Subjects: MIND Research Institute analyzed partner schools in Virginia for grade-average Virginia SOL math achievement growth between the 2011/12 and 2012/13 school years. All grades 3, 4, or 5 with ST Math usage in 2012/13, achieving average ST Math program content coverage of at least 50%, and with at least 85% of their students enrolled in the ST Math program were analyzed: altogether 15 grades with 760 students at 9 schools. The comparison group used was the best grade-level matches selected from throughout Virginia, using a propensity scores matching technique to find the most similar demographics and math proficiency in the baseline 2011/12 school year. Of course the comparison group did not use the ST Math program at all in 2012/13: 15 grades with 1,030 students at 15 schools.

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: Grade-level SOL math proficiency level percentages, demographics, and student enrollment were collected from the Virginia Department of Education’s website for each VA school and grade level for the years 2011/12 and 2012/13. 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 2012/13.

Analysis Summary: Changes from 2011/12 to 2012/13 in the grade percentage of students at the Advanced proficiency level 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 2011/12 to 2012/13) and then aggregated across schools and grades.

Results: The grades implementing ST Math on average grew 4.1 points in Advanced proficiency, as compared to -0.9 points for the comparison group of similar grades (p-value = 0.07).