SCHOLASTIC

RESEARCH UPDATE

Midland Independent School District

Midland, TX

Students with Disabilities Demonstrate Significant Improvement on the TAKS After One Year of *System 44®*

PROFILE

District: Midland Independent School District
Evaluation Period: 2009–2010 School Year
Grades: 4–9
Model: Daily 45-minute *System 44* Instructional Model
Assessment: Texas Assessment of Knowledge and Skills (TAKS), *Scholastic Reading Inventory* (SRI)

DISTRICT CHARACTERISTICS

Located in Midland, Texas halfway between El Paso and Fort Worth, Midland Independent School District (MISD) enrolls approximately 21,000 students in grades PreK-12. The majority of the students (52%) are Hispanic, with the remainder Caucasian (37%), African American (10%), Asian (less than 1%), and Native American (less than 1%). About half (48%) of all students in MISD receive free or reduced-price lunch. Eight percent of students receive special education services, and 9% are classified as limited-English proficient.

OVERVIEW

During the 2009-2010 school year, MISD implemented *System 44* for the district's most challenged readers who had not yet mastered basic phonics and decoding skills.

Implementation Model

During the 2009-2010 school year, MISD implemented *System 44* in 23 classrooms across the district. During each 45-minute class period, teachers provided 5 minutes of whole-group instruction and then divided their classes into two small-group rotations lasting 15-20 minutes each. While one group used the *System 44* software, the other group participated in teacher led small-group instruction.

Participants

System 44 was implemented with elementary, middle, and high school students who performed poorly on an assessment of reading comprehension, the *Scholastic Reading Inventory* (SRI), and then exhibited poor word-reading skills on the *Scholastic Phonics Inventory* (SPI). This analysis includes a total of 346 students who had valid pretest and posttest data from the SRI and Texas Assessment of Knowledge and Skills (TAKS) Reading test. Approximately 66% of students in the sample were Hispanic, 18% were African American, 14% were Caucasian, and 2% were unclassified. Nearly one quarter (23%) of students were classified as limited-English proficient, 81% were classified as economically disadvantaged, and 34% were receiving special education services.

Measures

Texas Assessment of Knowledge and Skills

The Texas Assessment of Knowledge and Skills (TAKS) Reading test was used to measure the reading achievement gains of students enrolled in *System 44*. Students with various special education designations that require accommodations for testing received modified versions of the TAKS at pretest and posttest. The TAKS Reading test assesses a subset of the Texas Essential Knowledge and Skills (TEKS), the state-mandated curriculum, and includes a variety of narrative and expository texts. Four objectives are measured: basic text understanding, knowledge of literary elements, analysis using reading strategies, and analysis using critical-thinking skills. A student's performance on the TAKS Reading test is reported as both a scale score and a performance level descriptor (Did Not Meet the Standard, Met the Standard, and Commended Performance). TAKS Reading scale scores from spring 2009 and spring 2010 were collected and analyzed.

Scholastic Reading Inventory

SRI is designed to measure how well readers comprehend literary and expository texts. It focuses on the following skills: identifying details in a passage; identifying cause-and-effect relationships and sequence of events; drawing conclusions; and making comparisons and generalizations. During test administration, the computer adapts the test continually, according to student responses.

Performance on SRI is reported as a Lexile® (L) scale score. The higher a student's score, the more challenging material that student is likely to be able to read and understand. Scores can range from Beginner Reader (less than 100L) to Graduate-School Readers (1500L). SRI was administered in October/November 2009 and in April/May 2010.

RESULTS

TAKS Results

Data indicated that, on average, students enrolled in *System 44* made improvements in their reading ability (Graph 1). Overall, the *System 44* students made a small gain in their TAKS Reading test passing rate, from 42% meeting or exceeding the standard in 2009 to 44% in 2010. A dependent t-test revealed that *System 44* students with disabilities showed a large and significant increase in the percentage of students passing the TAKS Reading test, from 44% meeting or exceeding the standard in 2009 to 64% in 2010.

