



WebAssign Leads Educational Technology

By Gene Pinder

Few physics professors become entrepreneurs. Fewer still build a company that goes on to service more than 1 million students at more than 2,300 educational institutions, becoming the leading independent provider of online instructional tools for faculty and students in the world.

That's the legacy of NC State professor John Risley. Colleagues were saddened by his death in 2013. But the company he launched in 1997 — Advanced Instructional

Systems, known as WebAssign — has become a formidable innovator in customizable online instruction.

From its headquarters on Centennial Campus, WebAssign has built an online class management system that allows instructors to build assignments, administer secure tests, provide practice problems and track student progress and results with analytical tools.

The system also has built-in email capability, and it provides

interactive content such as simulations, videos and tutorials to enhance learning. All major academic publishers have adopted WebAssign and have integrated it with more than 900 textbooks.

In short, WebAssign has become the go-to tool for thousands of college and high-school faculty members.

"I find that WebAssign has all of the features I want in a learning management system, with fewer things I don't use — and thus, less

complexity," explains Betty Black, professor of biological sciences at NC State. "Development within WebAssign is intuitive and easy to learn. It also has an excellent grade book, and the website is very reliable, even with large numbers of simultaneous users."

Lori Petrovich has a dual perspective on WebAssign. She began using the platform in her NC State chemistry lectures in 2003 and in laboratory sessions in



• **ABOVE:** Collaborating at the WebAssign headquarters on Centennial Campus are, from left, Alicia Hundley, Chris Gearing, Robert Davis and Annie McQuaid.

2006. “The instructional support provided by the WebAssign platform allows me to focus on what I truly enjoy: interacting with students as individuals and teaching them chemistry,” she says.

For lectures, the program provides immediate and constant feedback to students. “Students are always aware of their grades in the categories of homework, participation and exams — and of their overall grade,” Petrovich explains.

“The e-textbook is hosted by WebAssign, such that students can easily find reference materials, charts and constants,” she adds. “I also find the ability to view all of a student’s submissions to a question helpful. I have often pulled up this view when a student visits me during office hours or emails me and have been able to easily recognize and explain their misconception by the submissions they made.”

In the lab, WebAssign keeps

teaching assistants and students on schedule with assignments and lab grades. “With WebAssign doing the heavy lifting of grading and calculating grades, the TAs have more time to invest in assisting students during the lab period and explaining chemistry,” Petrovich says.

WebAssign courses can roll over from one semester to another. “This has freed up time in my schedule so that I am able to work on improving my classroom presentation and developing supportive materials for students to learn outside of class,” she adds. “The diagnostics on each question have helped me discover where improvements in the lecture presentation and additional resources are needed.”

That kind of feedback is music to the ears of Mark Santee, vice president of product development and marketing for WebAssign. Since joining the company in 2009, Santee has seen it go through the usual growing pains of a technology company gaining traction in the marketplace, while ironing out technical glitches. He says it’s a never-ending process of releasing new functionality and features that better serve WebAssign’s users.

The company’s future looks bright. WebAssign continues to increase its new business by 12 to 15 percent each year. In addition to providing services to faculty and students in the United States, the company also provides services in other countries, including Canada, Australia, New Zealand, the United Kingdom, Hong Kong, the Philippines, South Africa, Israel, Saudi Arabia and Mexico.

Company leaders want to move WebAssign into other disciplines, such as statistics and business. The management team also sees growth opportunity in the secondary education market as high-

school teachers move toward online interaction with students.

At the core of successful educational technology is an understanding of the data related to use of that technology.

One new trend in education, often called adaptive learning, involves companies such as WebAssign capturing data on how a student is progressing and then using that data to tailor-fit the learning experience to better match the student’s needs.

Santee says WebAssign and others are just now scratching the surface in terms of what’s possible in this emerging field. “From a technology standpoint, we’re still feeling our way through this, with a few bumps along the way,” he says. “Next year, though, our goal is to provide better data to students.”

Whatever the future holds for this educational technology company, being located on Centennial Campus has proven to be an invaluable asset for WebAssign.

“It’s energizing,” Santee says. “We feel that having this close access to faculty and students gives us a huge competitive advantage. We talk to teachers every day about their experiences and get their opinions, and that feedback is invaluable.”

With nearly 200 full-time employees and bold new plans for future growth, WebAssign continues to realize the vision John Risley set out for the company nearly 20 years ago. His legacy extends to the overall campus through the annual John S. Risley Entrepreneur of the Year Award.

“The campus environment today is extremely supportive of faculty entrepreneurship,” says Kelly Sexton, director of NC State’s Office of Technology Transfer. “This is due in large part to pioneers such as Dr. Risley. His example continues to inspire NC State faculty to engage in commercialization of their innovations.”