QuickReads®

A Research-Based Fluency Program

Research Compendium

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Dr. Marilyn Jager Adams, Chief Scientist of Soliloquy Learning Inc., is internationally regarded for research and applied work in cognition and education. Recipient of the American Educational Research Association's Sylvia Scribner Award for outstanding research, Dr. Adams's contributions include the landmark book *Beginning to Read: Thinking and Learning About Print* (MIT Presss). *The QuickReads Technology Edition* is powered by Soliloquy Learning's speech-recognition technology, which was founded on Dr. Adams's research and developed with her leadership. Dr. Adams is cited in the 2000 Politics and Education Yearbook as one of the five most influential people in the national reading policy arena.

QuickReads® Research Compendium

CHAPTER 1
Fluency and the Reading Challenge

Approximately 8 million of the 32.5 million students in fourth through twelfth grade read below the minimum or "basic" standards for their grade level set by the National Assessment of Educational Progress (analysis of the National Center for Educational Statistics, 2003). This is a staggering statistic that has received even more attention with the advent of the No Child Left Behind legislation and the increasing demands on districts to demonstrate adequate yearly progress. To this end, important findings from the latest educational research can prove indispensable to educators assisting them as they make the most effective instructional decisions for the students they serve.

The biggest obstacle to proficient reading for many students is fluency—the ability to read a text accurately, quickly, and with proper expression. Studies show that even the students in the lowest percentiles can recognize most words. . .eventually. The problem lies in the length of time it takes readers to recognize even common words. Struggling readers devote their energies to recognizing words, thus forgetting the content of what they are reading.

To raise proficiency and increase comprehension, educators must ensure that students have a solid foundation in reading. This foundation is the ability for students to read fluently and accurately so that they have enough cognitive capacity to apply to comprehension. According to the National Institute of Child Health and Human Development's (NICHD) report of the National Reading Panel findings (2000), direct instruction in fluency can improve students' comprehension. In fact, without it, there is no comprehension strategy that can be taught that compensates for difficulty in reading words accurately and fluently. Simply put, fluency is the essential bridge to comprehension. Research demonstrates that "repeated reading interventions that were combined with comprehension activities enhanced both fluency and comprehension" (Chard, Vaughn, and Tyler, 2002).

Instructional Procedures and Strategies for Developing Fluency

Research consistently shows that students must be able to read a text fluently in order to comprehend what they read. Many studies have found that students' reading achievement also depends on the amount of time they spend reading. Ultimately, students who read more, read better. However there are also multiple instructional approaches that can be used in the classroom to develop fluency among students. CIERA's publication, *Put Reading First: The Research Building Blocks for Teaching Children to Read* (2001), outlines these procedures and strategies.

These instructional strategies include providing students with models of fluent reading and having students read passages repeatedly. The report also suggests that the text should always be at students' independent reading level in which students read with about 95 percent accuracy. This ensures students focus on comprehension, not word recognition. Lastly, monitoring student progress not only allows for determining the effectiveness of fluency practice, but also serves as motivation for students.

Modeling Fluent Reading

By listening to a model of fluent reading, students hear how a text should sound. Such models show students that written text can make sense. When selecting a text to model fluency, the text should always be at a students' independent reading level. In other words, students should be able to read the text with 95 percent accuracy. It is important to select a text within students' independent reading level so they can use the text to practice reading on thier own. Having students listen, then practice reading a text also provides

opportunities for students to engage in repeated reading. Repeated reading is another strategy for developing fluency.

Repeated Oral Reading

Repeated reading involves having a student repeatedly read the same text. Reading the text about four times is usually adequate to improve fluency. There are multiple ways for students to participate in repeated oral reading in the classroom.

Students can read one-on-one with the instructor. The instructor can model fluent reading first, then ask the student to reread the passage. Assistance should be provided until the student is capable of reading the passage fluently.

Choral reading allows all students to participate in repeated reading. After the text is modeled, students should repeat the text as a group.

Tape-assisted or software-assisted reading lets students hear a text being read fluently while they follow along with a book. After students listen to the text, they can read along with tape or computer. Students should practice reading along with the tape or computer until they are capable of reading the text fluently without assistance.

