Consistent AR™ use helps improve reading scores for hard-of-hearing students

Introduction
To find possible causes for delays in learning to read experienced by deaf children, this study examined factors thought to be crucial in improving their reading achievement, such as motivation and engagement. The study author looked at demographic and educational variables as well as the number of books read through Accelerated Reader (AR) in a residential school for the deaf. The goal was to determine the relationship of these variables to reading comprehension as measured by STAR Reading and the Stanford Achievement Test.

Research questions
1. Is there a relationship between number of books read in AR and students’ performance on STAR Reading?
2. Is there a relationship between number of books read in AR and students’ performance on the Stanford Achievement Test?
3. What is the extent and amount of effect of language-learning background variables, including number of AR books read, on performance on STAR Reading and the Stanford Achievement Test?

Study description
This study collected data over 4 school years from 55 deaf and hard-of-hearing students who attended a residential school for the deaf in the southeastern United States.

Test scores were correlated to background variables such as IQ, parent sign-language competency, total number of books read, and hearing loss. Statistical analysis identified factors that affect the efficacy of Accelerated Reader with students who are deaf and hard of hearing.

Data was collected from the standardized STAR Reading assessment, which was given three times per academic year, and the Stanford Achievement Test. In addition, information from student records was used to document basic demographic information, and a survey was used to obtain parent sign-language-competency data.

Results
When results were examined over time, there was a significant correlation between the number of books read/AR quizzes passed and performance on STAR Reading and the Stanford Achievement Test. Although the number of books read as part of the AR program in 2003 demonstrated no significant correlation with performance on STAR Reading or the Stanford Achievement Test in 2003 or 2004, significant relationships emerged in 2005 and continued through 2007 (see figure, next page).
Correlations between number of books read in AR™ and performance on STAR Reading™ (2003–2007)

When examining individual background variables, several characteristics demonstrated a significant correlation: IQ, ethnicity, and degrees of hearing loss. Caucasian students performed high on both assessments compared to their African American peers, as did students with higher IQs. Students with less significant hearing loss consistently performed high on the performance assessments, and so did children of deaf parents.

Conclusion

When comparing results over time, a steady relationship was seen between the number of books read/quizzes passed as part of the AR program and students’ results on STAR Reading and the Stanford Achievement Test. This suggested that consistent use of AR and reading motivation helped improve reading scores for the study students.