

DISTANCE education

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Report

Measuring—and Understanding—Student Retention

By Catherine Stover

When actor John Houseman stood in the front of his class and said, “Look to the left of you. Look to the right of you. By the end of the semester, one of you will be gone,” he made student attrition look like the hallmark of a fine institution. However, *The Paper Chase* was not exactly a reality series, and administrators today know that low retention is a problem, not a badge of honor.

Universities lose money when students quit. Managing dropouts is an inefficient use of institutional resources. In addition, low retention rates reflect poorly on the quality and credibility of the program. Retention is gaining in importance, as is reflected by the number of federal and state agencies requesting the reporting of retention data, and it is used as an indicator of academic quality in U.S. News & World Report’s annual college rankings.

The rate of retention in the United States between 1880 and 1980 was around 55 percent. According to the Consortium for Student Retention Data Exchange 2001, the retention rate for member institutions was 80 percent,

87 percent for selective institutions, and 69 percent for less selective institutions. Private colleges have about a 74 percent rate and public four-year institutions have a 72 percent rate, according to ACT 2001.

Everyone agrees that retention rates for distance education programs are lower than traditional on-campus programs. What that rate is, however, depends to a large degree on the definition of “dropout,” which varies widely among institutions. In addition, registration procedures can mask attrition rates. For example, the British Open University registers all students on a temporary basis. If they withdraw within three months of starting the program, their official registration will not show up on the university records. Thus, a large number of dropouts are not included in official retention rates. Another complicating factor is that some students enroll in online programs and on-campus programs simultaneously, sometimes in programs that are offered by different institutions.

So, with that in mind, what is the retention rate for online programs?

Many estimate that it is 15–20 percent lower than on-campus programs, which would put it at about 60 percent.

One leader in the call for a national consensus on defining “dropout” and calculating retention rates is Naj Shaik, Ph.D., from the University of Illinois Urbana-Champaign. In November 2005, at the Sloan-C International Conference on Asynchronous Learning Networks, Dr. Shaik and colleagues Jeff Harmon, Mike Alexander, Paul Schneider, Nancy Coleman, and Brett Coup will present a case for creating a multi-institutional perspective.

The first step would be to agree on the definition of “dropout.” Shaik advocates using a very simple one, such as, “Anyone who enrolls in an online course, and does not withdraw during the standard two-week grace period, but does withdraw after that date, would be considered a person who has dropped out.” Some, however, would prefer to see retention defined by years, not by courses, so there will be an opportunity for discussion on that issue.

After that first step of defining the term has been resolved, the next step will be to create a questionnaire that people who are dropping out would complete when they ask for their refunds. Shaik, who is a research programmer, advocates taking advantage of Computer Adaptive Technology (CAT) to develop a questionnaire that uses Item Response Theory (IRT), in which a student’s answer to a question determines how hard the next question will be. So, to use a mathematical

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President: William Haight
(billh@magnapubs.com)

Publisher: David Burns
(dburns@magnapubs.com)

Editorial Content Director: Bob Bogda
(bbogda@magnapubs.com)

Managing Editor: Christopher Hill
(chill@magnapubs.com)

Creative Services Director: Debra Lovelien
Customer Service Manager: Mark Beyer

Editorial Advisory Board: Stephen Donahue, M.S., G-Learner Corp.; Stephen Ehrmann, Vice President, TLT Group; Donald P. Ely, Associate Director, ERIC Clearinghouse on Information & Technology; Jeffrey Feldberg, Chairman, CEO, Embanet Corporation; Gordon Freedman, Director, Strategies & Alliances, Prometheus; Christine Geith, Director, Program and Business Development, MSU Global, Michigan State University; Chere Gibson, Ph.D., Associate Professor, University of Wisconsin-Madison; Darcy W. Hardy, Ph.D., Assistant Vice Chancellor for Academic Affairs/Director, UT Telecampus, The University of Texas System; Joseph Holland, Chair, Department of Hospitality & Tourism, University of Wisconsin-Stout; Marge Jeffers, WTCN Distance Education Network, Fox Valley Technical College; Marina Stock McIssac, Educational Media and Computers, Arizona State University; Karen L. Murphy, Ed.D., Associate Professor, Texas A&M University; Don Olcott, Jr., Ed.D., Executive Director, Division of Extended Programs, Western Oregon University; Christine Olgren, Ph.D., Chair, Distance Teaching and Learning Conference, University of Wisconsin-Madison; Rick Shearer, MA, MBA, Instructional Designer, World Campus, Pennsylvania State University; Karen Vignare, Director of Business Strategy & Development, Rochester Institute of Technology; Linda L. Wolcott, Ph.D., Department of Instructional Technology, Utah State University.

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example, if a student is able to correctly answer a question that uses a complicated algebraic formula, that student will not have to answer questions about basic addition or subtraction. The company that produces the GRE exam uses IRT. The advantage to this method is that everyone doesn't have to answer all of the questions—which significantly reduces the amount of time and questions involved.

