

Should We Reward Recreational Reading?

Originally published in *Selected Papers from the Sixteenth International Symposium on English Teaching, English Teachers' Association, Republic of China*. Taipei: Crane Publishing Company, 2007, pp. 615–19. Reprinted in Krashen, S. 2011. *Free Voluntary Reading. Libraries Unlimited*.

Summary: *Evidence continues to mount supporting the practice of free voluntary reading. If free reading is beneficial, how can we encourage students to read more? A popular answer is to give children rewards for reading, and the most popular way of doing this in the United States is to use a commercial program, Accelerated Reader (AR). AR gives students points for passing tests on the content of the books they read, and the points can be exchanged for prizes. Although AR claims its research supports it, my surveys of the research show that AR has not been properly tested. In addition, there is reason to suspect that rewarding behavior that is intrinsically pleasant can extinguish the behavior because it sends the message that the activity is not pleasant and that people need to be bribed to do it.*

The language education profession knows a lot about encouraging reading. Among other things, increasing access to books helps, seeing other people read helps, reading aloud to students helps, and, of course, providing time for reading, as in sustained silent reading, helps (Krashen 2004). Trelease (2006) has suggested that one very positive reading experience can result in an interest in reading, a suggestion that has been confirmed in several studies (Von Sprecken, Kim, and Krashen 2000; Kim and Krashen 2000; Ujiie and Krashen 2002).

Instead of taking advantage of these inexpensive, well-supported, and reasonable options, many schools have turned to one that is very expensive and not well supported: rewarding children for reading, using “reading management” programs.

The most widely used of these programs is Accelerated Reader, now in use in 62,000 schools in North America (Renaissance Learning, press release 2007). There are signs of interest in the spread of AR to EFL worldwide.

Accelerated Reader (henceforth AR) consists of four components: (1) it provides lots of books; (2) it allots lots of time to read (AR recommends one hour per day, far more than is done in sustained silent reading); (3) it includes tests based on low-level facts contained in the book the child reads (for an example, see <http://www.mrwrightscsclass.com/ar/story.htm>); (4) it awards prizes based on the number of points scored on the tests.

Evaluating Accelerated Reader

Renaissance Learning has claimed that numerous studies show AR increases reading ability in children who speak English as a first language. I have reviewed the research on AR in several papers (e.g., Krashen 2003, 2005) and concluded that AR has not yet been properly evaluated.

As noted above, AR has four elements:

1. lots of books
2. lots of time to read
3. tests
4. prizes

It has already been well established that (1) and (2), books and time to read, will result in substantial gains in reading (Krashen 2004). What we do not know is whether (3), tests, and (4), rewards, add anything.

Thus, a proper study should compare children in a full AR program, with elements 1-4, and children who receive only (1) and (2). Children in the “comparison group” should be given access to a large supply of books and plenty of time to read them. Unfortunately, this comparison has not been done: Studies compare AR with business-as-usual, “traditional” language arts programs. We thus have no idea whether elements (3) and (4), the tests and prizes, add anything.

Here is an analogy: I have just invented a new drug called KALM. It consists of sugar and Zoloft (a well-known antidepressant). It is expensive, costing significantly more than Zoloft alone. I have given it to a number of people, and they say they feel a lot better. Can I claim to have created a useful new product? Obviously not. It was the Zoloft that had the effect, not the sugar. People would save money by just taking Zoloft. Moreover, there may be long-term harm in adding sugar to the diet.

If it contains elements (1) and (2), AR should work, and quite often it does. That is, AR students do better in reading than comparisons with less access to books and less time to read, which is what we would expect. But, as I have noted in my reviews, there have been failures, cases in which AR students did no better than comparisons who, most likely, did not have as much access to books or as much time set aside to read.

