

# Suffolk County Community College Invests in Technology to Improve Developmental Mathematics Programs



## Overview

- Suffolk County Community College invested heavily in technology to improve and enhance its developmental mathematics program. Through this investment, the college has seen great success in student achievement.
- The self-paced nature of the courses offered using PLATO® Interactive Mathematics promotes a sense of control over education for students and allows them to complete courses when they have truly mastered the material.
- Due to the administrative support and faculty willingness to try computer-mediated instruction, student success rates have risen, and students are succeeding in their subsequent college-level coursework.

Suffolk County Community College consistently serves a large population of developmental students. Since 1997, Suffolk County Community College has invested heavily in campus technology to support its developmental programs.

In 1997, a committee of faculty was formed to investigate, purchase, and manage the use of technology in the developmental mathematics program at the college. The committee chose PLATO Interactive Mathematics as the main technology component in their developmental mathematics program. However, the committee also decided that relying solely on technology could pose problems, so they decided to include paper-and-pencil tests to supplement the curriculum and other materials that could meet individual student needs. Students have the option of enrolling in either a traditional lecture-based course or a computer-mediated course using PLATO Interactive Mathematics.

“Technology will never replace faculty in the classroom,” said Regina Keller, professor of mathematics. “Students will still have questions that need to be answered in person. We wanted to give students a different kind of venue for developmental mathematics. The computer-mediated courses give them the opportunity to try something a little different.”

## Investing in technology improves student achievement

Suffolk County Community College has invested heavily in technology to support this program. Each campus hosts a computer lab dedicated solely to developmental mathematics instruction. The labs are connected through a single server, which allows students to transfer easily between campuses and pick up right where they left off in their coursework.

**INSTITUTION:** Suffolk County Community College is the second largest community college in the State University of New York (SUNY) system, enrolling 22,000 students at its three campuses in Selden, Brentwood, and Riverhead. Suffolk County Community College offers 69 programs of study.

### CONTACT:

Regina Keller,  
professor of mathematics,  
kellerr@sunysuffolk.edu

Beverly Broomell,  
professor of mathematics,  
broomeb@sunysuffolk.edu

“It doesn’t sound like a big deal when we’re talking about arithmetic... but if students haven’t learned it yet, it’s hard for them to grasp it, especially as an adult. This self-paced model allows them to take the time they need to get through it and move on to the next level.”

BEVERLY BROOMELL,  
PROFESSOR OF MATHEMATICS

In order to implement such technology, the college willingly used capital funds to support their plans. They invested in hundreds of computers and the facility space to host the labs. The college also equipped the campus math center, academic computing center, and the libraries with PLATO Interactive Mathematics, providing students more opportunities to access the courseware. As a result, the campuses have taught the maximum number of sections every semester.

“Administrative support really led to a lot of the success of the developmental math program,” said Keller. “They have upgraded the labs with new computers every few years and made sure to upgrade technology to support student needs. The administrators saw the need to spend the money in the classroom, especially in a classroom solely used as a computer-mediated lab classroom for one course, and have supported that initiative by reserving the lab only for that course.”

The college also heavily invested in its faculty for this program. Training is provided for new faculty to teach using the computer-mediated technology, solidifying the college’s commitment to offer alternatives for developmental students.

### Self-paced instruction proves crucial to success

Using PLATO Interactive Mathematics in the developmental program affords students a luxury they would not have in traditional classrooms—a self-paced learning environment.

“By using technology, students are not bound to an instructor’s schedule,” said Beverly Broomell, professor of mathematics. “They are not required to pass certain modules on certain days. With a self-paced model, students can never fall behind and are truly in control of their education.”

Students are able to access the courseware either during dedicated class time, in the learning lab or library on campus, on their own computer at home, or on campus through the campus-wide Wi-Fi network.

“This program is designed for two types of students,” explained Broomell. “It is for the students that need more help and attention, those who need to focus on specific areas. It is also for the students who just need to brush-up on some of their skills and could end up

working ahead. The technology lets the students work at their own pace, and their success depends on how much time they want to put in to it.”

Suffolk County Community College is using PLATO Interactive Mathematics as full-course instruction for Foundations of Math (arithmetic) and Beginning Algebra. If a student in the Beginning Algebra course completes it with enough time in a semester to move on, an instructor may let them continue using PLATO Interactive Mathematics for Intermediate Algebra.

Most students get through the course in one or two semesters, as compared to students attempting to pass in traditional classrooms who sometimes spend four to five semesters working to pass. When students are required to retake a course, due to lack of completion or poor grades, they are able to pick right back up where they left off using PLATO Interactive Mathematics. Traditional courses require students to start at the beginning again.

“It doesn’t sound like a big deal when we’re talking about arithmetic,” said Broomell. “But if students haven’t learned it yet, it’s hard for them to grasp it, especially as an adult. This self-paced model allows them to take the time they need to get through it and move on to the next level.”

### Better retention, more achievement in subsequent classes

Since its implementation, the program has been incredibly successful. Thousands of students have used the technology to successfully master these developmental, non-credit courses, enabling them to move on to college-level coursework.

“We feel that this program has been quite successful,” said Broomell. “Students that took the computer-mediated course for developmental math did as well or better than students in the traditional setting. They also have better study habits, probably because they worked differently to understand the material.”

“After students finish the course, we have some who say, ‘do you have any other courses that I can take like this?’” said Keller. “That’s how we know it worked for them.”