallels to the Accelerated Reader program. Both programs were literature based, students were given the responsibility for deciding what, when, and how they read, and students were given opportunities to perform literacy activities. Since the two programs have some similarities, some of Gambrell’s results could also apply to the Accelerated Reader program. The results of Gambrell’s study suggested that the classroom-based program (The Running Start program) enhanced the reading motivation and behaviors of the elementary school students. Additionally, the results showed that students were more motivated to read, spent more time reading independently, engaged more frequently in discussions about books and stories with both family and friends, and took more books home to read. Finally, the results of the study looked at the impact of rewards on intrinsic motivation. Interviews with students who participated in The Running Start program demonstrated that rewards were desirable, but were not what the students liked the best about the program. More students mentioned “reading lots of good books” (p. 23) as a plus of the program, than those who discussed any of the incentives or extrinsic rewards received during the course of the program.

Finally, when looking specifically at research related more directly to reading motivation in conjunction with Accelerated Reader, the reviews remained mixed. One such research article concluded that students were not motivated to read by a “computer

However, students were motivated to read by their teachers, parents, librarians, friends, and relatives who read and discussed books with them. As a final point, Pavonetti, Brimmer, and Cipielewski concluded that based on data collected from their research, many districts, schools, and/or teachers have misused the Accelerated Reader system in regards to reading motivation. The Accelerated Reader program, designed to be used as a bookkeeping system, was often used as part of reading program that encouraged students to read for points that were part of their report card grades. According to the researchers, such an environment was not the type to create readers who enjoyed reading. It therefore becomes more and more important for teachers to be qualified to use the Accelerated Reader program in the approved manner.

**Teacher Attitude and Accelerated Reader**

The attitudes and behaviors that a teacher exhibits in their classroom are often a standard for the attitudes and behaviors found among the students in his/her class. Since teachers are influential to the ways in which students develop throughout the school year, a teacher’s personal views of both reading and the Accelerated Reader program may be more significant than either their training in the program or the reading motivational techniques that they use. Research has shown that teachers who were motivated, engaged readers modeled those behaviors in their classroom interactions, and therefore helped to create students who were motivated, engaged readers (Dreher, 2002).

Applegate & Applegate (2004) also commented on the influence of a teacher’s attitude on reading and its relation to students. They reported that, “because teachers…play a significant role in motivating children to read, a lukewarm or task-
oriented attitude toward reading can be problematic" (p. 556). One of the assumptions of their study was that the instruction and environment of a classroom was largely driven by the beliefs and the experiences of the teacher. However, if a teacher had no positive experiences with reading in his/her personal life, it can be assumed that they were unable or perhaps unwilling to promote reading for reading’s sake with their students.

Additionally, students need to physically see their teachers as readers, because in this way students “can see that an adult values reading enough that s/he regularly spends time engaging in reading and appears to enjoy it” (Morrison, Jacobs, & Swinyard, 1999, ¶ 3). Teachers must convey enthusiasm toward reading for their students to be become enthusiastic. Likewise, a teacher needs to model enthusiasm toward the Accelerated Reader program for their students to become enthusiastic toward it. If this were not accomplished, neither reading nor Accelerated Reader would thrive in a classroom environment.

Accelerated Reader is a literature-based program that encompasses many genres and periods of children’s literature. A student can take an AR quiz on “classics” such as The Adventures of Tom Sawyer or Gone With the Wind or on “new classics” such as Junie B. Jones and the Stupid Smelly Bus or The Adventures of Captain Underpants (Renaissance Learning, 2004). The periods of literature can span more than fifty years, but for teachers to be involved in the AR program, they need to be familiar with all kinds of these books. So the questions therefore arise: How can a teacher manage the Accelerated Reader program when they haven’t read the literature? How can a teacher encourage his/her student to read a book if they aren’t reading the books themselves?
Teachers must become readers of both children’s and adult literature so that they can adequately promote and support book choices that their students make. In a pilot program in Virginia called “Teachers as Readers” (Dillingofski, 1993), principals, teachers, and librarians met before or after school to read recommended books and participate in reading clubs. The results of this program produced a new interest and awareness of recent children’s authors and literature. One principal commented that, “Adults who are familiar with children’s books are more likely to introduce these books to children. Being familiar with these books helps teachers appreciate children’s literature more…” (p. 32). The more familiar teachers were with current (and past) children’s literature, the more able they were to make informed recommendations for each individual student.

Summary

The way in which the Accelerated Reader program was used and implemented varied from school to school. Some schools developed incentive programs for each classroom or as a school-wide project. Some schools had faculty and staff who were well trained in all aspects of the Reading Renaissance program while, others had faculties with limited experience and training. In some schools, the teachers who used the Accelerated Reader program were enthusiastic and eager to encourage their students to use it, while other teachers used the program only because they were required to do so. Research has shown that Accelerated Reader can be a worthwhile program if used and implemented correctly.

As a result of this literature review, it became apparent that there were both correct and incorrect ways to implement the Accelerated Reader program, and there were
varied responses (by both teachers and students) that can be seen as a result of this implementation. It is important to determine which (if any) of these three factors (teacher training, reading motivational techniques used, and teacher attitude) play the greatest role in creating a successful Accelerated Reader program.
Reference List


**Children’s Literature Cited**


CHAPTER III

METHODOLOGY

Overall Design and Justification

This study was conducted using survey research. It was determined that this specific type of research would be conducted because of the ease and the potential efficiency with which the research could be carried out. For example, as the research was performed at an elementary school using all of the first and second grade teachers as subjects, a mail survey in which forms can be placed in the participant’s mailboxes was the most potentially successful method with which to collect data. In a brochure published by the American Statistical Association (ASA) (1997) three main advantages emerge as reasons to conduct survey research for this particular study.

