

RESEARCH UPDATE

Napa Valley Unified School District

Napa, California

Greater Numbers of Students Perform at the Basic Level or Higher on the CST ELA After One Year of *System 44*[®]

PROFILE

District: Napa Valley Unified School District

Evaluation Period: 2009–2010 School Year

Grades: 3–11

Model: Daily 60-minute *System 44* Classrooms

Assessment: California Standards Test of English Language Arts (CST ELA) and Scholastic Reading Inventory (SRI)

DISTRICT CHARACTERISTICS

Napa Valley Unified School District (NVUSD) is large and diverse, serving 17,750 students. Approximately 44% of students are Hispanic, 36% are White, 10% are multiracial, 5% are Filipino, 2% are African American, and the remaining 3% represent other nationalities. Nearly half (40%) of the students are eligible for the federal free- or reduced-price-lunch program, 22% of students are English Learners, and 12% are enrolled in special education.

IMPLEMENTATION OVERVIEW

In March of 2009, NVUSD piloted *System 44* in one elementary school for its most challenged readers who had not yet mastered basic phonics and decoding skills. The district anticipated that *System 44* would address students' individual needs through its adaptive software, high-interest literature, and direct instruction in reading skills. The initial results were deemed successful, and by the end of the 2009–2010 school year, 11 elementary, 3 middle, and 2 high schools across the district used *System 44*.

Implementation Model

The *System 44* stand-alone model dictates a daily 60-minute class, with a 5–10-minute Whole-Group

Introduction in which the teacher leads a short warm-up activity to engage students and build phonemic awareness and phonics skills. Following whole group instruction, students rotate to receive either the Instructional Software or Small-Group Instruction. Students were expected to use the software for 20–25 minutes per day.

Participants

A total of 147 third- through eleventh-grade students were selected to participate in the *System 44* program during the 2009–2010 school year based on the following conditions: 1) tested in the Far Below and Below Basic Level on the prior year's CST ELA; 2) performed below 400L (elementary), 500L (middle), or 600L (high) on Scholastic Reading Inventory (SRI); and 3) exhibited poor fluency skills on Scholastic Phonics Inventory (SPI). Approximately 83% were elementary school students, 10% were middle school students, and 7% were high school students. The large majority (90%) were eligible for the federal free- or reduced-price-lunch program, 73% were English Learners, and 30% received special education services. The *System 44* students that comprise the sample in this report completed a minimum of six software sessions, had two SRI tests more than 90 days apart, and had valid CST ELA data from the spring 2009 and spring 2010 administrations.

Measures

California Standards Test of English Language Arts (CST ELA)
The CST ELA reports students' performance as both a scale score (which can range from 150–600) and as one of five Performance Levels. Each of the five Performance Levels (Far Below Basic, Below Basic, Basic, Proficient, or Advanced) is associated with a range of scale scores for each grade level.

The CST ELA scores and Performance Levels from spring 2009 and spring 2010 were collected for all participating students.

Scholastic Reading Inventory (SRI)

SRI measures reading comprehension by focusing 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. Scores can range from Beginner Reader (less than 100L) to Graduate-School Readers (1500L). SRI was administered two times, a minimum of 90 days apart, in order to measure growth in reading comprehension over time.

RESULTS

CST ELA Results

Results demonstrated that *System 44* students as a whole made improvements in reading ability, as measured by the CST ELA. In spring 2009, prior to the implementation of *System 44*, only 24% of these students achieved the Basic Performance Level or higher. However, Graph 1 shows that by the spring 2010 CST administration, the percentage of students scoring in the Basic Performance Level or above increased significantly to 35% ($t=3.33, p=.00$). Conversely, the percentage of students scoring in the Below Basic or Far Below Basic Performance Levels decreased from 77% in spring 2009 to 65% in spring 2010.

These positive trends continued when the results were analyzed by subgroup. *System 44* English Learners and students receiving special education services made substantial gains in terms of the percentage of students scoring in the Basic or higher range from 2009 to 2010. As Graph 1 shows, the percentage of *System 44* English Learner students achieving Basic or above on the CST ELA increased from 19% to 30% and the students receiving special education increased their performance by 13 percentage points, from 33% to 46%.

