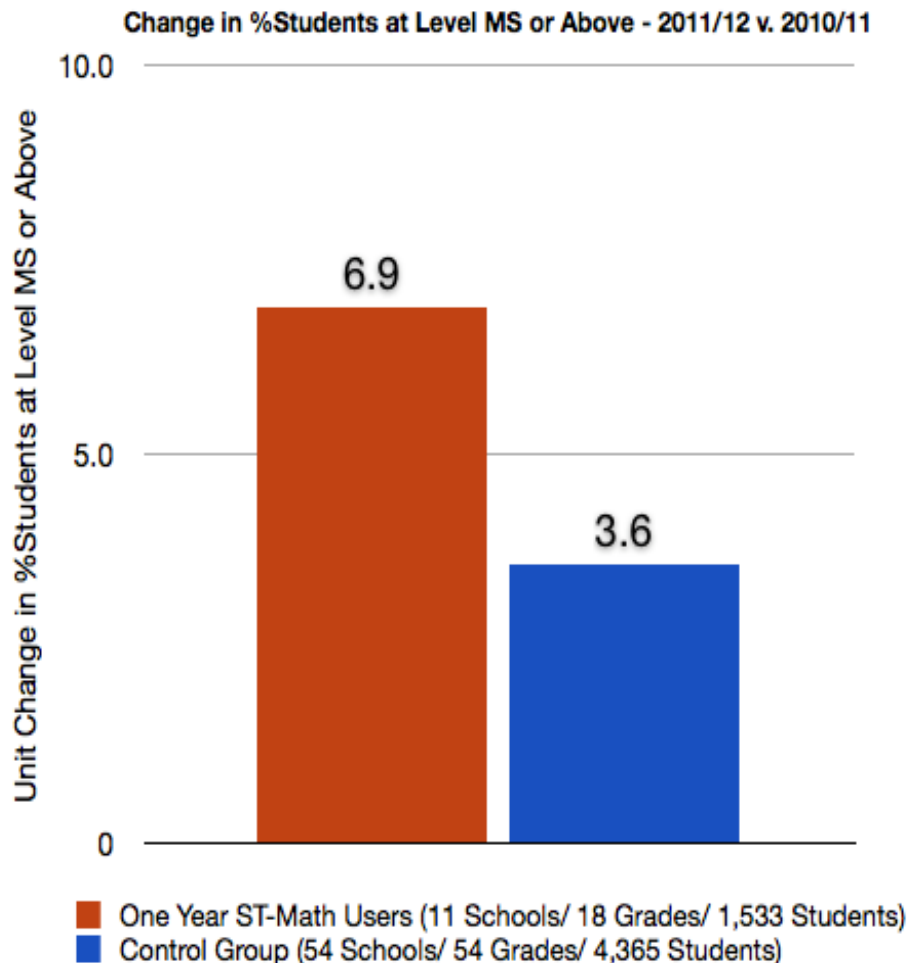


## Arizona Math Outcomes - One Year Growth 2011/2012

**Subjects:** MIND Research Institute analyzed all partner schools in Arizona for grade-average Arizona AIMS Assessment Test math achievement growth in the 2011/12 school year. The schools received software license grants for the ST Math® program from a philanthropic community partnership. The program provides software, training, and support for a research-based math teaching and learning approach, implemented primarily via student use of visual math instructional software. All grades with first-year ST Math usage of 2011/12, with average student use of ST Math content of at least 50% coverage, and with at least 85% of students per grade enrolled in the program were analyzed. This report focuses on grades from 11 schools, implementing the program at grades 3, 4, and/or 5, with altogether 18 grades and 1,533 students using the program. The comparison set was chosen to be similarly performing schools, also from Arizona, which did not use the ST Math program: 54 schools, 54 grades, and 4,365 students.



**Program:** In each grade using the program, all students and teachers are licensed to participate. The ST Math® program consists of a blended approach using math instructional software which covers Arizona AIMS 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 AIMS math achievement performance levels distributions, and student enrollment were collected for each grade level for the years 2011/12 and 2010/11 from the Arizona State Department of Education website. Each year the data indicate the percentage of students at each grade who tested into the 4 different levels of math performance. 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 math performance levels, Meet Standard (MS), and Exceed Standard (ES), 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 6.9 points in the percentage of students at level MS or above (student passing standard), as compared to an average increase of 3.6 points for the comparison group (p-value = 0.28).