

Interactive Mathematics Helps Students at Pasadena City College Take Charge of Their Learning, Driving Them Toward Mathematics Mastery



Overview—Pasadena City College, Pasadena, California

- The highly interactive program encourages students to become active learners.
- Students are motivated to succeed.
- Faculty can give students more one-on-one attention.
- Independent learning improves students' confidence.

Like many community colleges, Pasadena City College (PCC) struggled to increase the success rates of its developmental math students. That was until 1996, when the staff at PCC discovered the benefits of using Interactive Mathematics, an innovative multimedia program from PLATO Learning (formerly delivered by Academic Systems). Today, students who choose to take computer-mediated classes through the college's Mathematics Resource Center enjoy a strong completion rate of 95 percent for prealgebra, 93 percent for intermediate algebra, and 84 percent for college algebra, compared with a nationwide completion rate of only 50 percent for developmental math classes in 2002.

"We were looking for a software program that would help us personalize instruction and increase our success rates," said Yoshi Yamato, lead math instructor and director of the Mathematics Resource Center at PCC. "Now that we're using Interactive Mathematics, we have almost perfected what we have always wanted to do."

Breaking the Cycle

Many students who come to the developmental math program at PCC repeat courses two or three times before turning to Interactive Mathematics. "Students who feel they need to try something different because they haven't been successful in the past will choose Interactive Mathematics," said Yamato. The Math Resource Center at PCC currently offers 13 sections of classes that use this innovative multimedia program. "A lot of students have been turned off by math in high school and even in elementary school. Sometimes doing something different can get them excited about learning."

According to the completion rate results for fall 2002, students are more than just motivated to learn—they are succeeding in math with the help of PLATO Learning. In college algebra for instance, 84 percent of students

INSTITUTION: Fully accredited by the Western Association of Schools and Colleges, Pasadena City College has served the community for the past 79 years. This comprehensive two-year community college caters to the diverse needs of its student population with 60 different academic programs and 76 certificate programs in 38 vocational areas.

SIZE: Pasadena City College is the third largest single-campus community college district in the nation. In 2002, an average of 26,000 students enrolled in a broad range of vocational, basic skills, and adult education courses.

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"Interactive Mathematics gets students excited with math all over again."

YOSHI YAMATO,
LEAD MATHEMATICS INSTRUCTOR

completed the course, with 70 percent of those students receiving As, Bs, or Cs. With a completion rate of 95 percent for prealgebra and 93 percent for intermediate algebra, students are doing extremely well with the program, scoring well above the nationwide average of 50 percent for developmental math classes.

Alternative Methods of Learning

What is it about Interactive Mathematics that works so well for students? By design, the program fosters independent learning. This flexibility allows teachers to spend more time with students who need additional help, while giving students who want to go faster through the course the ability to do so. “Students love being in the driver’s seat. They don’t have to wait for the entire class to be ready before they can take a test. With Interactive Mathematics, they are very much in charge of their own learning,” said Yamato.

Not only does Interactive Mathematics encourage independent learning and make room for personalized instruction in the classroom, it also turns students into active learners, one of the major goals at the Math Resource Center. “Before we discovered Interactive Mathematics, we were trying to

come up with ways to make students more active,” said Yamato. “Sometimes developmental math students tend to be very passive. With Interactive Mathematics, you have to be actively involved. I find that to be a great asset.”

Instructors Play a Vital Role

One of the keys to student success with Interactive Mathematics over the years has been the role of the instructor. At PCC, the staff has been encouraged to try alternative methods of teaching in addition to the traditional lecture format. When the college started using Interactive Mathematics, there were already instructors willing to try something new. “If teachers aren’t turned on about the program, you can’t excite the students,” said Yamato. “You need that passion.” And for most instructors, flexibility, ease, and one-on-one time with students are just a few of the many reasons to be excited about Interactive Mathematics.

“PLATO Learning is a great asset because it helps students see math from a different angle.”

YOSHI YAMATO,
LEAD MATHEMATICS INSTRUCTOR