MIND Research Institute

A neuroscience and education social benefit organization

BACKGROUNDER

HISTORY

MIND Research Institute is dedicated to ensuring that all students are mathematically equipped to solve the world's most challenging problems. We strive to achieve this through our distinctive visual math and problem-solving instructional software program for schools, and by conducting basic neuroscience, mathematics and education research.

MIND Research was founded in 1998 by scientists from the University of California campuses of Berkeley, Irvine and Los Angeles. These researchers came together to apply neuroscience findings indicating that children interacting with software games using visual, language-independent animation to learn math concepts showed significant improvement in their ability to conduct spatial-temporal reasoning, or the ability to manipulate objects in space and time. This ability to hold visual representations in the mind and predict their evolution lies at the core of innovative thinking and sophisticated problem-solving. These results prompted the scientists to found MIND Research, a social benefit organization, and further develop the visual learning-based Spatial-Temporal (ST) Math® software for use in K-12 schools. Using interactive visual representations of mathematical concepts, ST Math improves spatial-temporal reasoning and math proficiency.

The first randomized pilot study of the visually-based ST Math in a South Central Los Angeles elementary school confirmed the significant impact of the software on student math proficiency. Participating students scored in the 65th percentile on the Stanford 9 Math Test (used in California prior to the California Standards Test). Non-participants at the same school scored in the 36th percentile.

ST Math® CLOSING THE ACHIEVEMENT GAP

The impact of ST Math on student math achievement has been proven in numerous analyses over the years. Schools using ST Math consistently experience double to triple the growth in percentage of students testing proficient or better on state standardized math tests, when compared to similar schools not using the program. MIND Research's visual approach to teaching math has proven successful for a diverse range of students from many cultural and socioeconomic backgrounds and is particularly ideal for English Language Learners and students with learning disabilities.

In 2013, the CEO-led Business Roundtable (BRT) recognized ST Math for having "strong potential for helping prepare more U.S. K-12 students for college and the workforce. Since then, BRT member companies have given more than $8 million to bring ST Math to 90,000 more students and 3,200 more teachers. A complementary but separate initiative conducted by Change the Equation (CTEq) identified ST Math as one of four programs that met their standard of high-quality, immediately scalable programs.

MIND Research's programs, for which there are several patents pending, are currently reaching 1 million students, 39,000 teachers at 3,100 schools in 43 states and the District of Columbia.

MATH MINDs CLOSING THE EXPERIENCE GAP

Building on its social benefit mission, in 2014 MIND launched MathMINDs, a movement to shift the cultural perception of math from being scary and frustrating to exciting and essential. To do this, MathMINDs engages the community and students in hands-on mathematical experiences outside the classroom – including a Math Fair, Family Math Night and National K-12 Game-a-thon.

VALUES

In the words of the late Dr. Gordon Shaw, MIND Research Institute co-founder and seminal researcher of spatial-temporal reasoning, "All kids are smarter than we think. We just need to give them the opportunity to develop their abilities." MIND remains committed to creating this reality. To that end, our work is guided by the following values:

- Developing problem-solving skills that include multi-step reasoning, creativity, persistence and real-world applications of those skills.
- Encouraging a life-long love of learning through hands-on experiences that build deep conceptual understanding.
- Fostering and growing talented, diverse people who can collaborate to solve the world's toughest problems.

RESEARCH

Through our very active Research Division, the MIND Research Institute continues to explore in the fields of neuroscience, mathematics and education. We collaborate with other prestigious institutions, such as Johns Hopkins University, the University of Pittsburgh, the University of Montreal and the Medical University of South Carolina, in conducting research in mathematics and neuroscience.

ST MATH: THE LEADER IN GAME-BASED MATH EDUCATION

MIND Research Institute's flagship ST Math instructional software program is designed to help all students reach math proficiency through self-paced, language-independent, mastery-based objectives. It is closely aligned to rigorous state standards and builds the conceptual understanding and problem-solving skills needed for success in math. The ST Math software integrates with core instruction and is delivered in a variety of learning environments.

Teachers and students access the software in the classroom, lab, or at home, to maximize productive teaching and learning. ST Math features embedded assessments and detailed reporting of student learning patterns.

Through a 1:1 learning environment, the ST Math software games incrementally increase in difficulty and provide immediate feedback. Teachers are provided with both technical support for the software and training on how to successfully integrate ST Math into classroom instruction. Through the software system, educators are able to access real-time student learning data, allowing for differentiation based on each student's level of understanding. ST Math uses a blended learning approach of 1:1 online learning through ST Math and teacher-guided group instruction integrating ST Math software games into their classroom lessons.

With each new release, MIND Research applies insights gained from the software's built-in feedback system and incorporates the latest findings in neuroscience, cognitive and education gaming research to make ST Math more effective, engaging and accessible. The innovative spatial visualization and blended learning approach implemented through ST Math has shown significant results in student math achievement across a wide range of school districts and student populations.

MIND'S CURRICULA INCLUDE:

- ST Math®: K-6
- ST Math®: Middle School Supplement
- ST Math®: High School Intervention
- ST Math®: Fluency

AWARDS & DISTINCTIONS

ST Math has received several awards including:

- **2015 Bright Spots in Hispanic Education**, White House Initiative on Educational Excellence for Hispanics
- **2015 Best Game-based Education Solution**, SIIA/CODiE
- **2015, 2012, 2011 & 2010 District Administration "Top 100 Products"** for ST Math
- **2012 STEM Innovation Award**, Silicon Valley Education Foundation
- **2012 Estrella Education Award**, Orange County Hispanic Chamber of Commerce
- **2012 Readers Choice Award** by eSchool Media, Inc.
- **2009 EdNet Pioneer Award** for MIND Research Institute
- **2009 Teachers' Choice Awards** for the Classroom