Reading comprehension through technology: the Accelerated Reader program

Janette Schmidt

Copyright ©2000 Janette Schmidt

Follow this and additional works at: https://scholarworks.uni.edu/grp

Part of the Curriculum and Instruction Commons, Educational Technology Commons, and the Language and Literacy Education Commons

Let us know how access to this document benefits you
Abstract
The purpose of this paper is to research the Accelerated Reader program, a computerized reading program, to see if it did improve reading skills. The Accelerated Reader program has received a lot of attention because of the belief that students are not learning to read. This is a program that has been marketed well and promises to produce results in reading skill performance. Some educators have questioned the Accelerated Reader program because of the expense and the method of motivation. Both sides of this issue will be discussed in this paper.
Reading Comprehension through Technology:
The Accelerated Reader Program

A Graduate Research Paper
Submitted to the
Division of Educational Technology
Department of Curriculum and Instruction
In Partial Fulfillment
Of the Requirements for the Degree
Master of Arts
UNIVERSITY OF NORTHERN IOWA

By
Janette Schmidt
July, 2000
This Research Paper by Janette Schmidt

Titled: Reading Comprehension through Technology: The Accelerated Reader Program

has been approved as meeting the research requirement for the

Degree of Master of Arts.

Sharon E. Smaldino
Graduate Faculty Reader

Charline J. Barnes
Graduate Faculty Reader

Rick Traw
Head, Department of Curriculum and Instruction
Table of Contents

Chapter Page
1. Introduction ............................................. 1
2. Review of Related Literature ......................... 3
3. Disadvantages ........................................... 6
4. Comparison .............................................. 11
5. Advantages .............................................. 15
6. Conclusions and Recommendations ................. 23
7. References .............................................. 25
Chapter 1

Judi Paul started Accelerated Reader in Port Edwards, Wisconsin. She was an educator, who decided to stay home with her children for a while. She loved to read; but was concerned that her children were not picking up that love for reading. To motivate them she decided to make up quizzes for each book, which worked well with her kids. Her husband then tried to talk her into putting the quizzes on a computer and she said no, because she did not know how to use computers. A school in the area asked if they could use her quizzes and she agreed. Finally, her husband talked her into putting the reading program on the computer. The reading program continued to grow from that point and is now quite a profitable business for the Pauls. The name of their company is Advantage Learning System, which is based in Wisconsin. They also have expanded their business to include Accelerated Math (personal communication, July 14, 2000).

The purpose of this paper is to research the Accelerated Reader program, a computerized reading program, to see if it did improve reading skills. The Accelerated Reader program has received a lot of attention because of the belief that students are not learning to read. This is a program that has been marketed well and promises to produce results in reading skill performance. Some educators have questioned the Accelerated Reader program because of the expense and the method of motivation. Both sides of this issue will be discussed in this paper.

Sources for this paper were the Internet, ERIC, St. Ambrose University Library, Mississippi Bend Area Education Agency 9, the Advantage Learning System and professional journals. The Advantage Learning System was helpful with research information and was willing to send documents. The documents were mailed from the Advantage Learning System and were labeled Independent Research Reports. The publisher for the Independent Research Reports is
The Institute for Academic Excellence, a corporation founded by Terrance and Judith Paul, founders of Accelerated Reader.
Chapter 2

A study was done in Aberdeen, Scotland on Accelerated Reader (AR) with two elementary schools in low-income neighborhoods (Vollands, Topping & Evan, 1996). Two separate research projects were done, Project A and Project B, using a total of four classes. Project A took place in two parallel mixed ability classes. One class followed the AR Program and the control group received their normal reading instruction. Project A permitted students to exchange points for rewards. Each Accelerated Reader book is assigned points that correlates with the difficulty of the text. Students can accumulate points and then turn in their points to receive prizes, such as bookmarks, erasers, stuffed animals, etc. Project B took place in a different school in Aberdeen, Scotland. Again, two classes were selected for the study. One class followed the AR Program and the other class received what was called “alternative treatment”. This alternative treatment class consisted of the regular reading instruction with an additional 15 minutes of silent reading and additional ability grouped oral reading. During the group reading the teacher visited with the children and quizzed them on their comprehension. Also, the teacher gave homework assignments at the end of each book chapter. The teacher also made reading comprehension puzzles, secret messages, worksheets, etc. The teachers in Project A and Project B were new to the program and received a one-day in-service. Subsequent support and monitoring were made by the researcher.

