

Improving the reading and language skills of middle school striving readers and English language learners:

A study of the effectiveness of *Inside Language, Literacy, and Content*

2008–2009



This research was conducted by SEG Research, an independent educational research firm located in New Hope, Pennsylvania. SEG research provides research, evaluation, and assessment services to educational publishers, educational technology providers, assessment service providers and government agencies. SEG has been meeting the research and assessment needs of organizations since 1979.

Background and Purpose

During the 2008-2009 school year, SEG Research conducted a national study of students in grades six through eight to evaluate the effectiveness of *Inside Language, Literacy, and Content*, an intensive reading/language arts program for striving readers and English language learners, published by National Geographic School Publishing. *Inside* provides comprehensive instruction and accessible content for middle school students who have not mastered essential reading, writing, and language skills and who are typically reading two or more years below grade level.

Inside covers national English Language Arts Standards and English Language Development Standards with a spiraling curriculum and overlapping readabilities designed to quickly and effectively move students to grade level achievement. *Inside* equips students with the skills they need to succeed in an academic environment through use of systematic teaching and active participation. The direct, spiraling instruction in text structures, reading strategies, comprehension skills, language, vocabulary, and writing moves students through the levels to academic success.

Inside is designed to motivate early adolescent readers by including engaging, high-interest, multicultural literature and compelling nonfiction selections, presented in thematic units organized around Guiding Questions—big ideas that are relevant to students. *Inside* presents a wide variety of classic and contemporary texts—literary, informational, persuasive, and functional—that spark the desire to learn, bring delight, and inspire compassion, reaching the diverse interests of students at just the right reading level.

The goal of this study was to evaluate the effectiveness of *Inside* as a core intervention program for improving student reading and language skills. The study examined performance of striving readers, including English language learners, and found that both populations of students using *Inside* made significant improvement during one school year's time as compared to students using other intervention programs.

Study Design

Between August 2008 and June 2009, approximately 2,000 students from 111 classrooms in 30 different schools participated in a controlled study of the effectiveness of *Inside*. Fifteen different districts from across the United States participated in this study, representing a wide range of student demographics and school communities. Using a quasi-experimental, pre-post design, this study compared the growth in reading comprehension, language, and vocabulary skills between students who received instruction using *Inside* (Experimental Group) and a comparable group of students who received instruction using other programs, without the benefit of *Inside* (Control Group). Growth in reading comprehension, language, and vocabulary was measured by comparing scores on the Stanford Achievement Test, Tenth Edition, Abbreviated Battery (Stanford 10), at the beginning and end of the school year.

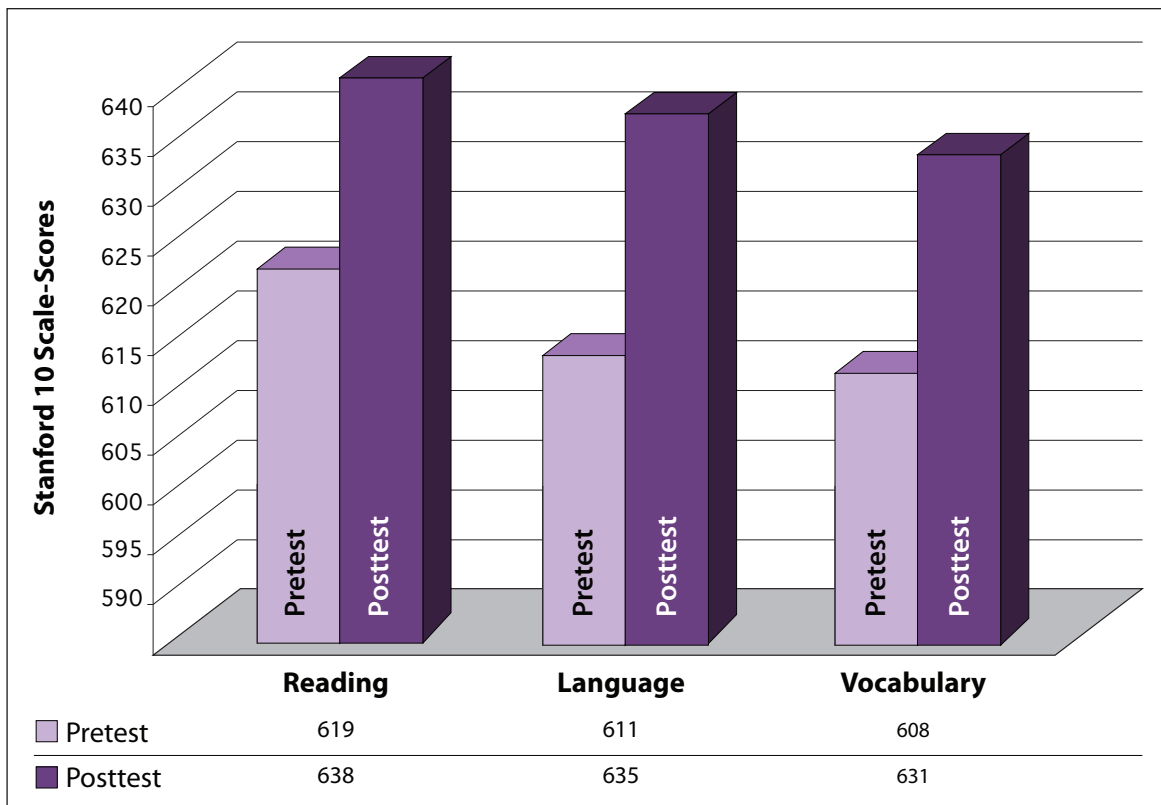
Students in both the Experimental (*Inside*) Group and the Control Group took a pretest (Stanford 10) at the beginning of the school year to obtain a baseline measure of student reading and language skills. Students in the Experimental Group then received instruction using the *Inside* program, while those in the Control Group received instruction using other programs. At the end of the school year, students in both the *Inside* Group and the Control Group took a posttest (Stanford 10). The results from the pretest and posttest were compared statistically to determine the level of growth in reading comprehension, vocabulary, and language skills. Students in the *Inside* Group and the Control Group were similar in ability and demographically. Any initial differences in the language and literacy skills of students in the two study groups were statistically controlled during analysis.