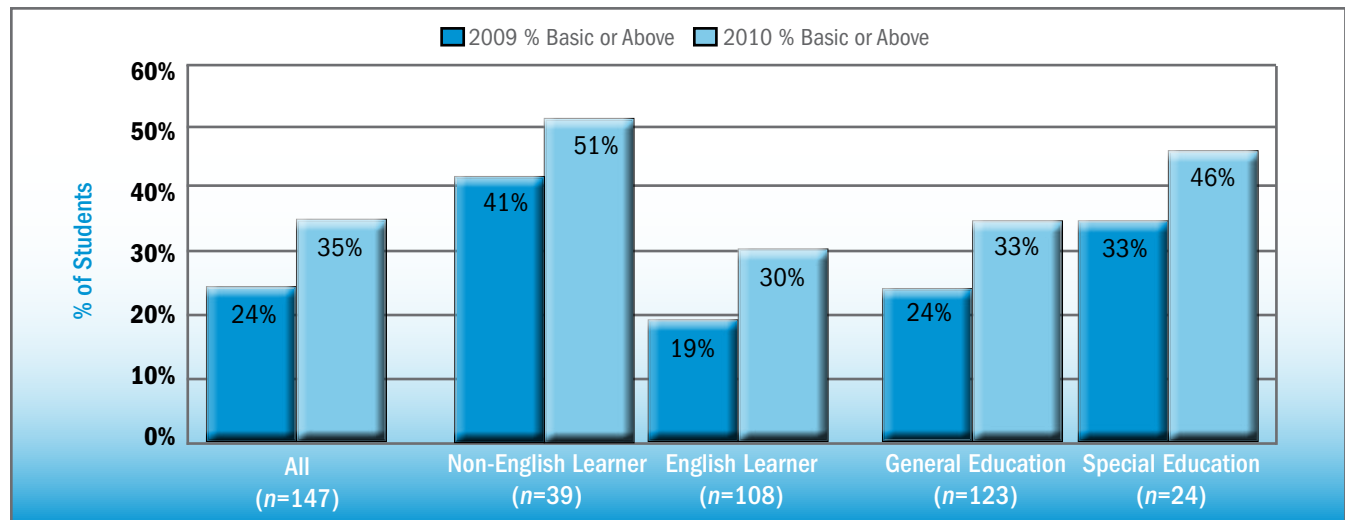
Further, in terms of overall improvement on the CST ELA, 30% of *System 44* elementary students, 50% of middle school students, and 9% of high school students improved one or more Performance Levels from 2009 to 2010 (see Graph 2).

SRI Results

System 44 students also demonstrated gains on SRI during the 2009–2010 school year. *System 44* students improved, on average, from a pretest score of 159L to a posttest score of 292L, resulting in a statistically significant gain of 134L ($t=10.48, p=.00$) on SRI. As Graph 3 indicates, when the data was disaggregated by school level, elementary and middle school students exhibited pretest to posttest gains that exceeded annual growth expectations. Overall, 56% of students achieved SRI Lexile gains of one year or more.

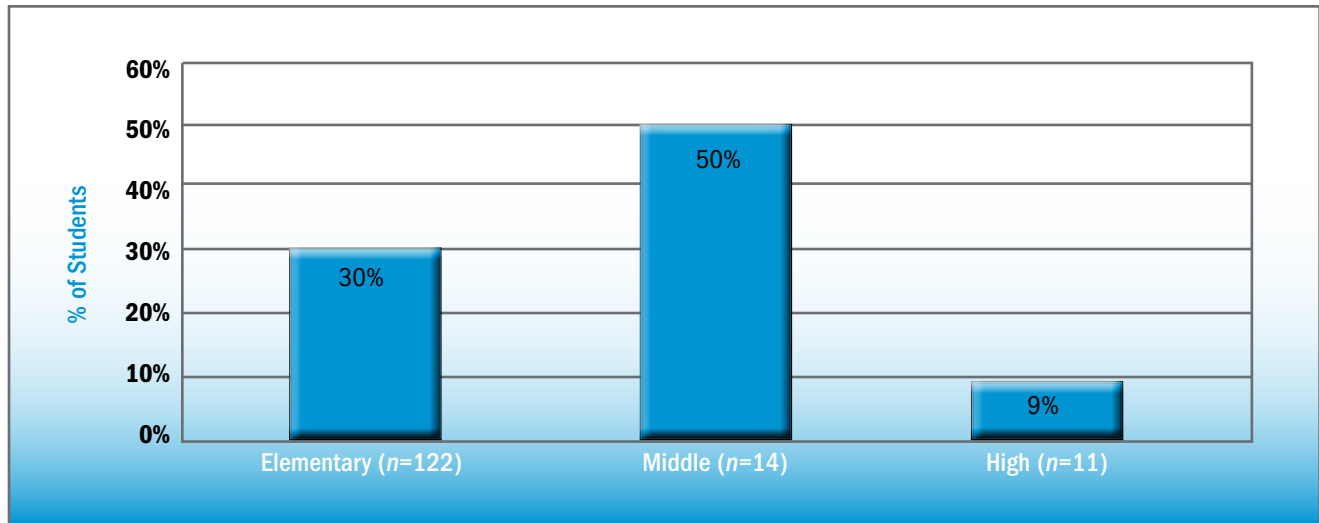
Graph 1.