CHAPTER 2
The Role of Text in Fluency Development

The National Reading Panel (NICHD, 2000) recommended multiple teaching strategies and procedures to help students increase their reading fluency. What was not explicitly considered was the role of text itself in fostering fluency. Hiebert and Fisher (2005) examined the research that was reviewed by the NRP and identified only two studies that addressed the role of text in fluency development. It was ascertained that both the instructional strategies and the type of text are imperative in helping students learn to read fluently. Texts that include a high percentage of words that appear infrequently can also be an obstacle for fluency development (Hiebert and Fisher, 2005).

The *Text Elements by Task* (TExT) model developed by Hiebert and colleagues, focuses on two features of a text: linguistic content and cognitive load. Linguistic content refers to the percentages of two kinds of words that give an indication of the difficulty of a text. The first is the percentage of words that account for the majority of high-frequency words in written English, such as *the* and *which*, and words with common, consistent vowel patterns, such as *stay* and *play* or *plan and man*. The second kind of word—words that are rare and frequently multisyllabic, such as *persimmons* and *warthog*—often challenge students. Cognitive load refers to the rate at which new words are introduced into a text. A beginning or struggling student might be able to read with a degree of automaticity if, for every 100 words of text, there are 10 words introduced into the text. If the figure at which new words is introduced is 25 or 30 per 100 words, the task may become overwhelming for a beginning or struggling reader, especially if 5 or more of these words are challenging.

The TExT model addresses how text supports or detracts from automatic word recognition for beginning and struggling readers. Students are not able to read fluently and comprehend a text if they have to constantly stop and decode many unfamiliar words. Furthermore, if these words appear only rarely in a text, it is unlikely that students will learn the meaning of the words. These rare, unrepeated words can serve as obstacles even if students read the text repeatedly (Hiebert, 2006).

Research on the Effect of Text on Developing Fluency

Dr. Hiebert's research demonstrates that teaching strategies and instruction are imperative to developing fluent readers and that the type of text students read is crucial in developing students' fluency and comprehension. Literature is critical in achieving the goals of strategic thinking and vocabulary building. Text with few rare, multisyllabic words is also useful in increasing students' fluency with core words which account for significant percentages of the total words in text (Hiebert, 2006). The following summaries of two studies conducted by Dr. Hiebert examine the effect of text on comprehension and fluency in second grade students.

Study 1:
Text Can Support Improved Reading Rate

This study involved a sample of second grade students with three conditions. In one of the treatment conditions, students repeatedly read texts from the district's literature-based reading program, *Literature Works*. In the

[1] Elfrieda Hiebert an author of *QuickReads*® and *Literature Works*.

second treatment condition, students repeatedly read texts from a set of scaffolded social studies and science texts, *QuickReads*®.[1] On both features of linguistic content and cognitive load, the *QuickReads*® texts were more accessible to struggling readers than the basal literature texts. The *QuickReads*® texts had substantially fewer different words in every 100 words and substantially more (25%) high-frequency words than the basal literature texts. The biggest difference between the two texts was in the number of rare multisyllabic words: 19 percent for the literature in the basal and 1 percent in *QuickReads*®.

Both of these treatment conditions implemented the Fluency-Orientated Reading Instruction (FORI) model (Stahl, & Heubach, 2005), which calls for teachers to model the text for students, conduct comprehension activities, and review key vocabulary words. The third group, the control condition, read from the district's literature-based reading program but did not implement the FORI model. Due to a mandatory 75-minute daily reading period in the school using the literature-based reading program, students reading the content-specific scaffolded texts had less opportunity for repeated reading than students in the literature condition. Both treatment conditions performed better than the control group in comprehension, but they did not perform significantly different from each other. However, the students reading the set of social studies and science scaffolded texts did make greater gains in reading rate than students who repeatedly read with the literature text. Results also indicated that students had greater performance gains when reading content-specific, scaffolded texts in shorter amounts of time than when reading for longer periods from a literature program.

Study 2: Text Can Support Improved Comprehension

This second study is similar to the first, but the implementation time was 10 weeks, or half of the time of the first study. The two treatment conditions remained the same. One treatment condition repeatedly read from a literature program with a high number of rare words, while the second treatment condition repeatedly read from a set of science and social studies scaffolded texts. These texts also had few difficult words, and all difficult words always appeared more than once. Teachers once again followed the FORI (Stahl, Heubach, & Cramond, 1997) model. Following this initial read of the text modeled by the teachers, and the subsequent review, partner rereading of the text occurred, then choral or echo reading, followed by additional comprehension activities. The gains for students using the *QuickReads*® texts were greater than those of the basal literature group for both number of words read correctly per minute and for comprehension.

