

California school sees big success with a language-free math program

ST Math, from the MIND Research Institute, uses a visual approach to teach core concepts

At Madison Elementary School in Santa Ana, Calif., almost all of the 870 students are English language learners. Historically, students were performing significantly below grade-level on standardized tests, especially in math.

“We didn’t have the ability to give a high level math program to our kids because of the language barrier,” recalled Marti Baker, the school’s principal. “We thought our kids would never be able to master the higher level standards that were coming out.”

Then, in 2002, the school became a pilot site for ST Math, a computer-based supplemental math program that is completely language-independent. “It doesn’t require any language at all,” Baker said. “That was a huge advantage for a school like ours.”

ST Math was developed by the MIND Research Institute, a non-profit organization in California, based on many years of neuroscience and education research. The program’s visual approach to math instruction is incorporated into self-paced activities that align to state standards and core math textbooks. In addition to the K-5 version used in Madison Elementary School, there is a middle school edition for Algebra Readiness.

Every student at Madison Elementary uses ST Math in the computer lab twice a week, for 45 minutes each session. Students work at their own pace on a series of animated games that have no verbal or written instructions; instead, the program is based on a visual, conceptual and problem solving approach.

“The students are able to fully understand a concept visually before they ever have to put a label on it,” Baker explained. “That’s the opposite of how we traditionally teach math, which is to tell students—in a language they may not



With ST Math, the percentage of students at Madison Elementary School achieving Proficient and Advanced levels in math increased from 25.5% in 2003 to 82.7 % in 2009.

even fully understand—what they are going to learn before they experience it.”

The activities are hosted by an engaging penguin named Jiji, who silently indicates if a student has succeeded in a game by confidently crossing a little bridge. “That is their only reward, but it is an amazing incentive,” Baker said. “They love to see Jiji run across the screen.”

Because the program is self-paced, very little intervention is needed from teachers. Their job is made easier because the activities in ST Math support the basal math textbooks used in the school, Baker said.

There is also an administrative function that allows a principal to monitor students’ progress with the program. “I can see if a class isn’t using it as often as they should be,” Baker said. “If a teacher misses a lab period here or there I can see it and help them make it up.”

Proof of ST Math’s effectiveness can be seen in the school’s test scores. Between 2003 and 2009, Madison Elementary significantly improved math perfor-

mance on the California Standards Test. The percentage of students at Proficient and Advanced levels increased dramatically, from 25.5 percent in 2003 to 82.7 percent in 2009.

Even more compelling, says Baker, is the students’ attitude about math. “For our children, their favorite subject is math,” she said. “It’s unbelievable but it’s true. They would rather play ST Math than go to recess.”

Baker said that her students’ progress with ST Math over the years has filled her with confidence about their future. “Once they are advanced in math and proficient in math, they are going to keep going,” she said. “This isn’t something they are going to forget and not know how to do later on. They have it.”

For more information about ST Math, please visit www.mindresearch.net.

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