The first advantage listed by the ASA (1997) was that mail surveys are cost effective. Since very little manpower and time are needed to hand out envelopes, one person can easily conduct a mail survey. Secondly, mail surveys enabled one to target a very specific population. For the purposes of this survey, only first and second grade teachers who used the Accelerated Reader program were examined, and that was the specific population at this elementary school. Finally, the ASA claimed that some studies showed that mail surveys encourage more honest answers than other methods of interviewing. The anonymity of a mail survey may increase the credibility of the respondent’s answers.
Statement of Purpose and Research Questions

A review of the research determined that in many elementary schools teachers use the Accelerated Reader Program as a reading motivation technique. In such settings, students can choose from a marked collection of books, read them, and then take a computerized test to evaluate their comprehension of the book. Teachers can use the results of these tests for record keeping and as a measure of reading/comprehension progress. Additionally, while not noted as part of the AR program, teachers can develop reward systems to encourage student participation. The purpose of this study was to determine the success of the Accelerated Reader program by examining the ways in which teachers implement the program and studying the relationship between that implementation and student success, as measured by the percent of student quizzes passed and the average book level read by the students in the class.

The Accelerated Reader Program was in effect at C.J. Davenport Elementary School in Egg Harbor Township, New Jersey since the late 1990s. For the most part, the Accelerated Reader Program at C.J. Davenport Elementary School seemed to be a success. However, there was a need to determine under what conditions of teacher use of this computer-based program was the most successful. This study determined if the degree of student success, as measured by the percent of student quizzes passed and the average book level read by the students in the class, when using the Accelerated Reader Program was related to the following factors:

1. What kinds and/or amounts of training in the Accelerated Reader program did teachers have?
2. In what ways did teachers motivate students to use the Accelerated Reader Program beyond set requirements?

3. What attitudes did teachers have toward the Accelerated Reader program?

4. Were there relationships between student success and these three variables listed (teacher training, motivational techniques, and teacher attitudes)?

Population and Sample

This study took place in an elementary school in southern New Jersey. The grade levels included in the school building were 25 classrooms that include four half-day kindergartens, ten first grade classes, nine second grade classes, and two autistic classes. Since neither the kindergarten classes nor the kindergarten autistic class used the Accelerated Reader program, they were not included in the study. The remaining 20 classroom teachers were included as the sample for this research.

Methods of Data Collection and Instruments Used

The 20 classroom teachers chosen to participate in this study each received an envelope containing a copy of the cover letter (see Appendix B) and the survey (see Appendix C) in their mailboxes, which were located in the school’s main office. The teachers were instructed to complete their survey and return it in a sealed unmarked envelope directly to the researcher’s mailbox also in the school’s main office. This method of data collection helped to ensure anonymity of the participants. After the initial distribution of the surveys, there was a follow-up mailing to all participants one week later. Survey responses were recorded in tables and descriptively analyzed for their results.
The twenty surveys were coded using different graphics to determine the identity of the participants. This was necessary in order to compare the survey responses to the classroom statistical results that were obtained through the AR Management program. The reports obtained through the AR Management program were titled “Schoolwide Summary Report” and “Word Count Report.” These reports provided data on the percent of student quizzes passed and the average book level read by the students in the class. The report period for each was from September 1, 2004 through April 11, 2005.

Variables and Question Design

The purpose of this study was to determine the effect of three aspects of the teacher’s role in the use of the Accelerated Reader program. To examine this effect, a number of variables were researched and compared. First, it was important to determine and compare each participant’s training with the Accelerated Reader program. It was important to determine if the teacher received professional training or “on the job” training in the AR program. Survey question 1 directly addressed the amount and the kind of training that teachers had/had not received. The question asked participants to describe the kind of training (if any) they had received and their interest in participating in a training workshop if it were offered. Survey questions 8 and 9 also addressed the issue of training by asking participants about terms specific to the Accelerated Reader program. The assumption was that if a teacher had received formal training, he/she would be familiar with and able to employ specific AR terminology.

Second, it was also important to compare the amount and the kind of reading motivation techniques that each teacher participant used with their classes. It was important to ascertain if participants used some kind of an incentive program to
encourage their students to use AR. Eight of the fourteen survey questions addressed the type and amount of reading motivation techniques that the participants used in conjunction with the AR program in their classrooms. Question 2 asked participants to identify the way in which they used the AR reading program (i.e. supplemental, motivational, rewards, etc.). Survey questions 4 and 5 asked the participants to specify the number of days set aside on a weekly basis for students to do independent reading and take AR quizzes. Questions 6 and 7 concerned the number of days the teacher modeled reading behavior to their students by reading aloud to the class or reading a book on their own. Question 11 dealt with the kind of reading goals that teachers set for their students in relation to AR books, while question 12 asked about the type of reading motivational techniques that teachers used with AR. Finally, question 13 concentrated on the use of the TOPS (Three Opportunities to Praise Students) reports provided by the AR program. Accelerated Reader considers the way in which these reports are used as a built in motivational technique.

Finally, it was important to assess each participant’s attitude toward the Accelerated Reader program. It was important to note if the participants had positive or negative feelings toward AR and its use. Survey question 3 had participants list any difficulties that they had experienced with the AR program, the assumption being that problems with the technology, etc., may have created negative feelings toward the program itself. Question 10 addressed the level of confidence that teachers felt in guiding their students in choosing AR books, again, assuming that lower levels of confidence may also create negative attitudes. Lastly, question 14 focused solely on the
participants attitude toward the usefulness of the program overall. Teachers were asked to rate the level of usefulness of the program and then explain their reasoning.

