

Accelerated Reading: Silent Sustained Reading Camouflaged in a Computer Program?

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According to Trelease (2001) there have been no significant changes in reading scores between 1971 and 2000 despite numerous efforts for higher standards, twelve years under a Democratic administration, and eighteen years under a Republican administration. Clearly, there is a strong need to address this reading problem. Over the past two decades, a wide variety of programs have been looked at as ways in which to remedy the reading crisis. This paper provides an overview of recent research findings and papers, the major

Students using the program select a book of their own choosing (from the preselected AR list) and then take a multiple-choice comprehension quiz on the book at the computer. Students reading selections (books) are determined by the number of AR quizzes the school has purchased. An average economy kit that contains 1,000 quizzes is currently priced at \$1,299.00, plus a .99¢ per student service support package. Schools can select from a list of titles or create one from an AR list of over 73,987 books on the AR list written in English and 5,274 written in Spanish (Mabie 2005). Books are not included in the package and each school must make book purchases independently from AR. The cost includes kits, inservice training sessions, and in-service professional development for an additional price. Schools can also purchase such supplemental materials as a technical support contract and selection of motivational materials for students including T-shirts, book bags, backpacks, and bookmarks (Education Commission of the States 1999).

AR Selection Process

According to Heidi Mabie (2005), a spokesperson for Renaissance Learning (RL), RL quiz writers make book selections based upon whether there is enough content for them to create five good questions. Quiz writers also make their book decisions based upon the number of requests they receive for a particular book. RL quiz writers include people with educational backgrounds as teachers, and librarians. When asked if librarians were also part of the team of quiz writers, Mabie said it was quite possible and likely.

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level reading skills, while a student report record provides a list of books read by each student and the scores for each. Reports can also monitor the progress of groups or classes of students (Education Commission of the States 1999). Student tests are standardized tests that are composed of admittedly *literal* questions (Institute for Academic Excellence 1998). There is only one specific correct answer to each question (Pavonetti, Brimmer, and Ciplewski 2002/2003, 308).

Chronological Highlights of Accelerated Reader Research

Most studies of AR were initially conducted by the Institute for Academic Excellence, a subsidiary of Advantage Learning that provides research and professional development services. Several large development administered studies compared schools that purchased AR to schools that did not and found higher scores in multiple subject areas of schools using the program (Education Commission of the States 1999; Institute for Academic Excellence 1999; School Renaissance Institute 1999; Paul, VanderZee, Rue, and Swanson 1996; Paul, Swanson, Zhang, and Hehenberger 1997; Volland, Tompkins, and Swanson 1996; Peak and Dewalt 1994). A number of research studies have attempted to explore AR effectiveness. The following section presents brief research highlights over the past six years. (For a more detailed presentation of AR research, see Krashinsky 2003).

Goodman (1999) evaluates AR as implemented at a middle school in Arizona for a one year period. The total population of 282 students (seventh and eighth graders) participated in the program. There was no experimental or control group to compare results. Goodman reports students demonstrated a statistically significant improvement in vocabulary and a gain in comprehension in grade equivalent scores, but not statistically significant gains. There was description of how the AR program was being instituted other than the grades themselves were divided to enable each half to meet in the library where they sat at tables and had access to four computers to take AR quizzes.

Scotts (1999) dissertation, involved students with disabilities to determine if the AR program had an effect on reading achievement and attitudes toward reading. A treatment group consisted of sixteen middle school students using AR. A control group of twelve middle school students did not use AR. The study took place over a four month period and followed a pretest posttest design. Students in both groups completed a STAR reading comprehension test at beginning and the end of the study. Students were also administered the Estes Reading Attitudes

The experimental class had access to AR for six months, including AR books, public displays of AR points gained by individuals and the opportunity to use points for tangible rewards (Vollands et al. 1999). For five weeks the experimental group received only fifteen minutes of reading time per day, after this was increased to thirty minutes reading time, plus thirty minutes of being read to by the teacher. The control group had regular classroom teaching of reading, including thirty minutes of reading time per day throughout the experimental period. Students also had to complete written feedback to the teacher on each book they completed. A few extra books were provided for students of lower reading ability (Vollands et al. 1999).

