

Students At Risk and With Learning Disabilities Benefit From Accelerated Reader Use

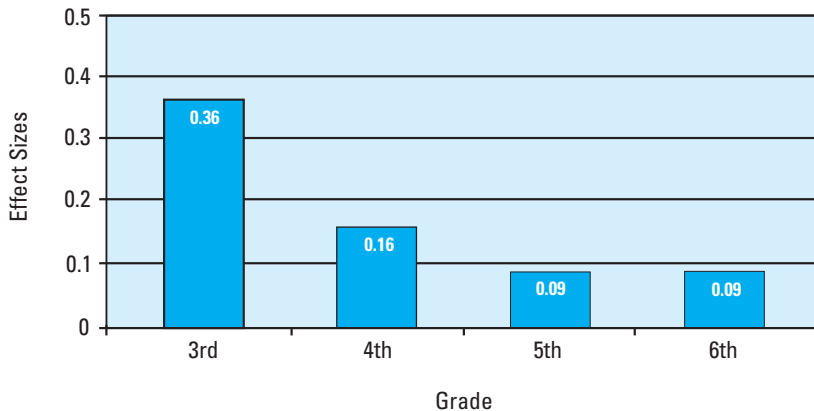
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Technical Report: Ross, S. M., Nunnery, J., & Goldfeder, E. (2004). *A randomized experiment on the effects of Accelerated Reader/Reading Renaissance in an urban school district: Final evaluation report*. Memphis, TN: University of Memphis, Center for Research in Educational Policy.

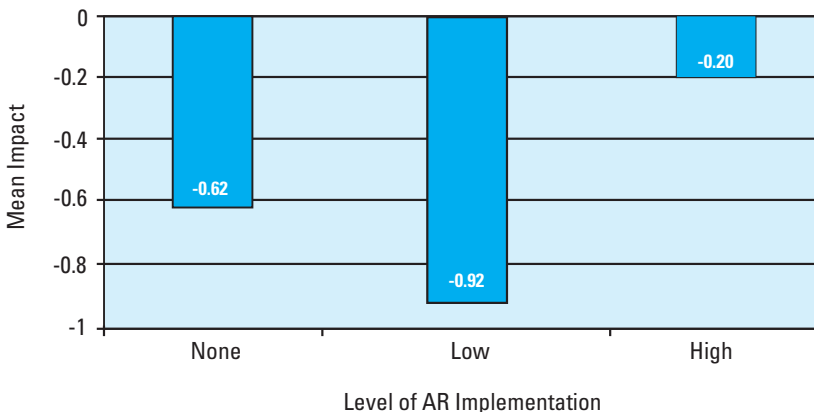
Introduction

Accelerated Reader (AR), when used with Renaissance Learning’s recommended best classroom practices, improved the STAR Reading scores of at-risk students in third through sixth grades. Students with learning disabilities improved the most when AR was highly implemented according to the best classroom practices.

Effect Sizes of AR by Grade Level



Impact of Learning Disability



(more information on back)

Main Findings

- At-risk students in third through sixth grades benefited from the implementation of Accelerated Reader (AR) and Renaissance Learning’s recommended best classroom practices.
- Students with learning disabilities benefited most in classrooms with high-implementation of AR compared to those in low- or no-implementation classrooms.

Demographics

Urban
Free or reduced lunch: 83%
African American: 90%
Learning disability: 3.3%

Researcher Background

John A. Nunnery, Ph.D., is currently Assistant Professor of Educational Leadership at Old Dominion University where he teaches program evaluation, planning, and advanced statistics. He received an Ed.D. in Educational Psychology and Research from the University of Memphis in 1995. Since then, he has published over 20 research articles in peer-reviewed journals.

Steven M. Ross, Ph.D., is a Faudree Professor and Executive Director of the Center for Research in Educational Policy at the University of Memphis. He received his doctorate in educational psychology from Pennsylvania State University. Dr. Ross is the author of six textbooks and over 120 journal articles in the areas of educational technology and instructional design, at-risk learners, educational reform, computer-based instruction,

Study Description

For this study, the researchers asked three questions: How does implementation of Accelerated Reader with best practices affect the growth in reading achievement of at-risk students? Does degree of implementation affect growth in reading achievement? How does degree of implementation affect the growth of students with learning disabilities?

To answer these questions, the researchers recruited 44 teachers with 978 students from one of nine large urban schools in the southern United States. Teachers were randomly assigned to either continue with their regular curriculum or to incorporate AR and best classroom practices into their curriculum. The district involved required a 90-minute reading block in all classes and set a goal of 25 books read per student. Additionally, each classroom using AR received on-site consulting once a month.

Accelerated Reader is a computerized, continuous progress-monitoring tool that promotes guided independent reading practice by providing feedback on the comprehension of books read. AR works in conjunction with regular classroom instruction. The best classroom practices used in this study included providing at least 60 minutes of reading practice per day, using reading logs, identifying appropriate ZPD ranges, and using diagnostic reports.

STAR Reading is a reliable and valid, computer-adaptive assessment of general reading achievement. In order to measure reading growth, the researchers administered STAR Reading to each student at the beginning, mid-point, and end of the study and included these results in a three-level hierarchical linear model. The first level of the model compared students with their own reading growth over time, the second compared students within each class to one another, and the third compared students in each class to other classes.

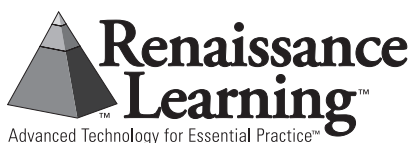
Results

Students that used Accelerated Reader had significantly higher growth rates in reading compared to students in classrooms that used regular curriculum alone. The researchers compared the effect sizes found in this study to the effect sizes found in group comparison studies of CSR models, including Direct Instruction ($d=0.15$), the School Development Program ($d=0.05$), and success for all ($d=0.18$). They concluded that the effect sizes reported here demonstrated a large positive impact of AR among students in third grade ($d=0.36$), a moderate positive impact among students in fourth grade ($d=0.16$), and a small positive impact among students in fifth and sixth grade ($d=.09$). (See Graph 1.)

The degree of implementation did not predict student performance more than simply knowing if the students were in the AR classrooms. On the other hand, the degree of implementation was useful in predicting how well students with learning disabilities performed. That is, students with learning disabilities were affected less by their disabilities when AR was well implemented (see Graph 2), while similar students in the control classrooms and low-implementing classrooms did not experience a significant reduction in the effect of their disabilities.

Conclusion

The reading achievement of at-risk third- through sixth-grade students in Accelerated Reader classrooms increased more than the reading achievement of students in comparison classrooms. In addition, students with learning disabilities benefited most in classrooms that implemented Renaissance Learning's best classroom practices to a high degree. It is exceedingly important to implement AR according to the best practice recommendations set forth by Renaissance Learning so that all students benefit from the use of Accelerated Reader.



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