While both of the studies were small and had a short implementation period and small sample size, they showed impressive results. These studies represent a very important stepping stone for further research of the significant effect text can have on fluency and comprehension development.

The *QuickReads*® Pedagogy

The text used in these research studies was developed into *QuickReads*®—a research-based and classroom-validated program that systematically increases fluency, builds vocabulary and background knowledge, and improves comprehension. The instructional routine not only includes modeling fluency and repeated oral reading, but also uses specially developed texts that feature minimal rare, multisyllabic words. In addition, *QuickReads*® offers meaningful motivation. Students fill out self-check graphs and track their progress as they become more fluent readers. Also, they read high-interest, engaging topics that are correlated to National science and social studies curricula at each grade level.

QuickReads® Increases Fluency Development

In the *QuickReads*® texts, 98 percent of the words are a combination of high-frequency words and words with grade-appropriate phonic/syllabic patterns. Text that is deliberately constructed using this 98 percent model contrasts with current textbook and intervention programs, in which 10 to 15 percent of the words typically fall outside the grade-level curriculum. The remaining two percent of the words in *QuickReads*® are taken from critical vocabulary in social studies and science and are always repeated. Such repetition allows students to fluently read a word that was difficult when first encountered. In this way, *QuickReads*® creates a cross-curricular benefit in teaching content-area vocabulary and fluency development.

QuickReads® Supports Meaningful Reading

While slow reading often means poor comprehension, "fast reading" does not ensure that students are thinking critically about what they read. The National Reading Panel (2000) concluded that comprehension can be taught, and also described how it can be taught. Consistent comprehension strategies, the panel reported, are critical.

To help students read with meaning, *QuickReads*® applies a consistent comprehension strategy. Before students read, they predict content based on the passage title and scan the text for new vocabulary. They read the passage for the first time, clarify confusing points, and review the author's ideas. Then they note some points to remember on a graphic organizer. During the second read, they listen to a fluent reading of the passage to help them model reading behavior. After the third read, students assess their reading speed, identify the passage's main idea, and summarize the text. Once they read all five passages on a topic, students check their comprehension and solidify their background knowledge by answering questions designed to elicit connections.

QuickReads® Supports Gaining and Recalling Content Knowledge

Learning to make meaning from informational text increases both reading fluency and content knowledge. Fluent readers gain background knowledge that their struggling peers do not simply because they read more. In so doing, fluent readers are exposed to more new words and ideas. Thus, students who are not fluent continue to fall further behind their fluent peers.

To address this widening achievement gap, *QuickReads*® presents nonfiction information that students might encounter in science and social studies textbooks. In this way, students experience success with reading and gain background knowledge that will be useful in future reading in these important content areas.

Traditionally, programs for struggling readers have consisted of a variety of unrelated topics. In *QuickReads*®, the approach features multiple passages clustered around a small number of topics in the critical domains of social studies and science. This structure allows students to explore a topic in-depth and build a body of knowledge that they can draw upon when they read their content-area texts.

CHAPTER 3
The Latest Efficacy Studies:
A Summary of Gains Made With *QuickReads*®

Through a unique combination of specially developed texts and a consistent instructional routine, *QuickReads*® results in improved reading proficiency for students at all ability levels. Available in both print and technology editions, students using *QuickReads*® and the *QuickReads*® *Technology Edition* have the advantage of using an effective program that lays the groundwork for successful reading. Both the print and technology editions have been proven to produce significant gains in comprehension, oral reading fluency, and vocabulary. The following two studies just conducted on the efficacy of *QuickReads*® further demonstrate the effectiveness of the program. The first study, *Teaching Fluency: An Experimental Study of the* QuickReads® *Programs,* was conducted by The Great Plains Institute of Reading and Writing at the University of Nebraska-Lincoln. The second study was conducted by Dr. Marilyn Jager Adams and can be found in her article, *The Promise of Automatic Speech Recognition for Fostering Literacy Growth in Children and Adults*, published in the International Handbook of Literacy and Technology. The following are summaries of each study. The full reports can be found at www.pearsonlearning.com.

Teaching Fluency:
An Experimental Study of the *QuickReads*® Programs

Abstract

In this large-scale randomized control trial study, the *QuickReads*® print and technology editions were implemented during the 2005-2006 school year in a large midwest school district. The study compared the efficacy of the *QuickReads*® intervention for all students using the print edition, the integrated technology edition and the print edition, and a control condition. In the treatment conditions, students receiving *QuickReads*® instruction showed strong growth in oral reading fluency, vocabulary, and comprehension.

