



Jerome Murray and Jim Anderson

Professors of Mathematics — Clark State Community College

Professors Team Up with Enhanced WebAssign® to Support Self-Paced Learning in Developmental Math

Jerome Murray and Jim Anderson are math professors at Clark State Community College in Springfield, Ohio. They wanted to redesign a portion of Clark State’s Developmental Math program to include courses that allowed students to work at their own pace as well as have the option of completing the entire developmental math program within a year. With these objectives in mind, Jerome and Jim set out to find a digital learning solution that would provide self-paced instruction and promote critical thinking skills. They also needed a solution that they could use in other math courses. “We wanted a learning solution that would allow us to build courses for College Algebra and Calculus in addition to Developmental Math,” says Jerome. When the faculty saw that Enhanced WebAssign® (EWA) could offer a unified platform for all levels of mathematics, they decided to adopt it for their program.

EWA COMPLEMENTS THE FLIPPED CLASSROOM

To provide an environment that would allow students to work at their own pace, Jerome and Jim decided to employ a flipped classroom model in Clark State’s Math Lab. Instead of delivering daily lectures, they facilitate a lab in which students watch lesson videos (produced by Jim and embedded within Enhanced WebAssign) and then attempt the chapter problems. Once the students have reviewed the chapter’s lessons and are comfortable with the problems, they take the chapter test. The intent of this model is to allow students traditionally intimidated by math to work through the chapters at a pace that is comfortable for them. “It allows the students to struggle on their own, and then get one-on-one assistance with the material they are having the most difficulty with,” says Jerome. The flipped classroom model also allows students to progress more rapidly through what was previously delivered as three separate Developmental Math courses.

The flipped approach required a user-friendly platform that provided immediate and constructive feedback to the students, and Enhanced WebAssign’s intuitive interface and varied learning resources were a perfect fit. EWA grades students’ responses, offers guidance for incorrect answers, and provides links to tutorials and other problem-specific resources to promote students’ proficiency as they work on their own. Jerome says, “In Enhanced WebAssign, students can easily attempt the problem, fail, gain immediate feedback, and learn.”

CHALLENGES

- Instructors needed to redesign part of the Developmental Math program to allow students to successfully work on their own and potentially complete all required coursework in one year.
- Mathematics faculty wanted a flexible learning platform that could be used for a variety of mathematics courses.

SOLUTIONS

- Enhanced WebAssign®

RESULTS

- EWA is well-suited to self-paced learning in flipped classrooms and math labs, offering abundant practice, immediate feedback, and problem-specific resources that reinforce skill development.
- EWA’s platform, learning resources, and book-specific assignments support the spectrum of mathematics courses.
- EWA promotes development of critical thinking skills by engaging students in independent learning. Students work comfortably at their own pace and get immediate feedback on incorrect answers as well as links to videos, tutorials, and other problem-specific resources that encourage them to continue practicing.
- Instructors in Math Lab have more time to focus on students needing special attention, because EWA’s guidance enables many learners to work successfully on their own.
- The number of students passing Developmental Math courses increased by 7% in the first year of using EWA in a flipped classroom.