Reliability and Validity

To ensure for reliability and validity the survey instrument was tested with a group of graduate library students from Rowan University, many of whom were practicing school library media specialists. As a result of the pretest, a few changes were made to the survey. In question 1, part a, pretest participants advised that it would be important to not only find out when and who provided formal training in Accelerated Reader, but to also know how that training was conducted (i.e. hands-on workshop vs. oral directions, etc.). The wording of this question was changed to read “If yes, when, how was it conducted, and by whom?” Also as a result of the pretest the wording was changed for question 6. The question originally read, “Do you read out loud for your students?” The pretest participants advised that “out loud” be changed to “aloud” and “for” be changed to “to”.
CHAPTER IV
ANALYSIS OF DATA

Procedures and Methods Used

This study took place in one elementary school in southern New Jersey. The grade levels included in the school building were 25 classrooms that included four half-day kindergartens, ten first grade classes, nine second grade classes, and two autistic classes. Since neither the kindergarten classes nor the kindergarten autistic class used the Accelerated Reader (AR) program, they were not included in the study. The remaining 20 classroom teachers were included as the sample for this research.

The 20 classroom teachers chosen to participate in this study each received an envelope containing a copy of the cover letter (see Appendix B) and the survey (see Appendix C) in their mailboxes, which were located in the school’s main office. The teachers were instructed to complete the survey and return it in a sealed unmarked envelope directly to the researcher’s mailbox, also in the school’s main office. This method of data collection helped to ensure anonymity of the participants.

The initial distribution of the surveys yielded a response of 10 out of the 20 returned, or 50% participation. At the end of that week, an e-mail (see Appendix D) was sent to all participants thanking those who had returned their surveys promptly and reminding those who had not, to do so as soon as possible. At the beginning of the next week, there was a follow-up distribution to all participants. This second distribution of
the surveys produced 6 more responses bringing the total number of returned surveys to 16 out of 20, or 80% participation among the survey sample.

Among this group of 16 participants, all 16 teachers answered every question of the survey. The only exception was the first survey question. The first question of the survey asked participants to answer with a yes or no and then directed them to two different sub-questions that began with, “If yes...” and “If no...” Therefore, the participants responded to the two sub-questions according to the answer given in the first part of that question.

Variables Studied

The purpose of this study was to determine the effect of three aspects of the teacher’s role in the use of the Accelerated Reader program. First, it was important to determine and compare each teacher participant’s training with the Accelerated Reader program to determine if the teacher received professional training or “on the job” training in the AR program. Second, it was also important to compare the amount and the kind of reading motivation techniques that each teacher participant used with their classes to ascertain if participants used an incentive program to encourage their students to use AR. Third, it was important to assess each participant’s attitude toward the Accelerated Reader program to note if the participants had positive or negative feelings toward AR and its use. Finally, to determine the relationship between these variables and student success, the percent of student quizzes passed and the average book level read by the students in the class was also measured.
Presentation of Results

Research Question 1

Research question 1 dealt with the amount and the kind of training that each teacher had/had not received. The first survey question asked participants to describe the kind of training (if any) they had received and their interest in participating in a training workshop if it were offered. The results of this question showed that only 6 out of 16 participants (38%) had received any kind of formal training in Accelerated Reader (AR). The six participants who had received training all responded that the school’s Reading Specialist had trained them during an in-service training/workshop. Of the ten participants who had not received formal training, six stated that they would participate in an AR training workshop if it were offered. They responded that they were interested in learning “more about AR Management,” “how to use and create the reports,” and “any useful information besides the basic testing information.”

Survey questions 8 and 9 also addressed the issue of training by asking participants about terms specific to the Accelerated Reader program. The assumption was that if a teacher had received formal training, he/she would be familiar with and able to employ specific AR terminology. Survey question 8 dealt with the use of Diagnostic Reports as part of the AR Management program. The majority of the participants, 12 out of the 16 (75%), responded that they did use AR Management to check their students’ Diagnostic Reports, 3 out of 16 (19%) responded that they were not familiar with the term “Diagnostic Reports,” and one participant responded that they did not use the AR Management program to check Diagnostic Reports. Survey question 9 dealt with the use of the AR Management program to check the students’ Zone of Proximal Development.
(ZPD). In this question, the results were very diverse. The majority of the participants, exactly half, 8 out of 16 (50%), responded that they did not use AR Management to check students’ ZPD, 6 out of 16 (38%) were not familiar with the term “Zone of Proximal Development”, and only 2 of the 16 (13%) participants used AR Management to check their students’ ZPD.

Research Question 2

The second research question dealt with comparing the amount and the kind of reading motivation techniques that each teacher used with their classes. It was important to ascertain if participants used some kind of an incentive program to encourage their students to use AR. To this end, eight of the fourteen survey questions addressed the type and amount of reading motivation techniques that the participants used in conjunction with the AR program in their classrooms.

Survey question 2 asked participants to identify all of the ways in which they used the AR reading program in their individual classrooms. Figure 1 shows the frequency of each type of use in the participants’ classrooms:

Figure 1: Accelerated Reader Uses
The results in Figure 1 show that 13 out of 16 (81%) participants used AR as supplemental reading, 12 out of 16 (75%) used AR as a form of motivational reading, challenging reading, and/or free choice reading, 10 out of 16 (63%) used AR for classroom recognition, 6 out of 16 (38%) used AR for classroom rewards, 4 out of 16 (25%) used AR for part of a reading grade, and only 1 out of 16 (6%) used AR only as part of a school-wide program.

Survey question 4 asked the participants to specify the amount of days set aside on a weekly basis for students to take AR quizzes. Figure 2 compares the participants’ responses:

Figure 2: Amount of Days Set Aside for Taking AR Quizzes

Figure 2 shows that the majority of the participants, 9 out of 16 (57%) set aside 1-2 days a week for their students to take AR quizzes, 5 out of 16 (31%) of the participants gave their students time daily to take AR quizzes, and 1 out of 16 (6%) of the participants each allocated either 3-4 days a week, or less than 1 day a week to take AR quizzes.