The conclusions from this study showed that AR did make a difference. Vollands, Topping, and Evan (1996) report that they were encouraged by the results of this evaluation of AR, in spite of the small scale of the study, lack of enough AR titles, inadequate training of the teachers and failure to fully implement AR. Vollands, Topping and Evans (1996) summarize the research by saying:
Taking the two projects together, the results indicate that the Accelerated Reader program, even when less than fully implemented, yielded gains in reading achievement superior to regular classrooms teaching and an alternative intensive method, even with less time devoted to class silent reading practice than in comparison classes. Additionally, the program yielded measurable gains in attitudes to reading for girls.

(p. 4)

The authors suggest that AR caused an increase of the quantity of reading practice time but also improved the quality of "engagement" with literature by students.

Paul (1992) did research that showed that increasing student reading practice to one hour indicated an increase on standardized reading tests. A continuation of that study in 1993 by Paul also showed a "reading fallout theory," in that when there is an increase in reading ability, there is a positive effect in other subject matters and critical thinking skills. This was especially evident in math scores. The study also suggests that AR is effective with either the PC or Mac platforms. Effects of AR were good irrespective of the availability of tangible rewards, in spite of the fact these were socioeconomically disadvantaged students.

A more recent study was done in North Carolina. Janie Peak, Assistant Superintendent of Cherryville Junior-Senior High School in Cherryville, North Carolina and Mark Dewalt, faculty member in the College of Education at Winthrop University in Rock Hall, North Carolina did a study to determine the impact AR made on the reading skills of middle school students (Peak & Dewalt, 1999). Random sampling was used to select 100 students from the Gaston County School System in North Carolina. The students, who were in college-prep classes, came from two similar schools in Gaston County. The main difference between the two schools was the use of AR. CJSHS had been using the program since the 1987-1988 school year. GJHS's did not
have any prior use of AR. The two schools selected were Cherryville Junior-Senior High School (CJHS) and Grier Junior High School (CJSHS). The difference between the two schools was AR. Cherryville students had been using AR since the 1987-1988 school year, while the students at Grier did not use the program. The following chart shows the data that they collected.

**CAT Reading Scale Score Comparison for Ninth-Grade Students**

<table>
<thead>
<tr>
<th>School</th>
<th>3rd Grade Mean Score</th>
<th>6th Grade Mean Score</th>
<th>Average Gain 3rd-6th</th>
<th>8th Grade Mean Score</th>
<th>Average Gain 6th-8th</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJSHS</td>
<td>715.6</td>
<td>761.6</td>
<td>15.3 points per year</td>
<td>788.0</td>
<td>13.2 points per year</td>
</tr>
<tr>
<td>(Used AR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GJHS</td>
<td>724.3</td>
<td>755.0</td>
<td>10.2 points per year</td>
<td>766.0</td>
<td>5.5 points per year</td>
</tr>
<tr>
<td>(No AR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The chart shows that students who used the AR program gained 13.2 points per year on the California Achievement Test and the students who did not use the AR program only gained 5.5 points per year on the same reading test. A survey was administered at the end of the study—the AR students said that they spent an average of five to six hours per week reading, while the non-AR students read only two or three hours per week (Peak & Dewalt, 1999).
Chapter 3

There are plenty of studies advocating the benefits of AR but there are some who raise points that should be considered. Carter (1996) wrote an article titled “Hold that Applause! A Skeptic Says that Computerized Reading Programs Don’t Teach a Love of Reading.” She has many reservations about AR. The first thing she mentions is that Accelerated Reader can hinder book selection and collection development, in that media specialist must spend a good deal of the media center’s budget on Accelerated Reader titles instead of on purchases to supplement and enrich the curriculum. If Accelerated Reader is the curriculum, then the media center is going to have a lot of books left on the shelf that are not being checked out. If the classroom teacher insists that students only read AR books, then the vast majority of books in the media center will not be used. Also, if students are required to only select AR titles they are not learning how to self-select literature, instead they will choose books on its point level. Self-selection skills include reading the summary of the book on the book jacket, by genre, by author, and/or by subject. Students lured by the point system could also end up reading a book because it has a high point value rather than because they like the book.

Second, there is a concern that the Advantage Learning System will become a selection tool for the media specialist. Instead of using professional journals such as Booklist, School Library Journal, Media and Methods, Children’s Choice Awards, Publisher’s Weekly, Horn Book, and The Bulletin as sources, the media specialist will just select whatever AR recommends.