Napa Valley Unified School District, *System 44* Students, Grades 3–11 ($n=147$)
Percentage of Students Scoring Basic or Above on the CST ELA, by Student Subgroup, 2009–2010



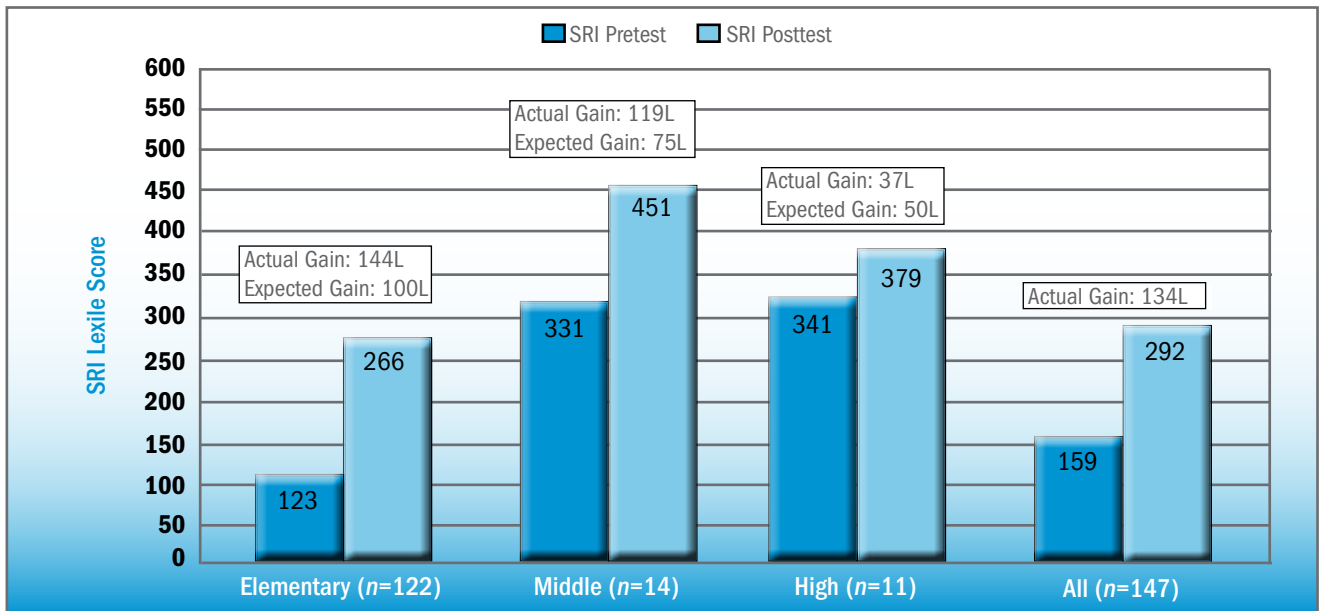
Graph 2.

Napa Valley Unified School District, *System 44* Students, Grades 3–11 ($n=147$)
Percentage of Students Who Improved One or More Performance Levels on the CST ELA, by School Level, 2009–2010



Graph 3.

Napa Valley Unified School District, *System 44* Students, Grades 3–11 ($n=147$)
Performance on SRI, 2009 and 2010



*Note: Lexile gains are rounded to the nearest integer.

CONCLUSION

Students who participated in *System 44* during the 2009–2010 school year demonstrated significant improvements on the CST ELA and SRI. After one year of intervention, the percentage of students performing in the Basic Level or higher increased significantly, from nearly one quarter of students (24%) to more than one third (35%), while the percentage of students performing at the Far Below Basic and Below Basic Levels decreased by 10%. The subgroups of English Learners and students receiving special education services made

particularly notable improvements in CST ELA performance. Further, elementary and middle school students exhibited pretest to posttest Lexile gains on SRI that exceeded annual growth expectations. This preliminary research suggests that *System 44* is having a positive impact on students' reading comprehension.

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