Survey question 5 asked the participants to specify the amount of days set aside on a weekly basis for students to do any independent reading. Figure 3 compares the participants’ responses:
Figure 3 shows that the majority of the participants, 9 out of 16 (56%) allowed time daily for their students to perform independent reading. Additionally, 3 out of 16 (19%) of the participants each allowed either 3-4 days a week or 1-2 days a week for independent reading, and only 1 out of 16 (6%) allowed for less than one day of independent reading in a given week.

Questions 6 and 7 concerned the amount of days per week the teacher modeled reading behavior to their students by reading aloud to the class or reading a book on their own. Figure 4 shows the frequency with which participants read out loud to their students:
Figure 4 shows that the majority of the participants, 11 out of 16 (67%) read out loud to their students on a daily basis. Another 3 out of 16 participants (20%) read out loud to their students 3-4 days a week, and 2 out of 16 (13%) read out loud to their students 1-2 days a week. However, when asked in question 7 if participants ever read a personal book in class, the overwhelming majority of 13 out of 16 (81%) answered no, and only 3 out of 16 (19%) answered yes.

Question 11 dealt with the kind of reading goals that teachers set for their students in relation to AR books. The majority of the participants, 11 out of 16 (69%) answered that they did set reading goals for their students. When asked to describe these goals, the responses were quite diverse. Some participants described goals related to the school-wide AR program, while others had very specific goals that were used in their individual classrooms. Two different participants described the use of a "star chart" in the hallway where students received a star sticker for scoring 80% or higher on a quiz. Another participant had the goal of receiving an 80% or higher for the score to even count. Two other participants set goals for the number of AR books their students were required to read on a weekly basis, while yet another participant set point goals for the year for students to earn pizza/ice cream parties.

In question 12, participants were asked about the types of reading motivational techniques that they used with AR. Responses to this question were almost evenly split. Seven out of the 16 participants (44%) said that they did use reading motivational techniques, while 9 out of 16 (56%) said that they did not. When asked to describe these techniques, two different participants described oral motivational techniques, such as announcing students who had earned a 100% or by reminding the students of their
classroom versus school wide goals. Three other participants explained their use of sticker charts on the walls of the classroom or the hallway. Still two others described rewards/classroom coupons that were earned either weekly or at the end of each marking period.

Lastly, survey question 13 concentrated on the use of the TOPS (Three Opportunities to Praise Students) reports provided by the AR program. Accelerated Reader considers the way in which these reports are used as a built-in motivational technique. Overall, the majority of participants, 13 out of 16 (81%), also used the TOPS reports in some way as designated by AR. When asked to describe the way in which these reports were used, five teachers said they sent the reports home for parents to see, and two of those five asked for parents to sign and return the reports. Others explained that these reports gave them the opportunity to analyze each student’s progress, their success in regards to the book levels that were read, and the ability for teachers to make modifications where needed. Only one respondent stated using the results of the TOPS report as part of their students’ reading grades.

**Research Question 3**

The third research question dealt with assessing each participant’s attitude toward the Accelerated Reader program. It was important to note if the participants had positive or negative feelings toward AR and its use. In survey question 3 participants were able to choose more than one from a list of difficulties that they had experienced with the AR program, the assumption being that problems with the technology, etc., may have created negative feelings toward the program itself. Figure 5 demonstrates the types of difficulties that participants stated they had with Accelerated Reader:
By looking at the responses on Figure 5, it was evident that the most pronounced difficulty that participants experienced with the AR program was the lack of access to computers. The majority of respondents, 9 out of 16 (56%), stated that there was not enough computer access for their students to effectively use the AR program. The second greatest percentage of respondents, 4 out of 16 (25%), stated that technical problems with the software/hardware led to the most difficulties with the use of the program. The remaining difficulties listed by 1 out of 16 participants each accounted for 6% of the respondents: not enough AR quizzes, not enough AR books in the library, and one respondent who wrote that she was “unable to access the voice mechanism which reads the test to students who have difficulty reading.” A total of 2 out of 16 (13%) of the respondents stated that they have no difficulties using the AR program.

Survey question 10 addressed the level of confidence that teachers felt when guiding their students in choosing AR books, again, assuming that lower levels of
confidence may be the result of negative attitudes. Figure 6 demonstrates the teachers’ confidence levels:

Figure 6: Teacher Confidence Levels in Guiding Students to Select AR Books

Figure 6 shows that the overwhelming majority of participants (100%) expressed at least some confidence in their ability to guide their students in selecting appropriate AR books. None of the participants felt unsure of themselves when guiding students to books, 8 out of 16 (50%) of the participants felt somewhat confident, and another 8 out of 16 (50%) felt very confident in their ability to direct their students toward appropriate AR book choices.