Third, the AR program is also expensive to implement. At $400 to $900, this computerized reading program will take a big chunk of the media center’s budget. The computerized quiz disks are expensive--$79.00. A lot of companies like TurtleBack sell AR kits
which include the AR books and a disk that contains the quizzes for all the books purchased in that particular kit. Books can usually be ordered individually, too.

The quizzes are multiple choice, factual questions, based on the student’s recall of facts from the book, which is not a higher order thinking skill. Also, it gives the reader the idea that there is only one way to interpret a book. The computerized reading program is touted to the kids that they get to use technology to help them learn to read. After they finishing the book students get to take a quiz on the computer, however; this is just like a paper quiz, but this time it is on the computer screen.

Since, the AR program is heavily weighted to fiction, those students who like to read non-fiction will not be able to read the books that interest them. New fiction presents another problem because there is a lag time between the publication of a new fiction book and its corresponding test disk.

Students accumulate points, which can be turned in for rewards. Kohn (1993) points out that rewards are not a way to motivate a student to learn. Rewards punish the students who do not get the reward and also implies to the student that reading is such an awful practice that teachers must reward students in order to get them to read. In the real world employers give rewards to employees to perform the not so popular tasks—like working nights or holidays He notes that children do not need to be rewarded to watch TV or play video games.

Some educators feel that technology could be used in other ways to encourage students to read. Carter (1996) feels that technology could be better used to encourage higher order thinking skills and use the computer to access the Internet, to use CD-ROMs and electronic encyclopedias, and to use software that simulates real life situations or use multi-media software to construct their own meaning. Carter (1996) has strong feelings about luring students into this
reading management program by telling them that they will have more computer time. Carter (1996) says:

They break my heart. Here are kids excited about computers, eager to experiment with them, and ready for sophisticated applications. Look at what we give them: multiple choice tests transferred from paper to screen. Diverting the power of electronic learning to such mundane activities is a lot like deploying an army to kill an ant. (p. 47)

It has been found that this computerized reading management program only uses the lowest level of the six International Society for Technology in Education (ISTE) Technology Literacy Standards (1998) as published in its document, National Educational Technology Standards for Students. That would be Technology Literacy Standard number 1, which is Basic Operations and Concepts. This first standard states that a student who is technology literate a) demonstrates a sound understanding of the nature and operation of technology systems and b) is proficient in the use of technology. Taking quizzes for these books on the computer barely fits into this first standard. This procedure does not demonstrate a sound understanding of the nature and operation of technology systems. Using the AR systems does not show that a student is proficient in the use of technology. Taking the AR quiz involves these steps:

1. The computer needs to be turned on.
2. Student double clicks on Accelerated Reader icon.
3. Selects Students AR instead of Management AR.
4. Selects the class that she/he is in.
5. Scrolls down to their name.
6. Selects the category I Want to Take a Test.
7. Scrolls to select the title of the book that the quiz is on.

8. Read the question and select the correct answer.

In conjunction with the ISTE Standards, there are Information Literacy Standards designed by the American Library Association (ALA) to help educators guide students through our information-based world. These standards are published in the ALA’s book, Information Power (1998). The Information Literacy Standards are:

**The student who is information literate:**
1. accesses information efficiently and effectively
2. evaluates information critically and competently
3. uses information accurately and creatively

**The student who is an independent learner is information literate and:**
4. pursues information related to personal interests
5. appreciates literature and other creative expressions of information
6. strives for excellence in information seeking and knowledge generation

**The student who contributes positively to the learning community and to society is information literate and**
7. recognizes the importance of information in a democratic society
8. practices ethical behavior in regard to information and information technology
9. participates effectively in groups to pursue and generate information

The AR program does not allow the student to access information efficiently and effectively, evaluate information critically and competently, use information creatively, or pursue information related to personal interests, because the reading material is restricted to what is on the AR list. Carter (1996) noted that AR does not always allow a student to appreciate literature (ALA Information Literacy Standard 5) because the students are more concerned about accumulating points.
ALA Information Literacy Standard number 6—striving for excellence in information seeking and knowledge generation is not part of the AR program. Again, the information is limited to the AR titles, which are mostly fiction. Information generation is not part of the AR program because students do not generated any new knowledge because they are restricted to the “correct” answer on a multiple choice test.
A recent article pointed out the positive and negative aspects of AR. Kirschenman (1999), a Library Media Specialist in Elkton, South Dakota published her response to the AR craze. She says her school has joined the other 34,000 American schools that use AR and has listed the features that she does not like and the features that she does like. She feels the AR program is a problem because:

1. Huge chunks of time are involved in getting the books ready for the students. Labels are placed on the spine of the books and the reading level and points are written on the inside cover of the books.