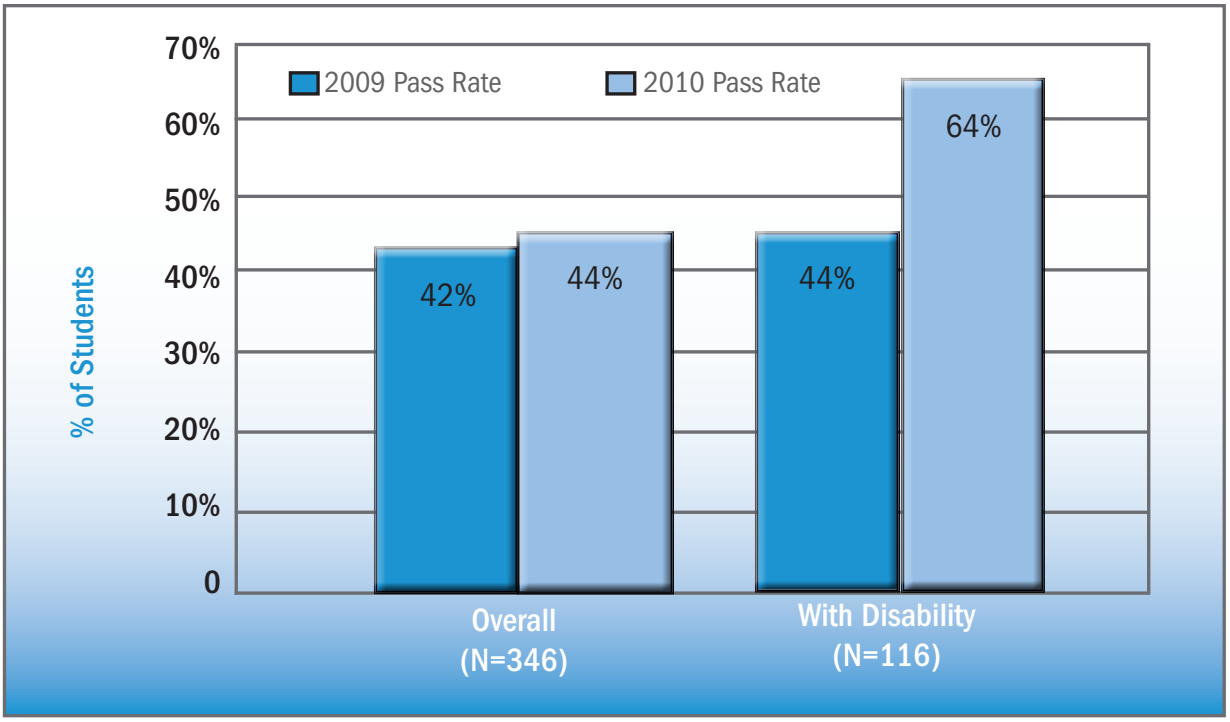
SRI Results

Dependent t-tests revealed that *System 44* participants made statistically significant gains in performance on SRI. As Table 1 shows, overall, *System 44* students in MISD gained an average of 208L, with elementary students gaining an average of 211L, and secondary students gaining an average of 197L.

Graph 1

MISD *System 44* Students, Grades 4–9 (N = 346)

Percentage of Students Meeting the Standard on the TAKS Reading by Disability Status, 2009 and 2010



Note. The increase in percentage of students with disabilities passing the TAKS is statistically significant (t = 3.36, p = .00).

The relationship between time spent on the *System 44* software and gains in reading achievement on SRI was also investigated. Students were divided into groups depending upon the number of software sessions they completed. A one-way ANOVA test and subsequent post-hoc analyses showed that students completing 80 or more *System 44* sessions demonstrated significantly greater Lexile gains on SRI than did those students completing fewer than 80 sessions. See Graph 2. Thus, greater use of the *System 44* software was associated with greater growth in reading comprehension.