Methods
Design

This efficacy study was designed as an experimental, randomized control trial. Students and teachers were assigned to one of three conditions. These conditions included a *QuickReads*® print edition condition, a *QuickReads*® print and technology condition, and a control condition, in which teachers used district-recommended fluency instruction.

Teachers assigned to the *QuickReads*® print group attended a one-hour training session conducted by the research team. Teachers from the *QuickReads*® print and technology group received a three-hour training session. The implementation followed the implementation guidelines for *QuickReads*® as found in the Teacher's Resource Manuals for the program.

Participants

A total of 1,484 students in grades two through five participated in this study. The classrooms ranged in size from 14 to 26 students, with a total of 72 classrooms participating. The sample was representative of high, middle, and low SES, including White Non-Hispanic, African American, Hispanic American, Asian, and Native American students.

Instruments

Three assessments were used to pre-, mid-, and post-test students in the areas of comprehension, oral reading fluency, vocabulary, and word reading. Assessments were administered in October for pre-testing, in the second and third week of February for mid-testing, and the last weeks of March or first two weeks of April for post-testing.

Gates-MacGinitie Reading Comprehension: This group-administered reading comprehension subtest is used to measure students' abilities to comprehend different types of texts.

DIBELS: This individually administered test of accuracy and rate with connected text is used to identify students who may need additional instructional support and to monitor progress toward instructional goals.

Interactive Reading Assessment System – Revised (IRAS-R): This individually administered informal reading inventory determines students' reading strengths and weaknesses.

Implementation

Teachers were to follow the model in the Teacher's Resource Manuals for *QuickReads*® implementation. Teachers spent at least 15 minutes at a time, three days a week on *QuickReads*® instruction. Implementation was monitored by the research team via weekly implementation logs and the site observations. Based on an analysis conducted on these measures, the research team was able to conclude that overall fidelity was high.

Results
Reading Fluency

Results were analyzed using a Hierarchical Linear Growth Model. Students were assessed three times during the school year with the DIBELS Oral Reading Fluency measure. Curriculum was a significant interaction, showing that the growth slope for students using *QuickReads*® was steeper across all grades, indicating a higher gain for these students than the control group. Although students in the *QuickReads*® print and technology condition did have higher gains than the *QuickReads*® print group, the gains were not significant.
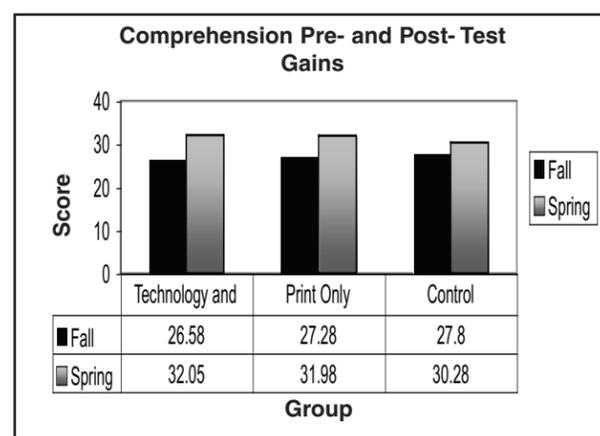
Vocabulary

