



## The issue

The U.S. ranks 32 out of 65 developed countries in math proficiency. Yet research finds developing math skills at an early age is a predictor of future academic success.



### Quick Facts

#### Timeline

2004 to present

#### Region

35 U.S. states

#### Cisco Investment

Over US\$4 million as of March 2014

#### People Impacted

630,000 students and 25,000 teachers

#### CSR Focus Area

Education

#### Technology Used

Wireless bridges, antennas, routers, switches, Cisco WebEx® and TelePresence® solutions, Voice Over IP, blade servers, Unified Computing System, video-enabled education

#### Human Network

Researchers, teachers, students, school administrators, nonprofits, corporations and foundations

#### Contact

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MIND Research Institute studied the way children learn and used the research to develop Spatial Temporal (ST) Math®, a self-paced software program that uses language-free animation to help K-12 students grasp key concepts.

MIND works with school districts to incorporate ST Math into underperforming schools. With contributions from Cisco and the Cisco Foundation of more than US\$4 million in cash and products since 2004, MIND has transitioned ST Math to an online delivery platform, scaled it to more schools, and enhanced its web-based teacher trainings. As of March 2014, MIND's programs have reached 630,000 students and 25,000 teachers in more than 2000 schools in 35 states.

Cisco has supported the following MIND Research Institute initiatives:

**Virginia, Arizona, and California ST Math Pilots.** ST Math enables all students, even those with limited English skills or learning disorders, to greatly improve math proficiency. In Santa Ana, California, for example, the district went from 35% proficiency to 67%, to match the state average—between 2005 and 2011.

**MIND and City Year collaboration.** In 2010 City Year's tutors, who provide academic support during and after school, helped implement ST Math in four underserved Silicon Valley schools. From 2010 to 2011, the percentage of students who scored as "proficient/advanced" on California Standardized Tests jumped from 49% to 69%. The number of students who scored "far below/below" dropped by almost half – from 25% to 13%.

**National School Scholarship Alliance.** MIND partners with local agencies to deliver its ST Math program, as well as training and support for teachers and principals, to the lowest-performing K-12 schools in large urban areas.

you + networks = impact<sup>x</sup>



## Impact of MIND Research Institute's ST Math Students build confidence in math concepts at an early age

### ST Math Boosts Proficiency in Struggling Neighborhood



Cesar Chavez Elementary School is just a few miles from Silicon Valley's million dollar homes. Yet as many as 80 percent of its students are English language learners, and 100 percent are eligible for free or reduced lunches. However, the school has seen a dramatic uptick in its math proficiency scores since ST Math was introduced in 2010. The school now is among the district's top 14, achieving a score of 800 or above in the Academic Performance Index – the state of California's target. In the 2012-13 school year, 74 percent of second graders scored in the "proficient" or "advanced" categories on the California Standards Test in math.

### Math Skills Grow for At-Risk Students in Minnesota



At Bancroft Elementary in Minneapolis, 88% of students are on free or reduced lunch, 45% are English Language Learners, and very few have computers at home. Within a few months of introducing ST Math, math specialist Lisa Hartmann knew it would be a phenomenon. "I've had librarians call me from the public library to tell me my students are playing [ST Math] for an hour on computers that have a 15-minute limit," says Hartmann. "They're just so motivated." Thirty-two percent of Bancroft students tested in 2013 met state math standards, compared to 19% in 2011, before ST Math. Similar improvements were seen at 19 other Minneapolis schools that used ST Math in 2012.

### Metrics



3X

growth in math proficiency at 22 Virginia schools using ST Math, compared to non-ST Math students



10%

point growth in math proficiency among children using ST Math in major metropolitan areas



100%

increase in math proficiency over six years in Santa Ana Unified School District



630,000

students use ST Math – an 11X increase since MIND began converting it to a web-based platform in 2007 with Cisco support

### Proficiency Scores Multiply for Virginia Students



When Tylicia transferred to third-grade at Occohannock Elementary in Virginia's Northampton County, her teachers described her as polite but extremely quiet. She was failing math, but wouldn't ask questions when she needed help. Two months into the school year, Tylicia had what her teacher describes as a breakthrough moment. She had created her own place value chart on a white board to work through a series of ST Math problems on the computer. "It wasn't a strategy any one had given to her, and she was able to explain to me how she was using this tool she'd created," says math teacher Jenna Bassette. "She was problem solving independently." Tylicia is one of 6000 Virginia students who began using ST Math in 2012 with grant support from the Cisco Foundation. In just one year, student math proficiency scores in the 22 participating schools grew by 11 points – three times as much as students who didn't use ST Math.

## Cisco Corporate Social Responsibility

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