Results

Pre-Post Growth for the *Inside* Group One important measure of program effectiveness is the extent to which students using that program grow academically in a given timeframe. Students who were in classes that used *Inside* for the duration of this study showed substantial growth in reading comprehension, language, and vocabulary.

Across the 2008-2009 school year, students in the *Inside* Group increased their Reading Comprehension scale-scores by 19 points; their Language scale-scores by 24 points; and their Vocabulary scale-scores by 23 points, as measured by the Stanford 10 (see Figure 1). For comparison, this is about twice the level of growth students in grades six through eight typically achieve in one year on the same subtests, based on the national sample of students included in the Stanford 10 norm group (Harcourt Assessment, 2002).

FIGURE 1
Pre-Post Growth for the *Inside* Group

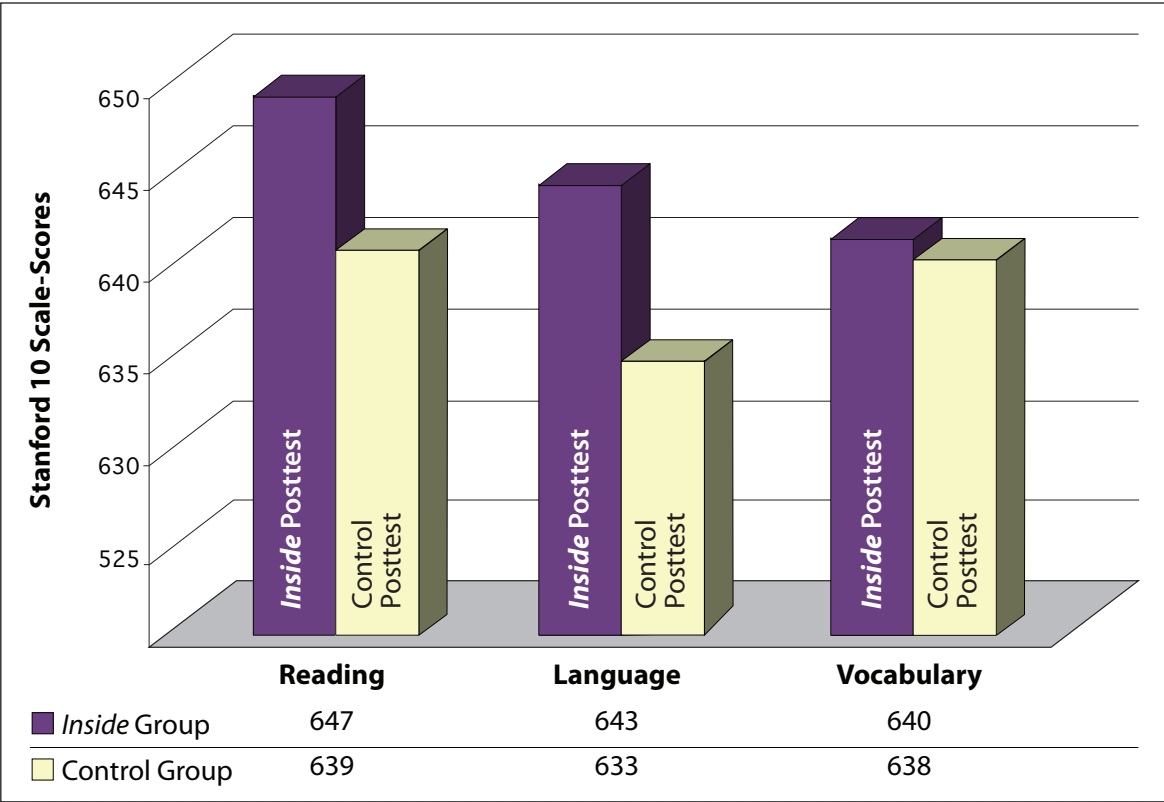


To better understand the magnitude of growth for the *Inside* Group, we looked at “effect size,” a common metric that can be used to evaluate the amount of growth across studies, when different measures are used. We found effect sizes of +.39 for Reading Comprehension, +.49 for Language and +.43 for Vocabulary (unadjusted for Control Group differences). This indicates that students who used *Inside* showed substantial growth in reading comprehension, language, and vocabulary skills.

Comparison of Growth between the *Inside* Group and the Control Group Students in the *Inside* Group also showed greater gains in reading comprehension, language, and vocabulary than students in the Control Group, who did not use *Inside*. This study controlled for any initial differences in language and literacy skills of students in