

Orange County Math Initiative Cohort 3 Growth 2010-2011

Subjects: MIND Research Institute analyzed schools in Orange County for California Standards Test (CST) math proficiency growth in the 2010/11 school year. The Math Initiative, funded by local philanthropy, is designed to increase math achievement at lower performing schools through deployment of a research-based math teaching and learning approach, implemented via student use of visual math instructional software. Eligible schools from a list of the lowest 30% in California's Academic Performance Index (API) were invited to a launch event in 2010 and applied for startup grants for two selected grade levels (e.g. grades 2 and 3). All Math Initiative schools in Orange County which started the program in 2010/11 were analyzed. This report focuses on those 10 schools implementing the program at grade 2, 3, 4, and/or 5, with altogether 20 grades and 1568 students using the program. The comparison set was chosen to be similarly performing schools in Orange County, also in the bottom 30% of API performance, which did not participate in ST Math: 46 schools, 181 grades, 14338 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 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 achievement scale scores, proficiency levels distributions, and student enrollment, were collected for each grade level for the years 2009/10 and 2010/11 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 usage data.

Analysis Summary: Changes from 2009/10 to 2010/11 in the percent of students at 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 the same grade, the same school, from 2009/10 school year to 2010/11 school year) and then aggregated across grades and schools.

Results: The grades implementing ST Math grew 10.9 points in the percentage of students Proficient or better, as compared to an increase of 4.6 points for the comparison group ($p < 0.5$).