2. The program requires a lot of money to initiate. Labeling supplies, computer disks with tests, new books, and possibly more computers are all expenditures.

3. AR requires a flexible library media center schedule so that students can get books any time of the day. She is a k-12 library media specialist who also teaches high school classes. Students feel a more urgent need to get a new book with the AR program. One student paged Kirschenman over the school intercom system because she wanted to check out a book. (She agrees that this could be considered a good problem.) The computer lab is in great demand so that students can take quizzes.

4. AR can become the media specialist’s main selection tool. Kirschenman asked another media specialist if the students in her building checked out books that were not AR and she said no.

5. The artificial motivation can become a problem with trinkety prizes given as rewards.

6. AR requires a huge team of cheerleaders to promote the program.

Below are the aspects of AR that Kirschenman does like about AR.
1. Students read more. Students come flying into the media center all day long to get another book after they have taken the last book test. They are not interested in rewards but they like to watch their progress as they accumulate more points.

2. Teachers love it. They have less paper work, however, they do have to schedule time for reading and tests and continuing motivation and encouragement.

3. Book circulation increases and students are willing to read titles that they wouldn’t read before—like Newberry Award winners and the students are more likely to branch out in their selection style.

4. This is great public relations for the school and the media center. The kids like to tell their parents about the “dot books” (AR books that have colored dots on the spines of the book to designate reading level.)

5. Publishers have become more cooperative with AR (so that they do not loose out on sales), there are now a wide variety of fiction and non-fiction. A lot of catalogs include AR notations, discounts, packages, which makes it easier for the media specialist to order.

6. Her school has only had the program for two years and they are sold on it. (Kirschenman, 1999).

Poock (1998) gives a balanced look at the AR program. She uses the figure below to demonstrate that the AR quizzes ask for simple recall of events and details in the story—which is only a low level of comprehension.

**Figure 1**

| The Foot Book |
|---|---|
| By Dr. Seuss |

| Question 1 |
|---|---|
| There were ____ feet and right feet. |

| A. left | B. night | C. wrong | D. light |
She feels very strongly that in order to achieve higher level of thinking skills, the teachers and students must discuss the books. Another weakness that she points out is that, "The AR program can give the wrong message that all there is to reading is taking tests on a computer." Media Evaluation Center review in the June, 1992 School Library Journal, points out the danger of too many tests by saying, "Careless or rigid use of the program has the potential to overemphasize competition and narrow reading pleasure and skill to a testable moment" (p. 64). Pooch (1998) questions the practice of letting students “spend” their AR points on bookmarks, pencils, stickers, paperback books, etc. She also quotes Kohn (cited in Pooch 1998): “Rewards are not actually solutions at all, they are gimmicks, shortcuts, quick fixes that mask problems and ignore reasons” (p.60). Pooch (1998) does not like the message that the rewards gives to kids, that is, if they read books and take tests they can earn insignificant prizes. She feels that reading should be rewarded with more reading.

A big issue for AR is that it proclaims to improve standardized test scores. However, Carter (1996) suggests that there might be a better way to improve standardized tests scores other than having students jeopardize their love of reading by tying reading to repetitive testing. She suggests direct instruction on test-taking skills as an alternative. The correlation between AR and improvement in standardized test scores is not a trivial matter. Teachers and school administrators have a lot of pressure put on them to improve test scores. The June 19, 2000 Newsweek Magazine has three articles about educators cheating so that their students get better scores on standardized tests. Sands (cited in Kantrowitz and McGinn, 1999), the author of Standardized Minds: The High Price of America’s Testing Culture and What We Can Do to Change It says, “Cheating is simply one more piece of a dangerous fallout from the politicians and bureaucrats placing too much emphasis on standardized tests” (p.48). The article mentions
that in some parts of the country, educators can receive bonuses of as much as $25,000 if their students improve their test scores. Jackson Elementary in Davenport, Iowa will receive $140,000 for the 2000-2001 school year from the federal Title 1 program to improve standardized reading and math scores. Pressure from the federal government to improve test scores played a factor in the decision to purchase the AR program for Jackson Elementary. This correlation between AR and the improvement of standardized test scores then becomes a reason to purchase this program rather than, is this reading management program the best way to improve reading.
Chapter 5

There are many proponents of AR. Pittner and Coit (1999) offer that technology based reading assessment programs provide teachers with the means of tracking individual student progress, identify problems and provide assistance to be successful readers. They, in fact, call this attribute of the technology based reading assessment a “gift”.