Results were analyzed using a Hierarchical Linear Growth Model. Students were assessed three times during the school year with the IRAS-R. Students in both *QuickReads*® conditions, print and print plus technology, performed better than students in the control condition.
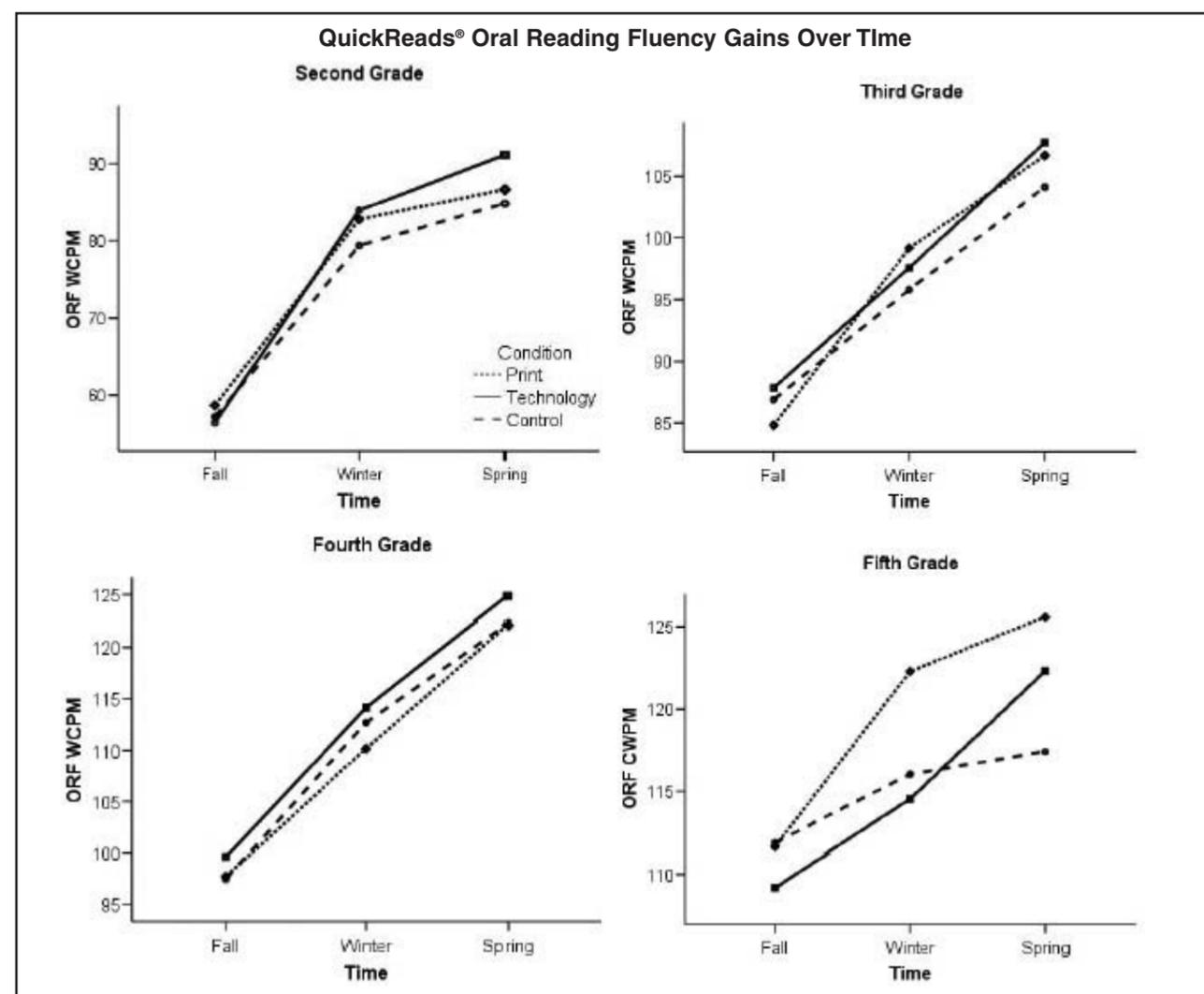
Comprehension

Results were analyzed using a Mixed Linear Model. Students were assessed at the beginning and end of the school year with the Gates-MacGinitie Comprehension subtest. The condition groups using *QuickReads®* performed significantly better than the control group. Although students in the condition using both the print and technology edition did score higher than the print group, the gain was not significant.

Comprehension Pre- and Post- Test Gains

Group	Technology and	Print Only	Control
Fall	26.58	27.28	27.8
Spring	32.05	31.98	30.28

Post-test results of comprehension across the three conditions.

QuickReads® Oral Reading Fluency Gains Over TIme

Second Grade

Third Grade

Condition
···· Print
— Technology
- - Control

Fourth Grade

Fifth Grade

Discussion

This study has shown that fluency training was a significant factor in predicting the growth slope of student reading fluency, comprehension, and vocabulary development. Furthermore results showed *QuickReads®* is an effective strategy for all students in grades two through five across diverse achievement groups, SES, ethnicities, and language learners. In addition to recognizing the significant growth in their students, teachers commented that the use of *QuickReads®* was highly motivating for students and easy for them to implement. Conducting this large-scale, experimental study is an important stride in validating instructional materials. Although this process is never simple, the success of this study is very encouraging: actively instructing fluency using appropriate, proven resources does help to close the achievement gap.