Question 14 focused solely on the participants’ attitude toward the usefulness of the program overall. Teachers were asked to rate the level of usefulness of the program and then explain their reasoning. Figure 7 shows the respondents’ attitudes toward the overall usefulness of the AR program:
Figure 7: Teacher Attitudes Toward the Usefulness of AR

Figure 7 again shows that the overwhelming majority of participants (100%) felt that Accelerated Reader was at least a somewhat useful program in their school. None of the participants responded that AR was of no use, 13 out of 16 (81%) of the respondents felt that AR was very useful, and the remaining 3 out of 16 (19%) of the respondents felt that AR was somewhat useful. When asked to explain their responses, everyone wrote positive statements. Some of these responses talked about how the program motivated their students to read more. One said, “The program...is very motivating for the children. They constantly want to read and take quizzes.” Another said, “The kids really enjoy using the computer to begin with. This program motivates them to read more so they can use the computer.” Other respondents talked about how the program tested the students’ comprehension. One said, “(AR) helps to show who has comprehension problems with what they read.” Another stated, “I love the way it aids in comprehension. We talk a lot about details in a story and this is another way to enforce this skill.” Still
another said, “... (AR) allows the teacher to gain knowledge of how each child understands what they've read.” Still other respondents commented on how the program raised the students’ self esteem. One teacher said, “(AR) gives them a sense of accomplishment on the tests.” Another said, “(AR) definitely pumps up students’ confidence.” Yet another stated, “(AR) gives them a chance to be independent. It also gives them a chance to successful.” One final teacher said that with AR, “the students love...the challenge.” Finally, to sum up the feelings of the group, one respondent simply stated, “Love it!” Overall, the participant response toward the Accelerated Reader program appeared to be very positive.

Research Question 4

Finally, the fourth research question dealt with the relationship between student success and the three variables researched in the surveys (teacher training, motivational techniques used, and teacher attitudes). In order to find correlations, if any, among these three variables, as determined through the survey responses, to individual classroom results, the AR Management program was used to print classroom reports. The reports obtained through the AR Management program were titled “Schoolwide Summary Report” and “Word Count Report.” These reports provided data on the percent of student quizzes passed and the average book level of the students in the class. The report period for each was from September 1, 2004 through April 11, 2005.

To best demonstrate comparisons between the variables and student success, five individual categories were compared. Table 1 shows the results for each category: the percentage of AR quizzes passed per class, the average book level read by the class, whether or not the classroom teacher received formal training in Accelerated Reader,
whether or not the classroom teacher allowed his/her students more than three days a week to take AR quizzes, and whether or not the teacher considered AR very useful:

Table 1: Results by Category

<table>
<thead>
<tr>
<th>Teacher/Grade Level</th>
<th>% of Quizzes Passed (60% or better)</th>
<th>Average Book Level</th>
<th>Formal Training Received? Y/N</th>
<th>More than 3 days allowed taking AR Quizzes? Y/N</th>
<th>Teacher considers AR Very Useful? Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A/2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>92%</td>
<td>2.7</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>2A/1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>98%</td>
<td>1.7</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>3A/*</td>
<td>100%*</td>
<td>2.4</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>4A/1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>96%</td>
<td>1.7</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>5A/2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>82%</td>
<td>2.4</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>1B/2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>85%</td>
<td>2.5</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>2B/2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>99%</td>
<td>2.7</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>3B/1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>96%</td>
<td>1.0</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>1C/1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>89%</td>
<td>1.7</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>2C/1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>98%</td>
<td>1.8</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>3C/1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>99%</td>
<td>1.8</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>4C/1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>84%</td>
<td>1.7</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>1D/2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>92%</td>
<td>2.9</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>2D/2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>96%</td>
<td>2.9</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>3D/2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>91%</td>
<td>2.6</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
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<td>90%</td>
<td>2.8</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>

* classroom 3A is a multi-age autistic class and only 3 quizzes were recorded
Table 1 shows that all of the classes had at least 80% of their students pass the AR quizzes with a score of 60% or better. Additionally, 12 of the 16 classes (75%) had 90% of their students pass the AR quizzes with a score of 60% or better. In terms of the average book levels of the classes, 6 out of 7 (86%) first grade classes read on-level, scoring at least 1.7 (first grade, seventh month) or over, and 2 of those 6 (33%) read above level at 1.8 (first grade, eight month). The average book levels of the second grade classes showed that 5 out of 9 (56%) read on level, scoring at least 2.7 (second grade, seventh month) or over, and for 3 of those 5 (60%) one read above level at 2.8 (second grade, eight month) and two read at 2.9 (second grade, ninth month). Among the additional classes, 4 out of 9 (44%) read below level. One class had an average book level of 2.6 (second grade, sixth month), one had an average book level of 2.5 (second grade, fifth month), and two classes had an average book level of 2.4 (second grade, fourth month).

In terms of the variables, six different types emerged: 1. teachers who had received training, allowed more than three days for AR, and considered AR very useful, 2. teachers who had not received training, allowed more than three days for AR, and considered AR very useful, 3. teachers who did not receive training, allowed less than three days for AR, and considered AR very useful, 4. teachers who had received training, allowed less than three days for AR, and considered AR very useful, 5. teachers who had not received training, allowed more than three days for AR, and considered AR only somewhat useful, and 6. teachers who did receive training, allowed less than three days for AR, and considered AR only somewhat useful. One out of the 16 (6%) participants fit into the fifth category, 2 out of the 16 (12.5%) participants each fit into the first,
fourth, and sixth categories, and 3 out of the 16 (19%) participants fit into the second
category. Finally, the largest percentage of participants (37.5% or 6 out of the 16) fit into
the third category.

Summary

In general, both the response rate of the participants and the attitudes expressed
through the surveys was positive. Eighty percent of the survey population participated in
the research, and taken as a whole, the group conveyed very positive feelings toward the
use of the Accelerated Reader program at C.J. Davenport Elementary School. It would
appear that for the teachers, Accelerated Reader was both a useful and a successful
method of reading motivation for elementary students. To make a final determination on
the success of the program at C.J. Davenport Elementary School, it was necessary to
analyze the student’s accomplishments in terms of the percent of student quizzes passed
and the average book level read by the students in the class while using the Accelerated
Reader program with the results from the teacher surveys.
CHAPTER V
SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to determine the success of the Accelerated Reader (AR) program by examining the way in which teachers implemented the program and studying the relationship between that implementation and student success, as measured by the percent of student quizzes passed and the average book level read by the students in the class. In an effort to examine this relationship, three variables were researched and compared with the degree of student success, as measured by the percent of student quizzes passed and the average book level read by the students in the class. First, it was important to determine each participant's training with the AR program. Second, it was necessary to compare the amount and the kind of reading motivation techniques that each participant used with their classes to encourage the use of AR. Finally, it was important to assess each participant's attitude toward the AR program to note if they had positive or negative feelings toward AR and its use.

