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# WebAssign® Helps Students Pace Themselves in Busy Developmental Math Lab

Solomon Willis has taught mathematics at Cleveland Community College (CCC) in North Carolina since 2002. As coordinator for the college's developmental math program, Solomon selects the online resources to be used for seated, hybrid, and online courses, and his choice is WebAssign®. WebAssign has successfully helped CCC students build the skills that prepare them for subsequent courses — engaging them with immediate feedback, tutorial content, and an interactive eBook, while allowing them to work at their own pace.

## COURSES AND PARTICIPANTS

Solomon has used WebAssign in CCC's self-paced developmental math program, taught in a lab with 50 computers, since the spring of 2011. Basic math, introductory algebra, and intermediate algebra all run at the same time. Coursework is completed online using WebAssign, with two instructors available to assist students. Working at their own pace, students take a pretest, watch video tutorials about relevant concepts, complete homework, and take a post test for each text chapter. They also take a final exam.

## THE CHALLENGES

Keeping students engaged is an ongoing issue. "Students want to see how math is used in the real world, and they need interactivity. Otherwise, they get bored," he says. A related challenge is how to accommodate students with diverse learning styles and levels of proficiency. Even a self-paced program requires resources to ensure that slower students don't get lost, and that stronger students stay interested.

In addition to promoting student preparedness, assessing preparedness throughout the course is critical in a self-paced learning environment. Solomon first tried another online learning solution in the math lab, but found that students were not retaining knowledge. "If students clicked the help button multiple times, the program would give them the answer. They could click their way through the course without learning the material," he says. Solomon's Cengage representative had introduced him to WebAssign for a hybrid developmental math course, with good results, so it was an easy decision to begin using it in the lab.

Another of Solomon's concerns is the time spent preparing for a new term and then administering it. "We use BlackBoard® for course management, and I am one of those instructors who wants to have my entire course set up before it starts. Give me a tool that can help me be more efficient, and I'm on board," he says.

## THE RESULTS

Instant feedback is a requirement for self-paced learning, and students get just that with WebAssign. They have five chances to submit a correct answer (although Solomon could specify fewer attempts). "When students are doing an assignment, they know right away if they are right or wrong. WebAssign is also very interactive, and offers students help with Watch It videos and Practice It interactive examples that walk them through solutions

## CHALLENGES

- **Students need interactivity** to capture and hold their attention. Struggling students need problem-specific guidance when working on homework assignments.
- **Self-paced learning formats require assessment tools** that assure students' proficiency as they proceed through the course.
- **Managing assignments and tracking student performance** for multiple courses and sections can be time consuming.

## SOLUTIONS

- WebAssign
- Aufmann, Richard N., and Joanne S. Lockwood, *Basic College Mathematics: An Applied Approach*
- Aufmann, Richard N., and Joanne S. Lockwood, *Introductory and Intermediate Algebra: An Applied Approach*

## RESULTS

- **WebAssign engages students with instant feedback and interactive tutorial resources** such as Watch It videos and Practice It examples. One-on-one assistance, which fosters understanding and skill proficiency, is ideal for self-paced learning.
- **Improved conceptual understanding and preparedness for subsequent math courses** is enabled by conditional release feature, which allows instructors to set a minimum score that students must earn on an assignment before proceeding.
- **Instructors work more efficiently and stay organized** with easy-to-use options for creating assignments, listing assignments, and more. Flexible gradebook and auto-graded assignments save instructors time.

step by step. Students view solution guidance until they feel confident enough to answer. It's much more engaging than a textbook," he says. Terminology asks students to participate in 'spelling bee' activities, in which they listen to a word and then type it.

The WebAssign conditional release feature allows instructors to set the minimum score that students must earn before proceeding, and is also ideal for self-paced learning. In the CCC math lab, students must complete one assignment with a score of 80% or better before they are allowed to access the next lesson.

Does WebAssign work? Yes. Solomon's students say that WebAssign helps them learn and understand the material, and he agrees that their conceptual understanding is better. "There is so much guidance that students could learn concepts just by using the help-related buttons," he says. "Students who have used WebAssign seem better prepared for their college transfer courses, and they tell me that they feel confident about moving to the next level."

Solomon's students like WebAssign for other reasons, too. "The gradebook lets them see their running average, so they aren't constantly asking me how they're doing in the course," he says. "They also like the eBook. Many students don't purchase the printed textbook. They bring their laptop or iPad to class and use the eBook version of the text that is included with WebAssign."

In terms of instructor benefits, WebAssign has greatly reduced the amount of time spent on grading, because Solomon's assignments are graded automatically. Gradebook options allow him to view class trends, check on individual student progress, and configure settings to fit his needs. WebAssign also helps him stay organized. He sets due dates when he creates assignments, and each time he signs on to WebAssign, his My Classes page shows him a "to-do" list of current and recent assignments.

"I work closely with my Cengage Digital Solutions Coordinator to get ready for each term," adds Solomon. "I can't say enough how grateful I am for the help I receive. Digital Course Support is a real time saver, and one of the many reasons I continue to use WebAssign. I've also attended and presented at Cengage TeamUP Mathematics Conferences. They offer the best in professional development and are another example of the many 'extras' that Cengage offers."

Solomon's future plans definitely include WebAssign. "WebAssign helps students learn and retain the concepts that they need to know, and assesses them to assure that they're ready for the next level. It's the best online interactive tool for math that I've seen."

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