



## Kristi Orr, M.Ed. in Mathematics

Tenured Faculty Member, Professor of Science and Mathematics —  
Northern Oklahoma College

### Enhanced WebAssign® Helps Students “Get It” When Doing Homework Online

In her ten years as a college instructor, seven of them at Northern Oklahoma College (NOC), on the Enid, Oklahoma campus, Kristi Orr has taught remedial math, remedial algebra, and calculus as well as physics for the life sciences. The school is rated by the Aspen Institute as being in the top ten percent of community colleges in the United States, and the only one recognized in the state.

To engage her developmental mathematics and calculus students in active learning, Kristi counts on Enhanced WebAssign® (EWA). This proven online homework solution enhances problems from Cengage Learning textbooks with video solutions, interactive tutorials, immediate feedback, and access to an eBook. Kristi has seen her students' level of engagement and understanding improve with EWA. “I’m a believer,” she says.

#### COURSE AND PARTICIPANTS

NOC prides itself on keeping classes small, so Kristi’s developmental math classes typically have no more than 25 to 32 students. She requires EWA, but students can also purchase a textbook, as some of them don’t have access to a robust Internet connection at home and must be on campus to do online assignments. Furthermore, some of her students — particularly the older ones who make up a significant proportion of the student population — still feel more comfortable with traditional textbooks. That said, Kristi finds that Enhanced WebAssign is an appealing way to introduce learners to online resources.

In addition to assigning ungraded practice problems from the textbook, Kristi assigns a set of EWA problems each week. She hand-picks questions (it’s quick and easy with EWA) to ensure that all relevant skills and concepts are covered, and allows students three submissions. She also requires students to turn in a hard copy of quizzes, and show their work so she can assess their understanding even if they don’t get the correct answer. (Although the hard copy quiz format is based on a departmental decision, Enhanced WebAssign also has a unique “Show Your Work” feature, which encourages students to focus on their methodology while giving instructors the option of considering more than a student’s final answer for grading.)

#### THE CHALLENGES

Another ongoing issue is twofold: assuring that students receive enough concept reinforcement and individual attention outside of class. “Every semester I show my algebra students how to factor the negative out of the x squared term of a quadratic trinomial, and I know that by the time they begin their homework, many of them will have forgotten,” says Kristi. “Students need to practice in order for a concept or skill to ‘stick,’ so I’m always looking for ways to motivate them to actively engage in course material outside of class. And if they get stuck on a problem at 3 a.m., they don’t have me to turn to.”

#### CHALLENGES

- **Unmotivated students** who need guided practice to learn and retain mathematics skills.
- **Providing individual attention to students outside of class and office hours** to prevent their being stymied by questions that arise while doing homework.
- **Difficulty assessing student comprehension** at a level that goes beyond test scores.

#### SOLUTIONS

- Enhanced WebAssign®
- Auffman, Richard N. and Joanne S. Lockwood, *Introductory Algebra: An Applied Approach*
- Auffman, Richard N. and Joanne S. Lockwood, *Intermediate Algebra: An Applied Approach*
- Larsen, Ron and Bruce H. Edwards, *Calculus: Early Transcendental Functions*

#### RESULTS

- **EWA provides immediate feedback** that encourages student engagement, active learning, and concept reinforcement. If students answer incorrectly or want guidance before attempting an answer, they can access text-specific tutorial resources.
- **Problem-specific videos** walk students through a solution just as the instructor would, freeing up class time to focus on core material.
- **Gradebook makes it easier to evaluate student progress**, individually and collectively, so problems can be addressed quickly.

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**Kristi Orr**

Professor of Science and Mathematics,  
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## THE RESULTS

Kristi is happy to have her students turn to Enhanced WebAssign. The EWA gradebook enhances her ability to evaluate her students’ progress and understanding, individually and collectively. “If I review assignment results and see that most of the class has missed Problem 4, I can address the issue immediately. If I were grading papers manually, I might not catch the trend. With Enhanced WebAssign, the results are right in front of you.”

Kristi believes that students’ level of engagement and understanding is higher than if they didn’t use EWA. “One student told me that WebAssign forces him to learn, and it was meant positively. Students love the instant feedback. They don’t like seeing that little red x that indicates an error; they want the green “correct” check mark. They know immediately if they’ve made a mistake and are motivated to continue working, which provides concept and skill reinforcement.”

Enhanced WebAssign serves as a surrogate instructor for Kristi’s students. “I have them 150 minutes a week, but they spend 450 minutes on their own. During that time, Enhanced WebAssign is with them. I know that when an EWA problem has a ‘Watch It’ video or ‘Practice Another Version’ feature, my students will ‘get it’ even though I’m not there.” She says the EWA technical support team addresses any technical issues, supplemented by a ‘tips’ sheet that she hands out the first day of class.

“I’ve run into instructors who resist online resources because they think they are for lazy teachers, or that they inhibit important teacher-student interaction. That is absolutely not the case,” says Kristi. “I love being an instructor. If anything, EWA frees me to focus on being the best that I can be in class, because I know students will have help when I’m not available.”

A passionate teacher who likes to modify her teaching activities to avoid getting too comfortable, Kristi tried not using WebAssign for a term. “I noticed right away that active learning was not occurring outside of the classroom. Students needed the motivation and the video guidance that EWA videos provide, so I began using it again. Enhanced WebAssign allows me to get back to the heart of teaching. I can’t imagine teaching without it.”

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