Results

The results of the surveys showed that the majority of teachers at C.J. Davenport Elementary School did not receive formal training in the use of the Accelerated Reader program. Only 6 out of 16 participants (38%) had received any kind of formal training in Accelerated Reader, all of whom were trained by the school's Reading Specialist during
an in-service program. None of the other ten participants had been trained to use the AR program or any of its components (i.e. AR Management, Diagnostic Reports, etc.). There were only 20 first and second grade teachers in the school, so therefore; at least half of the teachers had no training in the correct methods for using Accelerated Reader (as stated by Renaissance Learning).

It is interesting to see then, that 12 of the 16 participants do profess to use the AR Management program to check their students’ Diagnostic Reports, even though half of those respondents had never been trained to do so. Additionally, 14 out of the 16 respondents admit to either not checking their students’ Zone of Proximal Development (ZPD), or not being familiar with the term. Only 2 of the respondents were aware of and checked their students’ ZPD. This low number is somewhat disconcerting when taking into account the idea of the “Model Classroom” as encouraged by Renaissance Learning. According to Keith Topping (1999), for the Model Classroom status to be met, teachers must be fully implementing a majority of 10 keys to success. For instance, a properly trained teacher understands that AR books are organized by readability levels based on length and difficulty and that all students should be reading within his/her Zone of Proximal Development (ZPD). Furthermore, if a properly trained teacher sees a student reading outside of his/her ZPD, they must immediately intervene to find a book that is a suitable alternative. For the participants in this study, such a notion is impossible as the majority is neither aware of nor trained in the use and function of ZPD.

When examining the ways in which AR was used in each participant’s classroom, a number of uses were recorded. The responses showed that 13 out of 16 participants used AR as supplemental reading, 12 out of 16 used AR as a form of motivational
reading, challenging reading, and/or free choice reading, 10 out of 16 used AR for classroom recognition, 6 out of 16 used AR for classroom rewards, 4 out of 16 used AR for part of a reading grade, and only 1 out of 16 used AR only as part of a school-wide program (however, this response came from the teacher in the autistic classroom where many of the students are performing below a first grade reading level). By examining this list of uses, it was evident that many of the teachers used the AR system as either a motivational, supplemental, challenging, or free-choice reading activity. It could be said that these types of uses promote an intrinsic motivation to read, as recommended by Applegate & Applegate (2004). When students have the free choice to read AR books as supplemental or challenging reading, they are reading to satisfy their own curiosity or simply for reading’s sake.

However, many of the same participants also used AR for classroom recognition and/or rewards, and four of the teachers even used AR scores as part of their students’ reading grade. These types of uses unquestionably promote an extrinsic motivation to read. According to research by Pavonetti, Brimmer, & Cipielewski (2002/2003), many teachers misused AR as part of a reading program that encouraged students to read for points that were part of their report card grades. According to the researchers, such an environment was not the type to create readers who enjoyed reading. It is this type of environment that teachers should seek to avoid when using AR.

Additionally, teachers were asked to describe the kinds of goals that they set for their students in relation to AR. More than half of the participants (69%) described goals that they set for the students in their classrooms. The goals were either part of a school wide reading goal or an individual classroom-reading goal, but often involved the
quantity of books that each student was required to read, or the quality of the score that each student was required to earn. These goals could again be attributing to an extrinsic motivation for the students to read.

When examining the amount of time per week that the teachers allowed their students' to participate in Accelerated Reader activities (i.e. taking quizzes, reading independently), it appeared that three days or more was allotted per week by the majority of the participants. Additionally, more than half of the participants (67%) reserved time daily to read out loud to their students'. The only area that was lacking was whether the teacher modeled pleasure reading to his/her students. Only three teachers responded that they ever read a personal book in front of their students. Teachers also need to model their enjoyment of reading for the idea to instill itself in the lives of their students.

In terms of difficulties that participants experienced with the AR program, the most pronounced was the lack of access to computers. Fifty-six percent of respondents stated that there was not enough computer access for their students to effectively use the AR program. As lack of computer access had nothing to do with the use of AR itself, it should be assumed that such a problem would not turn teachers off to the use of AR. However, many teachers did associate the two. The second greatest percentage of respondents, 25%, stated that technical problems with the software/hardware led to the most difficulties with the use of the program. Teachers who had not received training in AR would likely be more apt to experience problems with the software, as they had not been trained to troubleshoot. The remaining difficulties listed by 1 out of 16 participants each accounted for 6% of the respondents: not enough AR quizzes, not enough AR books in the library, and one respondent who wrote that she was "unable to access the
voice mechanism which reads the test to students who have difficulty reading.” Again, the first two difficulties should not be directly associated with the use of the AR program, but with those responsible for purchasing the equipment. Nevertheless, many teachers associate and form relationships between the two. The comment that was written about the voice tests that are available for AR quizzes is a function that was not currently installed on the systems at C.J. Davenport School. Finally, 13% of the respondents claimed that they had no difficulties using the AR program.

When looking at the teachers’ confidence levels when using the AR program, all respondents expressed high levels of confidence in their ability to use the AR program. In fact, the results were evenly divided between those who were very confident and those who were somewhat confident in using AR. None of the participants expressed any doubt in their abilities to use the program, despite the fact that many were untrained in its design and functions.