In Project B the experimental class was a sixth grade class and the control group was a fifth grade class. The sixth grade AR class had twenty students and had access to AR for six months, including AR books and public display of AR points, but no opportunity to exchange points for rewards. According to Vollands and the quality of implementation of AR was adequate only towards the end of the project (2005).

The control group of twenty younger students were more able readers relative to their age than the AR class. The control group experienced regular classroom teaching supplemented by fifteen minutes of individual silent reading time each day and group oral reading on a selection of novels (2006). During the group reading sessions the teacher quizzed the students on the content of their reading. Homework assignments were given at the end of each book chapter with written comprehension quizzes. The teacher also created reading comprehension puzzle worksheets, secret messages, and so on for the class to complete either in class or at home (Vollands et al. 1999).

The outcome assessment reading quotients for both the experimental and control group showed a statistically significant increase over the experimental period, and the control group showed a larger gain from a higher base level (Vollands et al. 1999, 2006). However, the authors of the study acknowledge that the study was imperfectly controlled and the classes in the two groups were not comparable.

Facemire's (2000) master's thesis explores the effects of AR on the reading comprehension scores of third graders. Her study looks at two grade-level classes within the same school. The experimental group of fifteen students used AR and the control group of twenty did not. The STAR Reading program was used to test both the experimental (AR) and control (non-AR) group. The experimental group demonstrated significant gains on the STAR Reading program. Although this study involved few children and the time span of nine weeks was short, it demonstrated impressive results in favor of AR. The small sample size does pose problems. Krashen (2003) explains the AR group . . . contained one child who gained 2.3 years in nine weeks! If we remove this outlier, the AR mean gain drops to about four months. The comparison group had one child who got much worse, dropping more than one year (1.1 years) in nine weeks. If we remove this outlier, the comparison mean increases to three and a half months (12). Still, Krashen (2003) agrees that this study is a step in the right direction as there is a comparison group, and an attempt is made to note the amount of reading done (12).

significant difference in the reading comprehension level of those who experienced independent reading and those who experienced AR. There are serious limitations in this study including a limited time frame and the fact that the students received the reading assignments from the principal of the school and not the researcher.

Pavonetti, Brimmer, and Ciplewski (2002/2003), interested in exploring the claim that AR builds lifelong readers, investigated whether seventh-

- x timely, supportive, and interactive feedback from teachers,
- x teachers who will employ motivational strategies that excite students about books, and
- x teachers who will ensure that students are provided with reading material appropriate and challenging for their reading level.

Notice that all of the above is quite different from AR. AR offers a quick and easy instantaneous record keeping component for teachers which make their lives easier. Unfortunately, it has corrupted what was designed as essentially a bookkeeping system, converted it to part of the reading program, and encouraged students to read for points tied to report card grades (Pavonetti, Brimmer, and Ciplewski 2002/2003, 309).

Perhaps the most important advice in considering the use of AR in a school or district is the following from the Education Commission of the States (1999, 6):

Accelerated Reading is designed to be used as supplemental instruction and does not take the place of a main reading program. The multiple format of quizzes is useful in gauging literal comprehension of the texts assessing students' reading level, but has no mechanism for helping students explore story ideas or apply them to their own experiences.

AR CANNOT Replace School Library Media Professionals or School Libraries

The AR program cannot be used as a stand alone program. If educators choose to use AR they must accept its limitations as a supplemental tool (Tobro 2001, 28). AR cannot be a substitution for school libraries, or school library media professionals. Although Renaissance Learning efforts to match quizzes to the books found in a typical school library is laudable, school libraries are distinct learning communities, each of which has unique information and learning needs that extend far beyond just books. School library media specialists, information professionals, are experts in identifying the information resources their learners (teachers, students, and families) need. Such knowledge includes all traditional media (books, magazines, newspapers) as well as electronic multimedia, cultural, and community resources as well.

