

Subjects: MIND Research Institute analyzed Chicago Public Schools (CPS) partner schools for Illinois Standards Achievement Test (ISAT) math proficiency growth from the 2009/10 school year to 2011/12 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. All grades with two years of ST Math usage, with at least 80% of their students enrolled in the program, and covering on average at least 50% of ST Math content in the 2011/12 school year were analyzed. This report focuses on those 23 schools implementing the program at grade 3, 4, and/or 5, with altogether 44 grades and 2583 students using the program. The comparison set was chosen to be similarly performing CPS schools which did not use the ST Math program: 118 schools, 132 grades, and 8140 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 Illinois 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 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 ISAT math achievement proficiency levels distributions, and student enrollment, were collected for each grade level for the years 2009/10 through 2011/12 from the Chicago Public Schools, Office of Performance website. In each year the available data indicate the percentage of students at each grade who tested into the 4 different levels of math achievement. The average MIND Research Institute program implementation percentage, and student enrollment in the MIND’s software, were collected from MIND’s digital usage data.

Analysis Summary: Changes from 2009/10 to 2011/12 in the percentage of students at the top 2 achievement levels, Met and Exceeded Standards, were evaluated for the ST Math group and also the comparison group. A grade-wise growth comparison was evaluated (i.e. growth in same grade, same school, from 2009/10 school year to 2011/12 school year) and then aggregated across grades and schools.

Results: The grades implementing ST Math grew 11.4 points in the percentage at Met/Exceeded Standards, as compared to an increase of 3.6 points for the comparison group. The difference is statistically significant with a p-value less than 0.05.

Increase in Percent Students ISAT Math Met | Exceeded Standards 2011/12 vs. 2009/10