the *Inside* Group and the Control Group using a statistical procedure known as analysis of covariance (ANCOVA). Completing this type of analysis results in a more accurate comparison of growth between groups and allows us to compare differences as if the two groups (*Inside* and Control) of students were matched in initial reading comprehension, language, and vocabulary proficiency levels.

When controlling for the initial ability level of students in this manner, *Inside* Group students finished the year with scores that were 8 scale-score points higher in Reading Comprehension, 10 scale-score points higher in Language, and 2 scale-score points higher in Vocabulary than their peers in the Control Group on the Stanford 10 measures (see Figure 2). Students in both the *Inside* Group and the Control Group grew substantially in Vocabulary from pretest to posttest. While the *Inside* Group made modestly greater gains, the difference between the two groups on the Vocabulary subtest is not statistically significant. The gains noted for the *Inside* Group on the Reading Comprehension and Language subtests are statistically significant.

FIGURE 2
Comparison of Matched Posttest Scores for the *Inside* Group and the Control Group



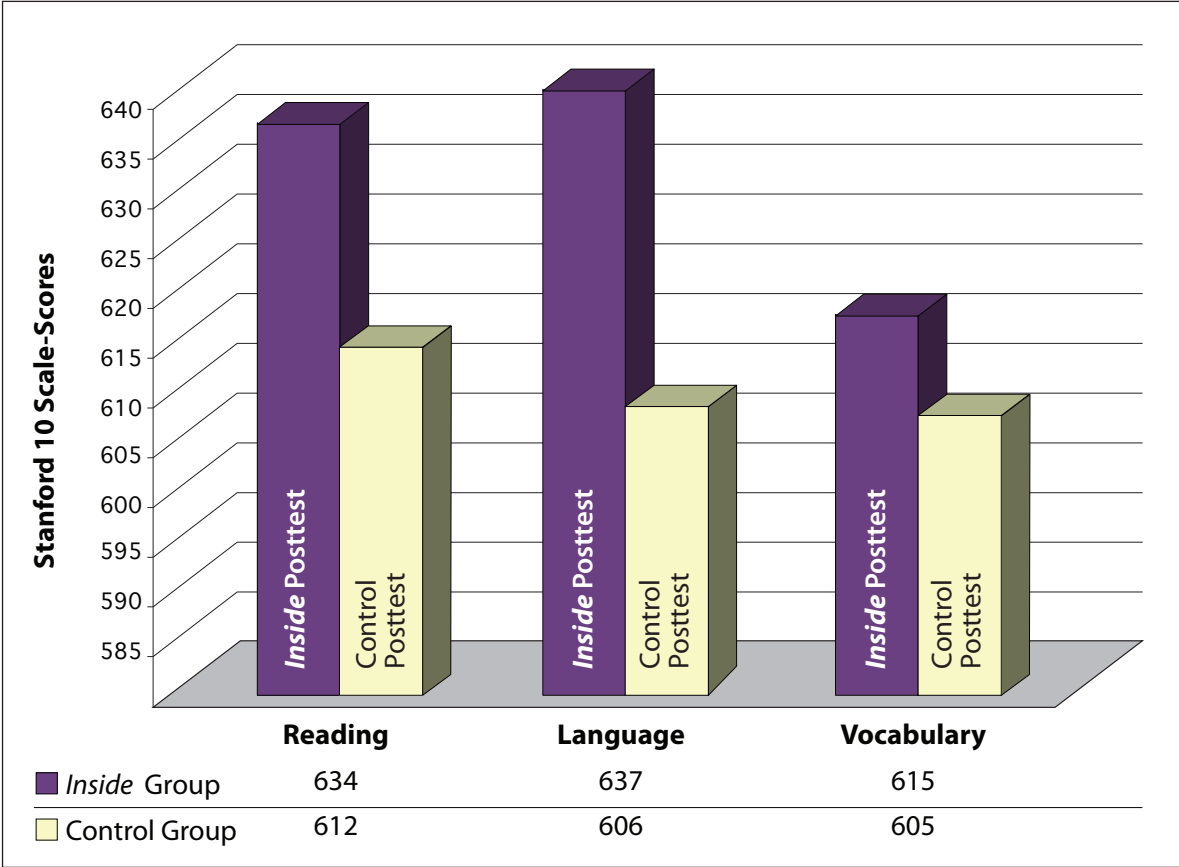
To determine how much of an effect the use of *Inside* had on the resultant difference between the two groups, we compared the average (mean) score for the *Inside* Group to the average (mean) score for the Control Group (adjusted for any initial differences in student ability). We found effect sizes of +.18 for Reading Comprehension and +.22 for Language. This is a large effect, indicating that the students who used *Inside* performed well above the students who used other intervention programs.

