For us, the success of our developmental math course redesign is measured in the number of students who are successfully completing their developmental course sequence in less time, therefore saving money for the students, (and allowing them to enter) college math level courses sooner.

*Katie Ack, Professor of Mathematics, University of Hawaii Maui College*
Students who complete one developmental math course can move onto the next one immediately, giving them the option of exiting developmental math in one semester and saving tuition costs. The combination of computer-equipped classrooms and online resources allows institutions to hold multiple classes in a single setting, eliminating the cancellation of low-enrollment classes.

**GRANT PROJECT DETAILS**

NGLC’s funding helped Chattanooga State, JCTC, and UHMC adopt the U Do the Math program. Project highlights include:

- **Classroom requirements:** U Do the Math's curriculum necessitates computer-equipped classrooms and math labs. Consequently, JCTC and UHMC furnished existing classrooms with computers. In addition, UHMC converted a classroom into a math computer lab. Student activities extend beyond usual class time, requiring more instructional support. JCTC hired a full-time computer lab coordinator using NGLC funds. UHMC readjusted instructional staffing, hiring more math lab monitors and student tutors.

- **Course redesign:** Each partner redesigned two developmental math courses to fit the U Do the Math model and streamlined and modularized the developmental math curriculum. For example, Chattanooga State transformed its three-course developmental math program into two online course shells.

- **Faculty Buy-In:** The U Do the Math model transforms the instructor's role from a classroom lecturer to a learning facilitator. Not every faculty member readily embraced this change, but faculty involvement in course redesign helped allay some concerns. Faculty committees designed JCTC's course shells. Ongoing analysis of redesign outcomes and postsemester program tweaking helped foster a more positive attitude among Chattanooga State faculty.

- **Class scheduling:** U Do the Math's success rippled through UHMC's math department. Students' more rapid completion of developmental math resulted in greater demand for college-level math courses. The department's college algebra course expanded from one to four classes per semester. Even with the expanded schedule, student demand still exceeded available class slots, resulting in a waitlist. The college also experienced greater student demand for its calculus course sequence.

- **Dissemination:** An important goal of U Do the Math was to circulate project practices and results to encourage program adoption. The Education Trust documented the program's implementation process and highlights a U Do the Math program page on its Access to Success Network website.

**PARTICIPANT IMPRESSIONS**

U Do the Math's student-centered approach benefits both faculty and student. “The program teaches students how to become more disciplined in regards to their studies,” explained Aleta Lenyard, director of the Math Center at Chattanooga State. “They are able to progress at their own pace and have more control over their success in the course.” This shift in the classroom environment leads to a better relationship between faculty and students, enabling them to work collaboratively to ensure student learning and success. Professor Tina Cannon noted, “I saw more smiling faces and got more hugs these past few days than I have gotten the whole 21 years I have been at Chattanooga State. I like seeing students happy about math.” A student concurred: “Due to my awesome professor, I have done so well, and the programs and technology have helped tremendously. I would recommend this math program to everyone.”

**RESULTS TO DATE**

The U Do the Math project team and SRI International, an external evaluator of projects in the NGLC grant program, reported these results:
• After implementing U Do the Math, Chattanooga State’s developmental math success increased from 48% to 65%; college math success increased from 66% to 74%.

• With the streamlined developmental math sequence, Chattanooga State saw a 44% increase in students successfully exiting the program into college-level math courses.

• Continuous enrollment enabled 14% of Chattanooga State’s U Do the Math participants to complete more than one developmental math course in a single semester.

• At Chattanooga State, low-income students enrolled in the redesigned developmental math courses performed at nearly identical levels compared to all other students: within 2% of overall success rates (49% vs. 51% for the first course in the developmental sequence and 60% vs. 62% for the second course) and had nearly identical fall-to-spring semester retention rates (69% for students in the first course and 72% for the second course). In addition, low-income students’ multiple course completion in a single semester was similar to that of all participating students (14% vs. 13%).

• At Chattanooga State, U Do the Math lowered costs by reducing the number of instructor hours needed for the course.

• U Do the Math had a statistically positive impact on student outcomes across all three institutions when compared to a control group. The .326 impact score is equivalent to raising the average student’s score on a 100-point exam from 50 to 62.

NEXT STEPS
The U Do the Math program continues to thrive at all three partner institutions and now flourishes in high schools too. In May 2012, Chattanooga State received a grant from the Tennessee Board of Regents to embed a version of U Do the Math in high schools as part of the Tennessee Higher Education Commission’s SAILS (Seamless Alignment and Integrated Learning Support) program. Through SAILS, high school seniors complete the college developmental math program, which gives them a head start on their postsecondary studies. In a blog post, project director John Squires reported that in the 2012–13 SAILS program pilot, 4 community colleges worked with 20 high schools and impacted over 600 students. At Chattanooga State, over 80% of the students in the pilot entered the college ready to take a college-level course. The program’s goal is to impact 7,500 students in the first year, 15,000 in the second year, and over 30,000 in the third year.

FOR MORE INFORMATION
Taking Do the Math to High Schools, NGLC blog post by John Squires, January 31, 2013.
Do the Math SAILS into Tennessee High Schools, NGLC blog post by John Squires, May 10, 2013.
A Tale of Two Redesigns, ELI webinar, May 2, 2011.

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http://nextgenlearning.org/grantee/chattanooga-state-community-college