Finally, when examining the degree of student success from Table 1, two kinds of relationships were evaluated. First, the relationship between the highest percent of quizzes passed and the three variables was compared. Two classes had 99% of their students pass the AR quizzes and two classes had 98% of their students pass the AR quizzes. However, no real relationships were evident among the four classes. In one of the classes who had a 99% quiz rating, the teacher had not received AR training or allowed more than 3 days a week to take AR, but considered the program very useful. In the other class with a 99% quiz rating, the teacher had received training, but did not allow more than 3 days a week to take AR and considered the program only somewhat useful.
Within the two classes who had a 98% quiz rating, both teachers allowed more than 3 days to take AR quizzes, but the other variables all differed.

The second relationship that was compared was the average book level of the class and the three survey variables. The highest average book level earned by two first grade classes was a 1.8 (first grade, eight month). A relationship did emerge among these classes: both of the teachers had been formally trained in AR. The conclusion could be made that it was important for the first grade teachers to receive training in AR since these teachers were most likely the first to introduce the program to the students. The highest average book level earned by two second grade classes was a 2.9 (second grade, ninth month). A relationship also existed between these classes: both of the teachers considered AR to be very useful. The conclusion could be made that it was important for second grade teachers to have a positive attitude toward the AR program so that their students would continue to use AR themselves.

Recommendations for Further Study

One of the limitations to this research involved the logistics and the size of the study. Since the research was only conducted at one elementary school, the conclusions drawn from this study applied only to the population of students and teachers at C.J. Davenport Elementary School. To further examine the success of the Accelerated Reader program in the Egg Harbor Township school system, similar studies could be conducted at the other schools within the district to compare with and support the results of this study. It would also be valuable to perform a similar study in schools that used the Model Classroom Checklist to compare the teacher’s efforts to the students’ success.
Reference List


Model Classroom Checklist

Educator ____________________________ Grade(s) ____________

School ______________________________

How to Use This Checklist

To certify as a Reading Renaissance Model Classroom, you must be fully implementing a majority of the 10 keys to success listed below. Under each of the 10 keys, you’ll find several techniques. Check each of the techniques you are using in your classroom. If you are implementing all of the techniques underneath the main key, it is fully implemented. If you are implementing only some of the techniques, it is partially implemented. For more detailed information about the strategies listed, refer to our Getting Started With Accelerated Reader and Reading Renaissance book or Reading Renaissance seminar workbooks.

GET STARTED

1. Understand Accelerated Reader.
   Ensure that you and students understand the process of selecting appropriate books and taking the Reading Practice Quizzes.
   - Know how to use book (readability) levels and interest levels in book selection. Understand that AR book levels indicate the difficulty of text and interest levels (for lower, middle, and upper grades) relate to the book’s content.
   - Understand that points are a measure of reading practice. Point values are based on book length and difficulty, and the amount of points earned depends on how well students comprehend their reading and score on the practice quizzes.

2. Schedule time for reading practice.
   Reading practice is essential for student reading growth.
   - Schedule daily in-school reading practice.
     - 30-50 min. for emergent readers in the primary grades
     - 60 min. for elementary grades and for all students below grade level
     - 45 min. for middle school (6th-8th)
     - 30 min. for high school (9th-12th)
   - Use a mix of reading practice (Read To, Read With, and Read Independently) with students of all grades and ability levels.
   - Provide students with daily access to computers on which to take Reading Practice Quizzes.
   - Use power lessons to help find the time for reading practice.
   - Use volunteers to help with Read To and Read With practice, and with quizzing.
3. Find the zone of proximal development (ZPD).
A student's ZPD represents a level of difficulty that is neither too hard nor too easy, and is the level at which optimal learning takes place.

- Identify each student's ZPD using past performance, tested GE scores and the Goal-Setting Chart, or your professional judgment.
- Monitor students' AR Reading Practice Quiz results to make sure students are maintaining an average percent correct of 85 or above.
- Use different ZPDs for different kinds of reading practice. For Read To and Read With practice, students usually can read more difficult books than they can read independently.
- Make sure students know their ZPDs and use them to select appropriate books.
- Supply adequate books and quizzes.
- Make it easy for students to locate books in their ZPD ranges by labeling books with book levels and providing book lists.

MONITOR PROGRESS
4. Use the student reading log.
On student reading logs, students record their ZPD range, the name of the book they are reading, its readability level and point value, the number of pages read each day, and when they finish the book, their score on the AR Reading Practice Quiz.

- Use the simplified primary student reading log for emergent and younger readers, and the student reading log for independent readers.
- Use the log as a "ticket" to take a quiz—students can't take a quiz unless you see the book listed on the log.

5. Take Status of the Class daily.
During reading practice time, go around the room, speak briefly with each student, and check student reading logs. Each conversation should last about 30 seconds to a minute.

- Review the student reading log.
- If a student has just started a new book, check to see if its readability level is within her ZPD and if its length is appropriate.
- If a student is partway through a book, have a short conversation about its content.
- If you have given a power lesson, check to see that students are able to apply the skill you've taught.
- If you notice that the student is struggling, arrange a conference to intervene.
- Initial the student reading log.
6. Check the TOPS Report immediately.
We recommend that you print a TOPS Report after each quiz taken. It shows information about the quiz that the student just took and cumulative data for the marking period and school year.

☐ Instruct your students to show the TOPS Report to you immediately after they take a quiz.
☐ Give praise and offer guidance when you check the TOPS Report.
☐ Send TOPS Reports home with students.

7. Review the Diagnostic Report weekly.
The Diagnostic Report summarizes significant information about every student in your class (number of quizzes passed and taken, percent correct, points earned, average book level) so that you can monitor progress.