A Recent Case

A recent example of this is Ross, Nunnery, and Goldfeder (2004). Ross et al. did two similar studies of children in grades 3, 4, and 5, comparing children who had a version of AR without rewards to comparison children. The results of both studies were nearly identical: Differences were small or nonexistent and not statistically significant. Table 1 presents effect sizes, which indicate the strength of a treatment. A positive effect size, in this case, means that the AR group did better. A negative effect size means the comparisons did better. Study 2 was republished as Nunnery, Ross, and McDonald (2006). (Ross et al. also includes a study of children in grades K, 1, 2, and 3; see Krashen 2007a for discussion of this sub-study.)

Table 1

Effect sizes: Ross et al.

	Study 1	Study 2
Grade		
3	0.33	0.36
4	0.01	0.16
5	0.11	0.09
6	0.14	0.09

Cohen (1988) has recommended the following guidelines for the interpretation of effect sizes: An effect size of .2 is considered small, .6 is moderate, and .8 or more is considered large. The authors of the study (Nunnery et al., 2006) are somewhat more generous, considering a .36 effect size to be “strong” and .16 to be “small to moderate,” but they agree that .09 is “no effect.” On its Web site (www.renlearn.com), AR’s parent company, Renaissance Learning, is even more enthusiastic about the impact of AR: .16 is now “moderate,” and .09 is “small” (table 2). Most readers of the Renaissance Learning Web site, unfortunately, are probably not aware of the differences in interpretation.

Table 2 Interpretation of effect sizes in study 2

Grade	Effect size	Renlearn	Authors	Cohen
3	0.36	“large”	“strong”	between small and moderate
4	0.16	“moderate”	“small to moderate”	less than small
5,6	.09, .09	“small, positive”	“no effect”	less than small

Cohen’s benchmarks: .2 = small; .5 = medium; .8 large Authors’ quotes from Nunnery et al. 2006

Is Accelerated Reader Harmful?

As is the case in other studies of AR, we must ask what AR was compared to. Comparisons had “sustained silent reading,” but we are not told how much. We are also told that a “commercially available basal reading program” (Ross et al. 2006, p. 7) was used and that students participated in “small- and whole-group activities” (p. 7). It is thus doubtful that comparisons put in anywhere near as much time reading as the experimental group did: SSR is usually 10 to 20 minutes per day. Ross et al. report that 80 percent of AR teachers said they devoted at least 45 minutes per day to reading, and 95 percent said reading time was at least 30 minutes.

Is Accelerated Reader Harmful?

The results of this study and the results of others in which AR was no better than comparisons suggest that AR can be harmful: The AR students had more time to read, but did not do better. How can this be so? I suspect it is because of the tests.

It is possible that the use of AR tests emphasizing low-level, literal facts focused students on retaining small details of the books they read in order to achieve higher scores on tests. This means shallower involvement in reading and a smaller chance of entering the “Reading Zone” (Atwell 2007), the state of mind that readers are in when they are absorbed in a text. This state may be optimal for language acquisition and literacy development (Krashen 2007b). A shorter time reading, but spent in the Reading Zone, may be more effective than more reading outside the Zone.

There is another very serious problem. Kohn (1999) notes that “reading management” programs such as AR provide a reward for an activity that is already enjoyable, an extrinsic reward for something that is intrinsically pleasurable. When we do this, we run the danger of sending the message that the activity is not enjoyable, that nobody would do it without being bribed. A substantial amount of evidence shows that by giving children rewards inappropriately, we can “turn play into work” (Kohn 1999).

A Jump-Start?

Should We Reward Recreational Reading?

It has been suggested that programs such as AR can “jump-start” reading, that the pleasure of reading will replace rewards once children discover how interesting books are. So far, there is no evidence that this takes place, no evidence that reluctant readers become dedicated readers because of incentives.