English Language Learner Results

Having established the overall effectiveness of *Inside* for the total sample of striving readers, we examined the effectiveness of *Inside* for the subset of students in the sample classified as English language learners and enrolled in classes designated specifically for this student subgroup. English language learners in the *Inside* Group also showed greater gains in reading comprehension, language, and vocabulary than English language learners in the Control Group who were not using the *Inside* program. When controlling for the initial ability of students in language and literacy skills, English language learners in the *Inside* Group finished the year with scores that were 22 scale-score points higher in Reading Comprehension, 31 scale-score points higher in Language, and 10 scale-score points higher in Vocabulary on the Stanford 10 measures (see Figure 3).

The gains noted for English language learners in the *Inside* Group are statistically significant for all three areas tested. This represents an effect size of +.43 for Reading Comprehension; +.55 for Language; and +.21 for Vocabulary. This is a very large effect indicating that English language learners who used *Inside* performed well above English language learners who used other programs.

FIGURE 3
Comparison of Matched Posttest Scores for the Subset of English Language Learners in the *Inside* Group and the Control Group



Summary

Students in the *Inside* Group showed significant gains from pretest to posttest in reading comprehension, language, and vocabulary as measured by the Stanford 10. Across the 2008-2009 school year, students in *Inside* classrooms increased their scale-scores between 19-24 points on these subtests, about twice the level of growth shown in the Stanford 10 national norming sample for a comparable period of time.

Students enrolled in *Inside* classrooms achieved greater gains in reading comprehension, language, and vocabulary than students enrolled in classes that did not use *Inside*. When controlling for the initial ability of students using analysis of covariance (ANCOVA), the findings of this study are quite significant. *Inside* Group students finished the year with scores that were 8 scale-score points higher in Reading Comprehension, 10 scale-score points higher in Language, and 2 scale-score points higher in Vocabulary on the Stanford 10 measures. The results for both reading comprehension and language are statistically significant.

We found effect sizes of $+.18$ for Reading Comprehension and $+.22$ for Language. This is a large effect indicating that the students who used *Inside* performed well above the students who used other programs.

The subset of English language learners in the *Inside* Group also showed greater gains in reading comprehension, language, and vocabulary compared to English language learners enrolled in classes that did not use *Inside*. When controlling for the initial ability of students in language and literacy skills, English language learners in the *Inside* Group finished the year with scores that were 22 scale-score points higher in Reading Comprehension, 31 scale-score points higher in Language, and 10 scale-score points higher in Vocabulary on the Stanford 10 measures. The results for reading comprehension, language, and vocabulary are statistically significant. This represents an effect size of $+.43$ for Reading Comprehension; $+.55$ for Language; and $+.21$ for Vocabulary. This is a very large effect indicating that English language learners who used *Inside* performed well above English language learners who used other programs.

The findings of this study demonstrate that striving readers and English language learners using *Inside* as a core intervention reading/language arts program can make considerable improvement in reading comprehension, language, and vocabulary skills during one school year's time and can also make significantly greater gains than students using other intervention programs in reading and language skill areas.

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