

Fremont Unified Math Outcomes (One Year of ST Math Usage)

Subjects: MIND Research Institute analyzed all partner schools in Fremont Unified for grade-average CST math achievement growth between the 2011/12 and 2010/11 school years. All grades with only one year of ST Math usage, with average ST Math content coverage of at least 50%, and with at least 85% of their students enrolled in the program in the 2011/12 school year were analyzed. This report focuses on grades from 13 schools, implementing the program at grade 2, 3, 4, and/or 5, with altogether 44 grades and 3,162 students using the program. The comparison set was chosen to be similarly performing schools, in the Fremont, New Haven (Union City), Newark, Hayward, Pleasanton, Dublin, Castro Valley, and Livermore Valley Joint Unified School Districts, which did not use the ST Math program: 43 schools, 63 grades, and 5,684 students.

Program: In each grade using the program, all students and teachers are licensed to participate. The ST Math® program consists of supplemental math instructional software which covers California CST math standards at each grade level. The software presents the mathematics as a year-long curriculum of interactive, animated visual diagrams, or puzzles, for the students to solve. The students use the self-starting, self-paced instructional software twice per week under the teacher's supervision. The teacher is trained to also use the software's visual representations of mathematics concepts during regular classroom lessons, to connect to the conventional language-intensive math instruction.

Data Collection: The average CST math scale scores, achievement level distributions, and student enrollment were collected for each grade level for the years 2010/11, and 2011/12 from the California Department of Education website. Each year the data indicate the percentage of students at each grade who tested into the 5 different levels of math achievement. The average MIND Research Institute program implementation percentage and student enrollment in the MIND software were collected from MIND's digital usage data.

Analysis Summary: Changes from 2010/11 to 2011/12 in the percent of students at the top 2 achievement levels, Proficient, and Advanced, were evaluated for the ST Math group and also the comparison group of schools. A grade-wise growth comparison was evaluated (i.e. growth in same grade, same school, from 2010/11 school year to 2011/12 school year) and then aggregated across grades and schools.

Results: The grades implementing ST Math on average grew 4.5 points in the percentage of Proficient or Advanced students, as compared to an average increase of 1.4 points for the comparison group (p-value = 0.088).