***QuickReads®* Efficacy Study Results**

Student Post-test Performance

Oral Reading Fluency: 19.27, 12.8
Comprehension: 5.08, 2.46
Vocabulary: 0.84, 0.58

☐ Oral Reading QuickReads ■ Oral Reading Control
☐ Comprehension QuickReads ■ Comprehension Control
☐ Vocabulary QuickReads ■ Vocabulary Control

Average gains made by the condition groups versus the control group as measured by DIBELS, Gates-MacGinitie and, IRAS-R respectively.

The Promise of Automatic Speech Recognition for Fostering Literacy Growth in Children and Adults

Abstract

In this small-scale efficacy study, students used *Reading Assistant*/QuickReads® Technology Edition* for approximately twenty 30-minute sessions from December through February. In addition to *QuickReads®*, students read trade-book titles from Charlesbridge Publishing's *Insights* collection in March. The purpose of the study was to determine if having students read a few more minutes per week with the help of the *Reading Assistant/ QuickReads® Technology Edition* would increase students reading growth. After 17 weeks, fluency gains were significantly better for students who used *Reading Assistant/QuickReads® Technology Edition*.
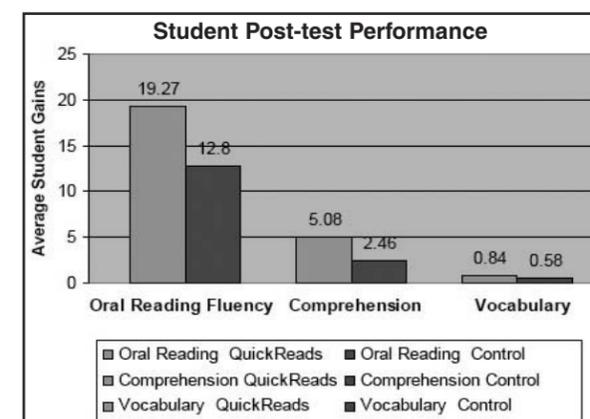
Methods

Design

This study consisted of a control and a treatment group. The treatment group received *Reading Assistant/ QuickReads® Technology Edition* software instruction. The treatment was matched to the control group through achievement test profiles and demographic information.

Participants

A total of 21 teachers and 410 students from two Framingham, MA, schools participated in this study. The grade span was from second to fifth grades. The control condition consisted of 182 students, while the treatment condition consisted of 228 students.

*The *Reading Assistant,* based upon the scientific research of Dr. Marilyn Jager Adams is the speech-recognition technology platform upon which the *QuickReads® Technology Edition* was built.

Instruments

The Edformation's Standard Oral Reading Fluency Assessment Passages were used to pre-test and post-test the students. This individually administered assessment measures fluency.

Implementation

Students using *Reading Assistant/QuickReads® Technology Edition* reported to the computer lab at least twice a week for 30-minute sessions. Implementation was measured though periodic visits and student records maintained by the software. Through further implementation analysis, it was found that even though students were reporting to the lab for 30 minutes at a time, the actual time on task of reading averaged about 8 minutes per session. The remaining time in the lab was filled with activities such as comprehension, reviews of progress and problems, and text and task discussions.

Results

An initial analysis indicated overall beginning reading levels of all students participating in the study, regardless of condition, were comparable. The main effect for this analysis was not significant, indicating the groups were equal.

Fluency gains were significantly greater for those students in the *Reading Assistant*/QuickReads® Technology Edition* condition than those students in the control condition.

The students using *Reading Assistant/QuickReads® Technology Edition* were also compared to normative expectations. Fall-to-spring gains from each norm were adjusted by the total number of weeks between pre- and post-test data for students receiving the software. Again, the students who used *Reading Assistant/QuickReads® Technology Edition* had consistently greater gains than what was predicted from the norms.

Discussion

The purpose of this study was to determine if students using the *Reading Assistant/QuickReads® Technology Edition* to read a few more minutes per week would improve their reading. Not only did it find students using the software had significantly greater gains than the control group, but also that the time it took in additional practice to achieve these gains was less than perceived. As mentioned by the software, although students only spent an average of eight minutes per each computer lab session reading, fluency increased significantly.

Although this was a small-scale study, the impressive results over such a limited time warrant future research into the effectiveness of technology in helping students increase their reading skills.

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*The *Reading Assistant* is property of *Soliloquy Learning* and serves as the technology platform on which *QuickReads®* content was launched.