## MIND Research Institute

Subjects: MIND Research Institute analyzed schools in Colorado Springs District 11 for grade-average Colorado TCAP math achievement growth between the 2010/11 and 2012/13 school years. All grades 3,4, or 5 with ST Math usage in 2011/12 and 2012/13, and with average ST Math program content coverage of at least $50 \%$, and with at least $85 \%$ of grade students enrolled in the ST Math program in 2012/13 were analyzed: altogether 86 grades with 4,743 students at 30 District 11 schools. A same-sized Comparison group was randomly selected from throughout the state of Colorado to be matched to the ST Math group by baseline 2010/11 math performance. The comparison group never used the ST Math Program: 90 grades with 6,218 students at 87 schools.

Increase in Percent Students TCAP Math Proficient or Advanced 2012/13 vs. 2010/11


Program: In each grade using the program, all students and teachers are licensed to participate. The ST Math® program is based on supplemental math instructional software which covers 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 conventional language-intensive math instruction.
Data Collection: The grade-average TCAP math achievement level distributions, scale scores, and student enrollment were collected from the Colorado Department of Education's website for each school and grade level for the years 2010/11 through 2012/13. Each year the data indicate the percentage of students at each grade at each school who tested into the 4 different levels of TCAP math achievement. The average MIND Research Institute ST Math program content coverage percentage and student enrollment in the ST Math software were collected from MIND's digital usage data for 2011/12 and 2012/13.
Analysis Summary: Changes from 2010/11 to 2012/13 in the percent of students at the top 2 achievement levels, Proficient or Advanced, were evaluated for the ST Math group, and also for the comparison group of schools. Grade-wise growth was evaluated (i.e. growth in same grade, same school, from 2010/11 to 2012/13) and then aggregated across schools and grades.

Results: The ST Math grades grew 3.9 points in the percentage of students at Proficient or Advanced, as compared to 0.0 points (no growth) for the matched comparison group ( $p$-value=0.02).