Stiegemeier (1999) from Educational Technology Consulting in Olympia, Washington evaluated a Language Integrated Project for the Educational Service District 113. The project leaders for this program choose Accelerated Reader, STAR (a component of AR) and Sentence Master to increase student reading achievement. The teachers report the following results from this project:

1. Students read more and are often reading at recess and other times at school.
2. Students shared their favorite books with others.
3. Students were excited to take the AR tests.
4. Students wanted to read challenging or quality books.
5. There was a huge impact on frustrated or reluctant readers.
6. Student skills in comprehension improved.

Poock (1998) listed several strengths of the AR program. The first one that she mentions is that the company has a toll free number to assist with software problems. She also likes the way the AR program promotes reading at the student’s ability level, which is the best level for them to learn. She also liked the At-Risks report that enable the teacher to monitor students who are not succeeding so that they can intervene and get the students back on track. A likely cause for poor performance would be that the child is reading books that are too hard for them.
positively point out to the student that they would meet more success if they read easier books.

Pooch (1998) also states that the AR program has been successful at Grant Elementary School in Muscatine, Iowa for the past six years. Mr. Paul Brooks, the principal at Grant Elementary gives these statistics to back up his claim that AR has improved several areas of his school. The first is that circulation of books from the media center has increased by 500%. The second area is the Iowa Tests of Basic Skills (ITBS)—scores have increased from the 40th percentile to the 70th percentile. Attendance has improved from 92% to 96% and discipline problems have significantly decreased. Mr. Brooks says that “A successful kid is a happy kid, and if they are happy, they don’t cause trouble” (personal communication, June 26, 1997). He feels the children feel good about their reading achievements from the AR program and that carries over to their all around happiness with school.

AR does try to improve its product. It has come out with a new component, which tests the students on Literacy Skills. AR Literacy Skills tests help to assess students’ knowledge of twenty-four skills found in state and district standards and on many other “high stakes tests”. The literacy skills measure the students’ higher order thinking skills. AR recommends that this component should be in conjunction with the AR Reading Practice Quizzes. As published in Literacy Skills by the Advantage Learning System, this new component measures the following concepts:

**Initial Understanding**

1. Understanding the main idea. This category would include choosing a summary of the whole book or a critical section of the book.
2. Responding to Literature. This would include how the literature relates to personal experiences.
3. Identifying Reading Strategies. Recognizing text that supports the plot, setting, characterization or other elements and understanding how it contributes to the reader’s understanding.

4. Differentiating Fact and Opinion.

5. Deriving Word or Phrase Meaning. Using context to understand a word or phrase as it is used in the literature, often involving an inference.

**Inferential Comprehension**

1. Recognizing cause and effect.

2. Making predictions. Identifying information in a story that can be used to predict future events.

3. Extending Meaning. Making judgments and evaluations or general assumptions of characters and events.

4. Making Inferences: Understanding the ideas stated indirectly in the text that requires the student to “read between the lines” to infer the author’s meeting.

5. Drawing conclusions.


**Literacy Analysis**

1. Understanding the Author’s Craft. This would include point of view, purpose, style, and devices such as foreshadowing or flashback.

2. Identifying Historic/Cultural Factors. Comparing these features to contemporary life.


5. Recognizing Setting. Realizing how the setting impacts the story line.

6. Recognizing Plot. Identifying the central problem, how the problem is resolved and how the thread of the story leads to the climax.

**Constructing Meaning**

1. Understanding Sequence.

2. Understanding Dialogue.

3. Recognizing Feelings.
4. Recognizing Details.

5. Identifying Reasons. Recalling significant details that advance the plot, enhance the setting, define characters, or otherwise contribute to the advancement of the story.

6. Identifying Reasons. Recognizing factors that are stated directly or indirectly in the story.

7. Describing Actions or Events. Recognizing how specific actions or events relate to the problem or solutions, the story line, or character development.