☐ Check for students with at-risk codes (A-F codes on the Diagnostic Report) so you can plan intervention. (Model Classroom criteria require that no more than 10 percent of students in a class are at risk.) Check for students with the % code, which indicates average percent correct below 85 on quizzes. (Model Classroom criteria require that no more than 10 percent of students in a class have an average percent correct less than 85.)
☐ Use the Student Record Report when needed to review student reading and diagnose individual student problems.
☐ Check the TWI Report weekly if your students are engaged in more than one type of reading practice—Read To, Read With, or Reading Independently. For established readers at least 80 percent of points should come from independent practice.

SET GOALS, DIAGNOSE, AND INTERVENE
8. Guide reading practice so students average 85 percent or above.

☐ Look for TOPS Reports with a quiz score of less than 80 percent or an average percent correct below 85. Direct these students to try shorter books or lower-level books.
☐ For students consistently averaging high scores on quizzes, and need additional challenge, help them select books with higher readability levels or that are longer.
☐ When you raise book-level goals, keep point expectations the same to start so the student will feel more comfortable taking on a challenging book.
☐ Adjust goals you feel are too challenging or too easy for students.
☐ Intervene with students who are struggling. Try some of the following techniques: Add Read With practice; take an active role in helping the student find appropriate books; involve students in book discussion groups; emphasize motivational techniques for meeting personal goals; and make sure the library has enough books and quizzes to match your students’ needs.
9. **Set student reading goals.**

Goal setting is highly motivating for students. It individualizes reading practice, encourages self-directed learning, and results in greater skill development.

- Set individualized goals with every student. Work with students to set challenging, yet achievable goals.
- Set goals for minimum average percent correct on quizzes, points, book level, and reader certification levels, and any other area you feel is appropriate.
- Use the Student Reading Plan and Goal-Setting Chart to help set goals.
- Base goals on whether the student needs to experience success or challenge.

**KEEP GOING**

10. **Create a system of motivators.**

Motivated students are students who have successful and rewarding encounters with books.

- Have students practice within their zone of proximal development.
- Allow students to select their own books.
- Provide immediate feedback.
- Set goals.
- Recognize students who meet their goals.
- Employ other motivational techniques as needed: Reading Wall of Fame, cooperative reading teams, book discussions, reading aloud to students, book voting, Family Reading Night. (See *Great Ways to Motivate Students to Read* for more details and ideas.)

Comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
APPENDIX B

COVER LETTER
Dear Teacher,

You are invited to participate in a study conducted by Sarah Lenko, candidate for Master of Arts in Library Science at Rowan University. I am conducting a study related to Accelerated Reader pertaining to my Thesis course at Rowan University.

If you decide to participate in the study, please answer the included survey questions. The questionnaire should not take long to answer. **Please return your completed questionnaire in the included envelope (sealed and unmarked) to my mailbox in the school’s main office. Please DO NOT return your questionnaire directly to me or to the library to maintain anonymity among participants.**

Your name will not appear on any form or in the final report. Additionally, as the survey does not ask you to give your name, no data will be personally identified with you. Participation is completely voluntary, and there are no risks beyond the inconvenience of time. With that said, I would greatly appreciate your participation in this survey.

If at any time you have questions about the study you may contact my advisor, Dr. Marilyn Shontz, at 856-256-4500 x3858 or shontz@rowan.edu. If you would like a copy of the final report, results will be available in the library after April 1, 2005.

Thank you in advance for your participation,

Sarah Lenko
Davenport School Media Specialist
609-645-3550 x1390
lenkos@eht.k12.nj.us
APPENDIX C

SURVEY
Accelerated Reader (AR) Survey

1. Did you receive formal training in Accelerated Reader (AR)?  Yes  No
   If yes, when, how was it conducted, and by whom? ____________________________________________
   If no, would you participate in an AR training workshop if it were offered?  Yes  No
   What would you want to learn about AR? ______________________________________________________

2. How do you use AR in your classroom? (check all that apply)
   ___ supplemental reading  ___ part of a reading grade
   ___ motivational reading  ___ free choice reading
   ___ challenging reading  ___ classroom recognition
   ___ only as part of a school-wide program  ___ classroom rewards
   Other ____________________________________________

3. What difficulties do you have with AR? (check all that apply)
   ___ not enough computer access  ___ not enough AR books in library
   ___ not enough AR quizzes  ___ technical problems with software or hardware
   ___ I don’t have difficulties with AR  Other ____________________________________________

4. How often do you set aside time for your students to take AR quizzes?
   (circle one) daily  3-4 days a week  1-2 days a week  less than 1 day a week

5. How often do you set aside time for your students to do any independent reading?
   (circle one) daily  3-4 days a week  1-2 days a week  less than 1 day a week

6. Do you read aloud to your students?  Yes  No
   If yes, how often? ____________________________________________________________

7. Do your students ever see you read (a personal book) in class?  Yes  No

8. Do you use AR Management to check your students’ Diagnostic Reports? (circle one)
   Yes  No  I’m not familiar with Diagnostic Reports

9. Do you use AR Management to check your students’ Zone of Proximal Development? (circle one)
   Yes  No  I’m not familiar with Zone of Proximal Development
10. Do you feel confident in guiding your students in selecting appropriate AR books? (circle one)

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<th>Not Very Confident</th>
<th>Not at All Confident</th>
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11. Do you set reading goals for your students with AR books? Yes No

If yes, please describe.

12. Do you use any special motivational techniques in relation to AR? Yes No

If yes, please describe.

13. Do you use the TOPS reports provided by AR? Yes No

If yes, please describe.

14. How useful do you think the AR program is in our school?

<table>
<thead>
<tr>
<th>Very Useful</th>
<th>Somewhat Useful</th>
<th>Not Very Useful</th>
<th>Not at All Useful</th>
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Please explain.

THANK YOU FOR YOUR PARTICIPATION!
APPENDIX D

E-MAIL REMINDER