As part of a larger study, Robbins and Thompson (1991) examined the progress of seven low-achieving readers who participated in their reading incentive program. For at least four of the seven low achievers, the incentive program had no lasting effect. One low achiever, Walter, continued reading after the program ended (p. 67), but Timmy “didn’t do much reaing . . . once the summer reading program ended” (p. 65). Octavious earned all his points in the first few weeks, then his reading “slowed considerably” (p. 71). Sann “found little time for reading and library visits . . . as the summer ended” (p. 73). The incentive program clearly had no impact on Jason, who remained a reluctant reader (p. 69). Robbins and Thompson’s analysis thus suggests that rewards do not “jump-start” reading interest (see also McQuillan 1997 for additional studies).

The Cost

At the time of this writing, AR software, without books, costs a school \$4 U.S. per student per year, in addition to a one-time fee of \$1,499. The average school library in the United States spends about \$12 per year per student on books (calculated from 2004–5 data in Schontz and Farmer 2007). Many schools in the United States, in other words, are

spending the equivalent of one-third of their book budget on software that has not produced any concrete evidence that it helps children.

Alternatives

Why even consider spending this kind of money without first trying more obvious means of encouraging reading? Wang and Lee (2007) easily and naturally combined several well-supported approaches into one to encourage reading among children in EFL classes in Taiwan, devoting a great deal of time to read-alouds for several years, which stimulated interest in books—especially series books such as Marvin Redpost—that the students read eagerly during sustained silent reading. Approaches like this one make much more sense.

References

Atwell, N. 2007. *The reading zone*. New York: Scholastic. Cohen, J. 1988. *Statistical power for the behavioral sciences*. 2nd ed. Hillsdale, NJ: Erlbaum.

Kim, J., and S. Krashen. 2000. Another home run. *California English* 6(2): 25

Kohn, A. 1999. *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes*. 2nd ed. Boston: Houghton Mifflin.

Krashen, S. 2003. The (lack of) experimental evidence supporting the use of accelerated reader. *Journal of Children's Literature* 29(2): 9, 16–30.

Krashen, S. 2004. *The Power of reading*. Westport, CT: Libraries Unlimited and Portsmouth, NH: Heinemann.

Krashen, S. 2005. Accelerated reader: Evidence still lacking. *Knowledge Quest* 33(3): 48–49.

Krashen, S. 2007a. Accelerated reader: Once again, evidence still lacking. *Knowledge Quest* 36(1).

Krashen, S. 2007b. Hypotheses about free voluntary reading. In *The Proceedings of 2007 International Conference and Workshop on TEFL & Applied Linguistics, Department of Applied English, Ming Chuan University, Taiwan*, ed. J. Myers and J. Linzmeier, Taipei: Crane Publishing Company, pp. 656–58.

McQuillan, J. 1997. The effects of incentives on reading. *Reading Research and Instruction* 36: 111–125.

Nunnery, J., S. Ross, and A. McDonald 2006. A randomized experimental evaluation of the impact of Accelerated Reader/Reading Renaissance implementation on reading achievement in grades 3 to 6. *Journal of Education for Students Placed at Risk* 11(1): 1–18. Renaissance Learning 2007. Press release, July 18, 2007.

Robbins, E., and L. Thompson. 1991. A study of the Indianapolis-Marion County public library's summer reading program for children. ERIC Document ED 355 647.

Ross, S., J. Nunnery, and E. Goldfeder. 2004. *A randomized experiment on the effects of Accelerated Reader/Reading Renaissance in an urban school district: Preliminary evaluation report*. Memphis: The University of Memphis, Center for Research in Educational Policy.

Schontz, M., and L. Farmer. 2007. The SLJ spending survey. *School Library Journal* 53(1): 44–51.

Trelease, J. 2006. *The read-aloud handbook*. 6th ed. New York: Penguin.

Ujiie, J., and S. Krashen. 2002. Home run books and reading enjoyment. *Knowledge Quest*, 31(1): 36–37.

Von Sprecken, D., J. Kim, and S. Krashen. 2000. The home run book: Can one positive reading experience create a reader? *California School Library Journal* 23(2): 8–9.

Wang, F. Y., and S. Y. Lee. 2007. Storytelling is the bridge. *International Journal of Foreign Language Teaching* 3(2): 30–35.