

RIO SALADO COLLEGE, TEMPE, ARIZONA

INTERACTIVE MATHEMATICS HAS HELPED RIO SALADO COLLEGE DESIGN COST-EFFECTIVE DISTANCE LEARNING COURSES.

OVERVIEW

- *Interactive Mathematics* gave Rio Salado the ability to offer four courses at the same time with one instructor.
- The number of students served in a distance learning format increased from 35 in a section to 100.
- The registration process became more flexible.
- A course assistant was added to help with course management, freeing the instructor to focus on student learning.

Rio Salado College has successfully redesigned four math courses to be taught concurrently in a distance-learning format by one faculty member, greatly decreasing college costs.

Through a two-year Pew Grant Program in Course Redesign, Rio Salado—one of the 10 community colleges in the Maricopa Community College District—redesigned four distance learning courses: Introductory Algebra, Mathematical Concepts/Applications, Intermediate Algebra, and College Algebra/Functions. Through the process, Rio Salado sought to increase the number of students that could be served in an online distance-learning format and improve student retention.

The study looked at three sections of 100 students each. Results show that costs were dramatically reduced, with a cost-per-student reduction of as much as 27 percent less, compared with previous distance learning formats at Rio. At the same time, retention stayed the same or improved slightly.

▪ **LETTING FACULTY FOCUS ON STUDENT ACHIEVEMENT**

“A large percentage of what the instructor does is not directly instructor-related and therefore can be placed on someone else,” said Ted Coe, mathematics department chair and one of the primary faculty members conducting the study. “Our goal was to explore the use of technology to help change the role of the instructor in a distance learning classroom. Our thought with this study was that an instructor using *Interactive Mathematics*, even with more students, would be able to spend more time on instruction and the assistant could help on everything else, decreasing costs and increasing student success.”

“The result was that it worked. We think it might work even better with 50 students instead of 100, though, so we’re going to look at that as well,” Coe said. “But we found that there definitely are ways to structure the capital-for-labor trade to save money and to improve the role of the instructor with the students.”

Rio Salado chose Academic Systems’ program for the study because “Academic Systems clearly has the best product on the market,” Coe said. Having used *Interactive Mathematics* already for several years, Rio Salado’s faculty knew that the strong instructional support system would help them reach their goals by greatly simplifying the course management process. The study used Academic Systems’



INSTITUTION: Rio Salado, established in 1978, is one of 10 colleges and centers making up the Maricopa County Community College District in Arizona. Known as “the college without walls,” it delivers courses to diverse populations, using customized programs, accelerated formats, and distance learning. Providing learning opportunities on-site at corporations, government agencies, and community centers, the college is also one of nation’s leading providers of distance learning courses, offering 200 Internet courses and a broad range of student services such as registration, tutoring, academic advising, library services, and counseling—all online.

SIZE: Rio Salado has over 34,000 annual enrollments. The Maricopa District overall serves over 250,000 students annually, making it the second-largest provider of post-secondary education in the country.

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Systems clearly
has the best
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interactive software to deliver content while a course assistant provided course management, communications, and student support, allowing faculty time to be spent more directly on improving instructional issues.

■ **SELF-SUFFICIENCY AND SATISFACTION**

According to instructors, students using *Interactive Mathematics* reported that they tended to go back and review the software's instruction more often than ask questions of the instructor or ask for help from tutors. "This showed us that the program enables more student self-sufficiency," Coe said.

In addition, the redesigned courses that utilized *Interactive Mathematics* gave Rio Salado the ability to:

- Use a communication routing system so that students, the course assistant, and faculty can communicate easily and clearly with each other;
- Increase support from a variety of places in the college community, ranging from course development and support to the student help desk, to offering a systems approach to student learning;
- Reduce costs per student by 27 percent (from \$49 to \$31) compared with previous distance learning formats at Rio Salado; and
- Maintain strong student satisfaction regarding communication with the instructor (8.25 on a scale of 1 to 10 with 10 being the highest).

Beyond this study's results, Rio Salado has found that *Interactive Mathematics* has enabled the college to meet its goal of offering students alternative learning options.

"More and more people are getting in touch with technology and would rather have an interactive experience," Coe said. "Academic Systems helps us provide the courses that meet that demand."

Our goal was to
...help **change** the role
of the instructor
in a **distance learning**
classroom.

TED COE,
MATHEMATICS DEPARTMENT CHAIR