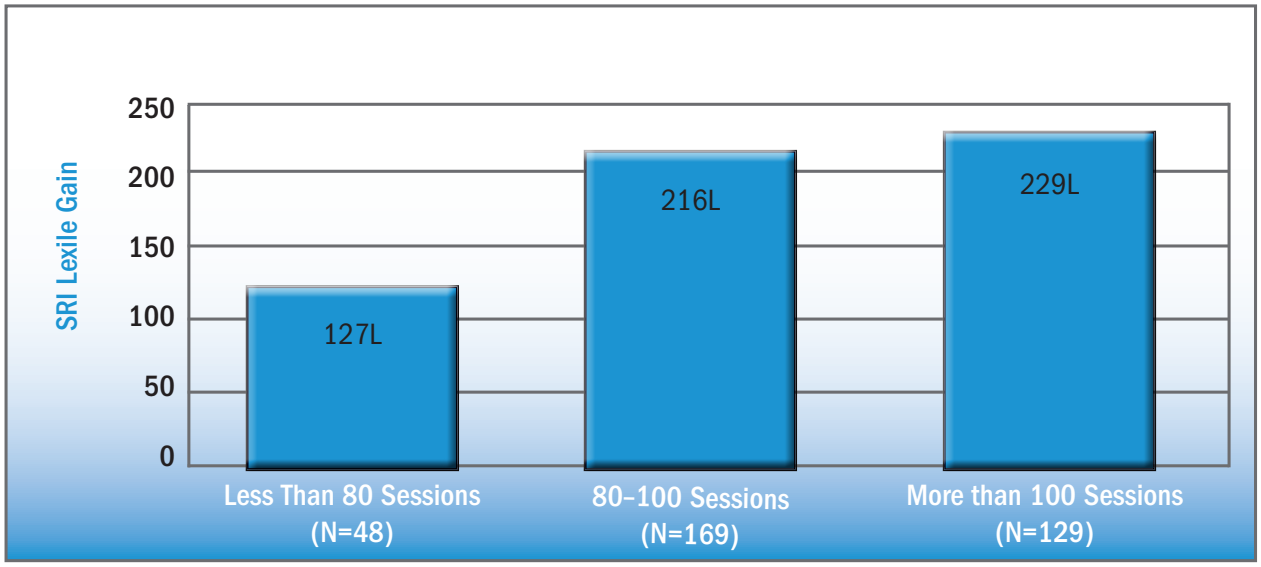
CONCLUSION

Overall, results from the 2009-2010 school year indicated that students enrolled in *System 44* made significant improvements in reading proficiency. *System 44* students as a group showed a small increase in their TAKS Reading test passing rate. Furthermore, students with disabilities showed a large, significant increase in reading proficiency, with a majority passing the TAKS Reading test after participating in *System 44*. The study also provides evidence of the importance of spending adequate time on the *System 44* instructional software; completing 80 or more software sessions was associated with greater Lexile gains on SRI.

Table 1
MISD *System 44* Students, Grades 4–9 (N = 346)
Performance on SRI by Grade Level, 2009 and 2010

School Level	N (w/ valid data)	Mean Pre-Test Lexile	Mean Post-Test Lexile	Mean Lexile Gain	Significance
Elementary (4th–6th)	291	191L	401L	211L	t = 21.87, p = .00
Junior & Freshman High (7th–9th)	55	155L	352L	197L	t = 9.10, p = .00
Overall	346	185L	393L	208L	t = 23.71, p = .00

Graph 2
MISD *System 44* Students, Grades 4-9 (N = 346)
SRI Lexile Gain as a Function of *System 44* Software Usage, 2009 to 2010



Note. Students completing 80 or more software sessions demonstrated significantly greater Lexile gains than students completing fewer than 80 sessions (Overall F = 7.41, p = .00).

SCHOLASTIC

RESEARCH UPDATE

Scholastic Research & Results

Scholastic Inc.
557 Broadway
New York, NY 10012
1-800-SCHOLASTIC

Scholastic is committed to developing innovative educational programs that are grounded in research and proven to work. We collaborate with school districts and third-party research organizations to conduct evaluations that provide useful information to help school leaders assess and advance school change and improvement. Scholastic believes strongly in a mixed methods approach to our research, an approach that provides meaningful and contextualized information and results. For more information, please visit the Scholastic Research website at: Scholastic.com/research.

Job # 4588
03/11