

Technology

TOOLS OF THE TRADE

New Tech for the Virtual Classroom

Providers of e-learning technologies promise educators more options to design courses, organize content, and assess student performance than ever before.

Expanded assessment capabilities, more customizable courses, more interactive content. These are features that digitally minded faculty are looking for in e-learning software, according to providers of educational software.

The latest versions of course management systems (CMS) and digital content have enhanced and added features to provide these capabilities and more to their systems. They aim not only to help educators design more dynamic online courses, but also to provide the assessment tools needed to meet today's increasingly rigorous accreditation standards.

Tools for Assessment

Perhaps the biggest concern for business schools today is assessment, says Jim Kourmadas, vice president and director of marketing for the business and economics group at McGraw-Hill Higher Education (MHHE). "AACSB has played no small part in driving the notion of accountability in its accreditation standards. Today's technology helps schools demonstrate that they're meeting their goals," he says.

David Yaskin, vice president of product marketing for Blackboard, agrees that an increased emphasis on learning outcome assessment is one of the most significant trends now influencing the design of e-learning software. "Institutions recognize the need to make decisions based on comprehensive outcomes assess-

ment," says Yaskin. "Chief academic officers are concerned with questions at the heart of educational institutions. Primarily, 'Are students learning what we say they should learn? Are we using student outcomes data as an organization to foster academic improvement?'"

New features that address schools' assessment needs are emerging quickly. For instance, MHHE's Assessment Learning in Knowledge Spaces (ALEKS) allows instructors to record student interactions and closely monitor student performance. ALEKS is also equipped with a Web-based tutor that helps students pinpoint and strengthen their weak areas. In addition, early this year Blackboard will be adding the Blackboard Outcomes System, which will allow faculty to track students' comprehension of material throughout a course.

Another course management system in the higher education market, eCollege, is also adding assessment capabilities to its software. Its soon-to-be-released Learning Outcome Manager (LOM) is designed to help institutions monitor student mastery of material, says Matthew Schnittman, president of eCollege's eLearning Division. "LOM will enable administrators to collect and analyze evidence that goes beyond grades," says Schnittman. "This can help support accreditation requirements and drive program growth."

Increased Customization

While off-the-shelf e-learning software streamlines assessment and educational processes, instructors note that such systems can present some disadvantages. In the past, it was difficult for individual instructors to customize the look and operation of their online courses within the larger system, and external software was often incompatible with many CMS platforms.

Manufacturers are now emphasizing greater customization capabilities within their individual products. eCollege.NExT, the latest software version from eCollege, includes interoperability with third-party and faculty-created software, as well as external simulations. It offers features that allow different customers to offer unique materials to students and create a unique look and feel to their programs.

Blackboard, too, is increasing its platform's flexibility. Its Blackboard Academic Suite is built on an open architecture that allows administrators to integrate third-party applications into its platform.

Much of this customization is driven by an industrywide shift toward more open standards for educational software. In October, the IMS Global Learning Consortium of Lake Mary, Florida, announced that digital educational content and e-learning software will soon follow a new standard of interoperability. The new standard, called "Common Cartridge," promises to enable the exchange of data between learning management platforms and standalone learning tools, such as adaptive tutors and assessment engines. Supporters of

"WHEN WE CONDUCT FACULTY TRAINING, FACULTY WANT TO KNOW HOW TO DEVELOP COURSES WITH STRONG INSTRUCTOR PRESENCE EMBEDDED, CREATE INTERACTIVE COURSES THAT ADDRESS MULTIPLE LEARNING STYLES, FACILITATE AND RESPOND TO DISCUSSIONS, AND GIVE ACTIONABLE FEEDBACK ON ASSIGNMENTS."

—Matthew Schnittman, eCollege



the measure include organizations such as Blackboard, MHHE, and eCollege, as well as open-source software developers such as ANGEL and Sakai. Products following the standard will be available from some manufacturers as early as this spring.

Assistance for Faculty

Manufacturers emphasize that while they work to add more features to their software, instructors are also striving to adapt their teaching styles to improve the quality of online courses. Software and content providers stress that they are adding features that aim to provide an infrastructure that builds faculty engagement with students into online formats.

Says Schnittman of eCollege, "When we conduct faculty training, faculty want to know how to develop courses with strong instructor presence embedded, create interactive courses that address multiple learning styles, facilitate and respond to discussions, and give actionable feedback on assignments."

As a result, eCollege has developed a new and enhanced version of its Content Manager, which is designed to provide faculty greater flexibility in how online course content is authored, managed, and delivered. It also has enhanced its

ClassLife synchronous suite to enable greater collaboration among groups.

In response to faculty requests for more interactive teaching tools, Blackboard will launch its Blackboard Beyond Initiative early this year. The initiative aims to accomplish four objectives: provide a global learning objects catalog that allows any user to publish or search for learning resources; develop Scholar.com, a Web service to connect students and faculty across disciplines and institutions; launch "e-Portfolios for life," which allows users to post their learning portfolios to a central site for long-term use; and create a benchmarking service where clients can anonymously share data and best practices.

