

## Computerized Self-Assessment of Reading Comprehension with the Accelerated Reader®: Impact on Reading Achievement and Attitude<sup>1</sup>

Excerpts from an original study by S.R. Vollands, K.J. Topping, and H.M. Evans

### Study Description

Two elementary schools in Aberdeen, Scotland, implemented Accelerated Reader (AR™) as part of a UK pilot program. The student population consisted of mixed abilities including special education and students learning English as a second language. The schools were located in a low socio-economic area and were divided into two separate project studies—A and B. Teachers received training in a single day and had access to approximately 100 AR book titles. Two standardized tests, the Shortened Edinburgh group reading test of silent reading comprehension and the Neale test of oral reading accuracy and reading comprehension, were administered to all students in both projects at the end of the six-month experimental period.

Project A school contained two sixth-grade classes—AR and non-AR. The non-AR control group included 12 students whose reading skills were comparable to the 27 students in the AR class. During the first five weeks of the six-month project, the AR students received only 15 minutes of class reading time per day. This reading time was increased to 30 minutes of “reading independently” time, combined with 30 minutes of “reading to” time provided by the classroom teacher. Some Duolog Reading™ was also incorporated into the AR class. The 12 students in the control group were given regular classroom instruction with 30 minutes of class reading time per day. Likewise, these students gave written feedback on the completed books they read to the teacher.

Project B school included an AR class of 24 sixth-graders and a non-AR class of 26 fifth-graders. AR implementation with Project B was more problematic than that of Project A, because Project B’s AR students received only 20-30 minutes of reading time per day, and no other Reading Renaissance® techniques were

incorporated. The control group for Project B consisted of an alternative treatment (AT) class of younger, more able readers. The AT class was given 15 minutes of silent reading time per day, along with 20 minutes of group oral reading 1 to 3 times per week. The AT students were also required to do many homework assignments and supplemental exercises in conjunction with regular classroom reading instruction.

### Results

#### Project A

By the end of the six months, the AR students showed significant gains on both the Edinburgh reading comprehension test and the Neale reading accuracy test. The control students did not show significant gains. The AR students also showed significantly higher gains than the control students on the comprehension portion of the Neale test. Likewise, the AR students showed greater improvement in reading attitudes than the control students. This improvement was particularly significant for girls in the AR classes.

#### Project B

Both the AR and AT students showed significantly higher gains on the Edinburgh reading comprehension test, while only the AR students showed significant growth on the reading comprehension portion of the Neale test. Overall, better test results were obtained for the AR students, even though they received far less reading time than their AT counterparts. Furthermore, AR students obtained better test results, despite the fact that the AT program was much more labor-intensive for the classroom teacher. AR was thus seen as being more cost-effective. Significant improvements in reading attitudes were noted as well for girls.

<sup>1</sup>Reading and Writing Quarterly. (1999). 15(2), (theme issue on electronic literacy).

### School Profile

Aberdeen, Scotland

### Educator Backgrounds

**Stacy R. Vollands**, a school psychologist in Scotland, was the primary researcher for this project<sup>1</sup>. She has taught in the United States, Europe, and Japan, and now resides in Texas. **Dr. Keith J. Topping** is the Director at the Centre for Paired Learning, Department of Psychology, University of Dundee, Scotland. He developed the Duolog Reading technique that is an integral part of the Reading Renaissance program.

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