Figure 2 Sample Literacy Skills Question

Toughboy and Sister by Amanda Addison

1. Natasha wanted to take Toughboy and Sister away from their father because_______.
   
   A. He did not like his children.
   B. He drank too much alcohol.
   C. She wanted them for herself.
   D. She thought he was mean to them.

Question 1 of 12 Literacy Skills

Inferential Comprehension: making inferences.

The literacy skills component of the Accelerated Reader program does answer some of the concerns from educators that criticized AR for only testing lower level thinking skills.

The number at the bottom right indicates to the students how many questions in the test. The bottom also identifies the type of comprehension skill that is being evaluated.

The Advantage Learning System also offers a CD called AR Book Guide: The Easy way to manage the Accelerated Reader Book Collection, which would be helpful to media specialist.

The price for this tool is ($80.00) The program offers these features:

1. It allows for book searching by title, author, level, points, interest and theme.
2. Can be used as a collection tool.
4. Aids in custom title orders. (AR offers the option of ordering custom title quiz disks. This allows for schools to order quizzes for books that are already in the book collection).
5. Provides access to handy information about every book in the AR collection.
6. Data can be imported from the library automation system.
7. Identifies for which books Literacy Quizzes are available.

The AR program allows for teachers to write their own quizzes and import them into the AR computerized reading management program. These teacher designed quizzes then can be used in the same manner in which AR quizzes are used, that is leveling can be done and reports can be made from these special disks. AR allows students to vote on their favorite book (personal communication, L. Wilson, July 14, 2000).

The Advantage Learning System offers The STAR Reading program to help educators assess reading level. Although expensive ($1,500 for a school license that allows for use by 200 students), this aide provides important information in a short amount of time. The assessment test takes only ten minutes and provides 16 reports, some of which can be used to communicate with parents. The STAR Reading Program uses a branching technique to adjust the test questions as the student is taking the test. If the student incorrectly answers a question, the difficulty level of the next question is lowered. If a correct answer is made, then the next question will increase in difficulty for the student. A student with at least a 100-word reading vocabulary can take a test. Below are two samples of a STAR Reading Test.

<table>
<thead>
<tr>
<th>In-Context Vocabulary Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>My big brother is two years __________ than I am.</td>
</tr>
<tr>
<td>1. Better</td>
</tr>
<tr>
<td>2. Larger</td>
</tr>
<tr>
<td>3. Older</td>
</tr>
<tr>
<td>4. Faster</td>
</tr>
</tbody>
</table>
There are arid regions all over the earth. Tropical deserts include the Sahara of northern Africa, Thar Desert of the Indian subcontinent, the Victoria of Australia, and the Kalahari of southwestern Africa. These deserts owe their origin and location largely to aridity that results from the high moisture-holding capacity of air warmed by compression as it descends from the high-pressure belt of horse latitudes to the belt of tropical trade winds. Decreased precipitation and extraordinarily high rates of evaporation are the two main factors that combine to _______ the land, particularly on the western sides of the continents.

1. Recant
2. Usurp
3. Expunge
4. Desiccate

Authentic text questions offer an even more precise measure of reading progress for students in grade 3-12.

Pittner and Coit (1999) offer that technology may be the answer to providing every student with a fair chance to become a good reader. They point out the Independence Middle School in Yukon, Oklahoma has some students who have found reading success for the first time through technology. Through a reading assessment program these students were able to find books that they could read. One of the most important parts of this use of technology is that it gives teachers the tools to track individual student progress, identify problems and give students assistance. In addition to the reading management program, the teachers at Independence Middle School have students produce PowerPoint presentations from the books that they have read. Students also use video and digital cameras to take capture images that relate to what they have read (Pittler and Coit, 1999).

One customer of Advantage Learning System is Salmon P. Chase Elementary School is in a tough, almost exclusively Spanish speaking neighborhood in Chicago, Illinois (Upbin, 1999). Yet 40 children come to school an hour early each day just to take one of ADL’s
Accelerated Reader's computer quizzes. Salmon P. Chase School began using AR after the school was put on probation for having chronically bad reading test scores. Principal Olga La Luz swears by the AR program, saying that it improved reading scores by 43%, which was enough to get the school off probation. She challenged her students to read enough books so that the whole school had earned 4,000 points. They earned 5,015 points, which made her carry through with her challenge, that if they got enough points, she would kiss a pig (Upbin, 1999). Upbin (1999) also feels that technology with software that helps to manage data, such as AR might make schools better at quality control.

