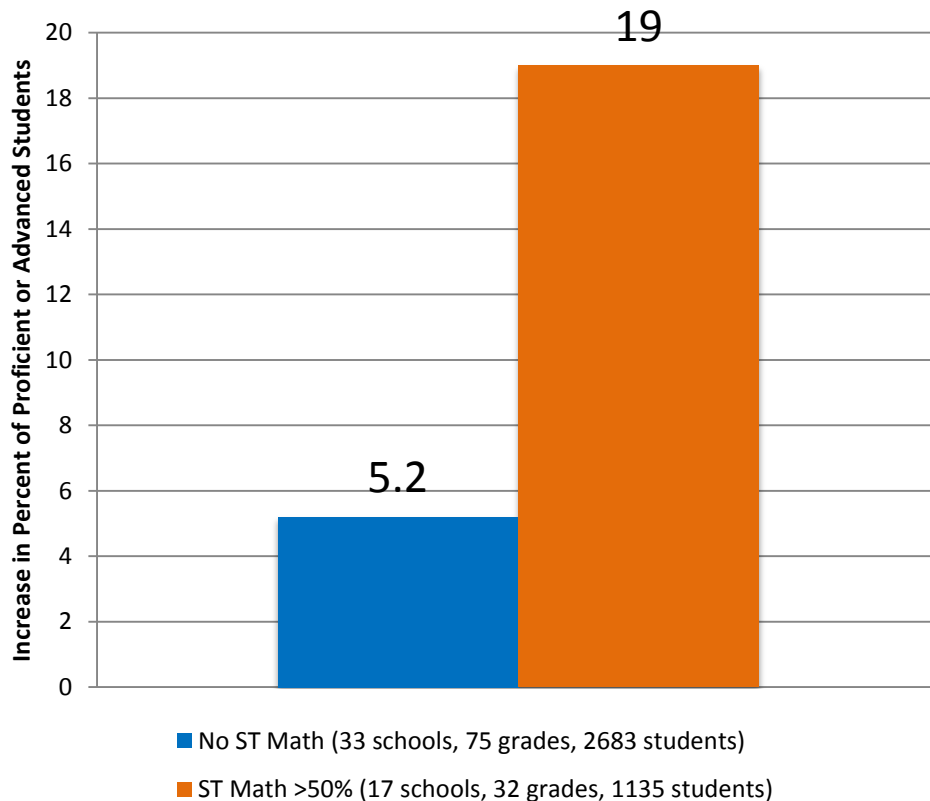# MIND Research Institute

Subjects: MIND Research Institute analyzed schools in D.C. Public Schools (DCPS) for grade-average D.C. Comprehensive Assessment System (DCAS) math proficiency growth between the 2011/12 and 2013/14 school years. All DCPS grades 3, 4, or 5 using ST Math in both 2012/13 and 2013/14, and which were relatively low performers in DCPS in 2011/12 at <=70% DCAS Proficient or better, and with average 2013/14 ST Math program content coverage of at least 50% and ST Math grade-level enrollment of at least 85% were analyzed: altogether 32 grades with 1135 students at 17 schools. The comparison group is all other DCPS grades, also starting at <=70% math Proficient or Better in 2011/12, but which never subsequently used the ST Math Program: 75 grades with 2,683 students at 33 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: The grade-average DCAS math proficiency level distributions, and student testing counts were provided by DCPS for each school and grade level for the years 2011/12 through 2013/14. Each year the data indicate the percentage of students at each grade at each school who tested into the 4 different levels of DCAS math proficiency (Proficient and Advanced being the highest). 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 and 2013/14.

Analysis Summary: Changes from 2011/12 to 2013/14 in the percent of students at the top 2 achievement levels, Advanced or Proficient, 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 2013/14) and then aggregated across schools and grades.

Increase in Percent Students DC-CAS Math Proficient or Advanced 2013/14 vs. 2011/12

- ■ No ST Math (33 schools, 75 grades, 2683 students)
- ■ ST Math >50% (17 schools, 32 grades, 1135 students)

Results: The grades implementing ST Math on average grew 19.0 points in the percentage of students at Proficient or Advanced, as compared to growth of 5.2 points for the Comparison group (p-value<.01).