AR's primary goal is to increase literacy based reading practice (Education Commission of the States 1999). This goal represents an important but substantially smaller portion of the focus of high quality school library media programs which have far beyond a room with books to become an active, technology learning environment with an array of information resources (ALA 1998, 1). Although AR stresses the importance of enabling children to have access to literature via books, school library media specialists know that to survive in the twenty century students need to be familiar with a wide variety of reading and informational materials: an extensive array of formats: books, newspapers, radio, television, movies, electronic sources, databases, Web pages, blogs, and so on. Innovations in traditional printing

not the student has read the AR (book) for Academic Excellence 1999). Although AR operates under the belief that practice makes perfect (School Renaissance Institute 1999, 7) AR does *not* enable students to:

- x analyze complex and conflicting presentations of information
- x appreciate the variety of perspectives offered by individual viewpoints, scholarly disciplines, and cultural understandings
- x use information competently in critical thinking, decision making, and problem solving
- x produce new information and create products and presentations that ideas efficiently and effectively
- x act responsibly in regard to information, particularly with respect to the difficult issue intellectual freedom, equitable access to information, intellectual property rights (ALA 1998)

It is the school library media specialist in each school, and the librarian in each library, who, as information professionals, possesses the skill and knowledge to perform all of the above. The school library media specialist, as the informational hub of a school, is little else connecting students, teachers, and community members with the information resources they need. The school library media specialist both contributes to and draws from the expertise of the entire learning community (ALA 1998, 3).

Krashen (1993) states that there is a negative relationship between poverty and the amount of reading at home. Krashen explains that 30 to 97 percent of students obtain their books from some kind of a library. A substantial body of literature of over five studies dating back over six decades documents the impact of school library media programs on academic achievement (Lance 2002).

No educational software program to date can compete with that performance.

A Research Challenge

It would be interesting to study comparing two schools with a comparable student body, experienced teachers, qualified school library media specialists, and librarians. One school would use AR in the best ways endorsed by the company, including of course six minutes of sustained silent reading. The other school would do everything the same (including SSR) except they would eliminate the AR quizzing of students. Administrators, teachers, and school library media specialists would actively collaborate and design that would connect students to books and appropriate curriculum enhancement materials. School library media specialists would hold book talks and encourage students and teachers to engage in self-designed book sharing demonstrations with the students. The students would incorporate the use of graphic organizers, images, and drawings to present highlights of the books they were reading. Skits and plays could be performed. The art, music, and physical education teachers would participate and actively contribute their expertise. The building principal would provide support and resources saving time and reading materials and encourage children, teachers, and parents to read. Teachers and school library media specialists would set up interactive interviews with children to discuss the books they each (teacher and student alike) were reading. Children would help select not only the books they wanted to read, but they would design projects to their book or reading with others in the community. At the end of a year it would be interesting

to see if there was a discernable difference between the two groups in both reading attitude and reading comprehension.

Reading Requires Time

We must accept the fact that there will never be a silver bullet to quickly solving the reading crisis. We need to acknowledge that in order to develop good reading habits students and teachers need to be provided with regularly scheduled reading time without the typical pressure to demonstrate or *prove* what they have read. Unfortunately, teachers feel uncomfortable when students are allowed to *just read*, a perception Kamarian (2001) attributes to their traditional reliance on basals, direct instruction, and skill development (43). Learners of every age need an environment that encourages them to read recreationally, think creatively, explore with curiosity, and revel in new knowledge (Pavonetti, Brimmer, and Cipilewski 2002/2003). This does not involve a simple decision to allocate funds for a technological book-

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School Library Media Research (ISSN: 1523-4320) is the successor to *School Library Media Quarterly Online* and the predecessor to *School Library Research*, an official journal of the American Association of School Librarians. The purpose of *School Library Media Research* is to promote and publish high quality original research concerning the management, implementation, and evaluation of school library programs. The journal also emphasizes research on instructional theory, teaching methods, and critical issues relevant to the school library profession. Visit the [website](#) for more information.

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