Bill Gates (1999) in his book, *Business at the Speed of Thought* talks about data mining, in which powerful software programs find useful patterns in data. Although, his book is geared for business, some of his ideas can be carried over to the education system. Gates: “Using software to handle routine data chores gives you [educators] the opportunity to provide the human touch where it really matters. Technology can also reduce administrative overhead in schools and make it easier to compare educational results” (p.399). He goes on to say that digital tools can allow educators to use software to analyze testing results and that time saved by digital tools gives teachers more time to spend on teaching (Gates, 1999).

AR purports to provide reading guidance so that students are in their “zone of proximal development,” (ZPD) a concept from the Russian psychologist and theorist Vygotsky (cited in Vollands, Topping & Evans, 1978). This ZPD would permit students to read at levels that are not too easy or too hard so that students can get the maximum benefit from their reading practice (Vollands, Topping, & Evans 1999). This comes from Vygotsky’s belief that a child follows the adult’s example and then gradually is able to perform tasks on her/his own. The Zone of Proximal Development is the difference between what a child can do on his own and what she/he
needs guidance for (online: http://www.ncrel.org/sdrs/areas/issues/students/learning/lr1zpda.htm).

A helpful feature of AR is that it makes quizzes for state reading contests. For example, the Iowa Educational Media Association sponsors the Iowa Children Choice Award Contest every year. Many school libraries in Iowa participate in this program so they already stock the books so would only need to purchase the quiz disk.

Douglas Johnson (1999), Director of Media and Technology in Mankato, Minnesota Public Schools, feels that AR can be used successfully, if used carefully. He wrote an article titled, “Creating Fat Kids Who Don’t Like to Read” in Library Talk Magazine. This title is a pun on Kohn’s (1993) philosophy concerning motivating kids with prizes. Johnson (1999) notes that Kohn believes that programs that reward kids with food will create a generation of chubby children who really do not read for enjoyment. Johnson believes that AR can be used with out using rewards. He ends his article with a challenge to educators: how can we intrinsically motivate students do research and information-based problem solving?
Chapter 6

I have learned a lot about the Accelerated Reader program. A reading specialist told me a couple of years ago that many reading programs would be successful, too, if the same amount of money that was spent on AR was used and was promoted as much as AR. The program also insists that sixty minutes of reading practice a day at school is essential for AR to succeed. Well, my guess is that if students read sixty minutes a day, even without AR, their test scores would improve.

AR has been criticized because the reading quizzes have questions that are on the lower end of Bloom’s Taxonomy. They have answered this with their Literacy Skills quizzes which tests higher level thinking skills. Another big criticism level at AR is that the motivation with prizes was not educationally sound. Their response is then to do the program without the prizes. Another criticism is that the AR program used mostly fiction books. Recently, I have seen many catalogs that advertise AR non-fiction books.

Another big issue is money. At Jackson Elementary in Davenport, IA, the software budget is only $800.00, which would buy 10 AR disks, and nothing else. Fortunately we are a Title I building so the AR books and disks can be bought with that source of funds. I have mixed feelings about the AR program but we did do a trial run with the program during spring semester of the 1999-2000 school year. We did not keep any records but the teacher and her students liked the program. News spreads fast and other teachers want to try it. I am willing to try to the program, especially since the Title I program money will be used instead of the media center’s budget.

I feel that if a school has a small budget, they should not buy the program because it is so expensive. Of course, the Advantage Learning System want their product bought so it even
offers methods of fund raising. I feel that all schools can learn from some of the research found by AR. First, is that students need to read more at school. AR recommends an hour a day for students in fourth grade and above. I think all students will improve their reading scores if they read more. This might mean some creative scheduling, such as using fifteen minutes here or there throughout the school day. Also, all the "cheerleading" done to promote AR can be used with just the pleasure of reading, like story time, crafts, guest readers, buddy reading, encouragement of parental involvement in the reading process, etc. Sometimes, it pays to wait before a school jumps on the bandwagon. AR has grown from a mostly fiction program, to now a program that includes non-fiction. It is also, in the process of providing quizzes that test higher order thinking skills.

On the other hand, if you have the money and the support staff to implement the program, then go with it and see what happens. As the media specialist at Jackson Elementary, Davenport, IA, we have decided to buy the program. However, I know some of the pitfalls, which will help me avoid some of the negative aspects of AR.
References


Zone of Proximal Development (ZPD). Available online: http://www.ncrel.org/sdrs/areas/issues/students/learning/lr1zpda.htm