For its part, MHHE's Homework Manager allows instructors to create and automatically grade homework, tests, and quizzes, and deliver instant feedback to students. For instructors who assign group projects, MHHE's Team Learning Assistant provides advice on managing teams, integrates teams into syllabi, and assists with team grading.

Print Versus E-Print

With so much digital content available, many might think that e-books and online news sources are quickly becoming a mainstay in the busi-

ness classroom. But while the use of e-print materials is growing, say providers, traditionally printed materials are still the norm.

For example, students and professors still use the print edition of *The Wall Street Journal* much more than its online counterpart, WSJ.com, says Mark Campbell, director of college marketing and sales for Dow Jones & Company. "Many educators have used our print edition in their syllabi for years—or decades. Therefore, changing those habits can be a challenge," says Campbell. "Our educational representatives are charged with demonstrating to faculty the robust features available on WSJ.com and ProfessorJournal.com, which simplify integration of *The Wall Street Journal* into any curriculum."

And while use of MHHE's e-book products has increased, e-books remain only a small part of the company's digital content sales, says Kourmadas. "We've worked hard to educate faculty on the availability of e-books, but in the end, it's largely a student's choice," he says. "While current demand for e-books is still modest, it's increasing substantially every semester."

Toward More Effective E-Learning

E-learning has long been viewed as a lesser educational option than face-to-face learning. Even with all the latest technological advances, few educators would choose a completely online format if face-to-face interaction was possible.

More and more, however, students are choosing online formats for a variety of personal reasons, whether it's a group of executives in India who want to take courses

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EXPOSE YOUNG PEOPLE TO BUSINESS CAREERS AT AN EARLY AGE.

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(continued)

in Europe, or the individual student who chooses an online course because its face-to-face counterpart won't fit in her schedule. With each new version of CMS software and digital content, these manufacturers emphasize that they are trying to make e-learning environments as rich and engaging as possible.

Teaching Tech at High School

More business schools are viewing technology not only as way to enhance their own curricula, but also as a bridge between their campuses and the local community. Several schools in the U.S., for example, are sending business students to local elementary, middle, and high schools to teach the younger generation just what IT can do. The advantage is twofold, say administrators: Business schools can build goodwill in the community and expose young people to business careers at an early age.

Bentley College in Waltham, Massachusetts, for example, recently sent 16 business students to a local high school to conduct a one-day interactive seminar on Internet safety issues for children. More than 300 elementary, middle, and high school teachers attended the event, which was designed to address growing concerns about the overall impact that Internet technologies can have on a child's development.

The University of Arizona's Eller College of Management in Tucson also conducts technologically driven outreach programs on a regular basis. Last spring, 11 students in the

"Kids are now working with computers from the day they enter into the public school system. As they go into higher education, they'll be the driving force in making education more flexible," says Kourmadas of MHHE. "Pedagogy and curriculum are being redefined. We're trying to make things easier for professors, so that they can create more flexible, adaptable, and dynamic courses."

management information systems department at the Eller College spent their spring break mentoring seniors at nearby Howenstine High School in technology-based projects. The business students taught the youths to take and manipulate digital photos, create posters and Web pages, shoot digital film, and put together presentations.

Each summer, Eller's MIS department also holds a weeklong summer program for elementary school children, titled "TechDivas" and "DigiDudes." Students learn a range of skills, from creating Web sites to researching information online. "We want to encourage a free exploration of IT in order to create awareness of its potential in multiple career fields,"



A student in Eller's MIS department teaches computer skills at a local high school.

says Mohan Tanniru, professor and head of the MIS department.

Fairfield University's Dolan School of Business in Connecticut introduced 37 local high school students to Wall Street in its Business Education Simulation & Trading (BEST) classroom. The students were divided into teams and "bought" and monitored stocks, aided by Dolan students and alumni. Introducing the students to the BEST classroom helps get young students excited about investing through hands-on experience, says Norm Solomon, dean of the Dolan School. "We're glad to share a glimpse of the modern digital trading floor with students from the community."

All of these projects are designed to increase awareness in the community about opportunities in information technology. Moreover, say school representatives, the projects fill the higher education pipeline with more students who are interested in IT and business careers.

Understanding 'Collective Intelligence'

A proliferation of Web sites such as blogs and Wikipedia now encourage users to share information—and researchers want to understand how these growing repositories of collective knowledge can be harnessed to solve a range of business, scientific, and societal problems. MIT recently launched its Center for Collective Intelligence (CCI), which aims to understand how such open-source communities work.

"The recent successes of sites like Google and Wikipedia suggest that the time is now ripe for many more such systems," says Thomas Malone, CCI director. "At CCI, our basic

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