Shaik acknowledges that this would require a major investment in technology. In his opinion, the process of developing and funding the software and the questionnaire would be an ideal multi-institutional project. Together, they could reach a central consensus on the issues. Having a common definition of "dropout" would improve the quality of the data that researchers could use in the future.

Writing the questionnaire is not a simple process because it would be driven by an understanding of student retention. For 30 years, this issue has been researched from different strata within the student population, including minority students, commuter students, graduate students, two-year college students, transfer students, nontraditional adult students, etc. In addition, many factors influence retention, including academic aptitude, student-faculty interactions, student services, financial factors, learning communities, grade-point average, gender, classroom environment, pedagogy, curriculum, classroom activities, faculty role, distance learning program, family backgrounds, etc. Despite the vast body of research a lot remains unknown about the process of student dropout and the factors that contribute to it. Two of the leading

frameworks that provide explanation for and prediction of student attrition and also serve as the basis for other models are Tinto's Student Integration Model and Bean's Student Attrition Model. These are called conventional "Fit" models.

One critic of the "Fit" models is Shaik. He feels these models are not satisfactory because:

- there is a lack of empirical support. There is no comparative research testing competing frames. There is also an absence of controlled experiments.
- there is an absence of a psychometric-based standardized instrument for data collection.
- there is an absence of standard protocols to administer instruments.
- generalization is not possible due to data constraints.
- in the absence of common metrics, valid time-series and cross-program comparisons on dropout rates are difficult to interpret.
- the list of explanatory variables is growing as we look at the number of suggested enhancements to the "Fit" framework.

In 2003, Shaik proposed an alternative theoretical frame work. He describes it as follows:

- It is based on cognitive architecture that draws on the field of cognitive psychology, particularly the contributions of Rasmussen (Skills-Rules and Knowledge Framework), Norman (Error Taxonomy), and Reason (Generic Error Modeling System).

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Computer Ethics 101

by Judy Dabl

“Students often come to the university with a very relaxed attitude toward copyright issues in particular—many feel there’s nothing wrong with copying music and sharing it across the Internet,” says David Wright, Ph.D., director of curriculum innovation and e-learning at the University of Dayton (UD). “Many don’t feel it’s an ethical or a legal problem, and computers are very neutral; they don’t stop the process from happening.” That’s one reason UD developed its “Policy on Fair, Responsible and Acceptable Use of Electronic Resources,” along with an online tutorial to help students understand it.

“UD put the policy together a number of years ago, with faculty, staff and students collaborating to draft it,” says Wright. “It went through a full review and investigation and everyone believed in it—it’s in line with UD’s mission. We’ve had a strong commitment to ethics from the beginning.”

UD’s policy encourages students to take responsibility for developing ethical behaviors while on campus and as life-long computer users. The online tutorial ensures that they understand the policy and tests them on their knowledge. “It talks about copyright issues, illegal file sharing and inappropriate use of e-mail, such as harassment,” explains Wright.

Illegal file sharing

“At the time we put the policy together, one issue we were tackling was a worry that students might be engaged in illegal file sharing, and saturating the bandwidth we have on campus,” he continues. “The more they do this, the less technology is available to everyone else. Students work as a community; they should be responsible to others as well as to themselves, and make sure there’s enough bandwidth

available for everyone.

“The hardware has since changed. It shapes the networking traffic so that no one person can negatively affect the amount of traffic any other person can send,” Wright adds. “But the hardware doesn’t know what type of traffic is going across the network. It’s still important that we provide appropriate guidelines.”

Students can download file-sharing software from the Web at no charge. Programs such as eDonkey, Morpheus, BearShare, Kazaa, or LimeWire enable them to illegally share music, videos and other files.

“Many don’t realize that when they sit down at a computer it’s not an anonymous process,” Wright points out. “It’s usually quite easy for a campus to track down a student; you just look at the IP address on the file, which is the address of the computer that sent it. Students don’t appreciate how easy that is.”

Wright notes that often when students are caught sharing files illegally, they aren’t aware they’ve been doing so. “They start by experimenting; they install the file-sharing software and start using it. Then later they might take our training module and stop doing it, but the software is still on their machine sending files back and forth,” he says. “Even if they try to uninstall the software, it may still be there—almost like spyware.”

UD’s ethics tutorial educates students about this process. “We try our very best to make sure they understand there are many reasons not to do it,” says Wright.

“There aren’t enough voices telling them to stop and think about the consequences of doing this; that’s one of the reasons we put the computer ethics training module together,” he says. “It’s part of a larger goal: to educate

students so they use the computer power in front of them in an ethical manner—and our policy is at the foundation of this effort.”

Computing ethics 101

The ethics tutorial is part of a series of computer-training materials created in WebCT. Called “Computing Ethics 101,” the module is integrated into UD’s curriculum.

“It’s used in actual academic courses,” says Wright. “In each course of study, we’ve tied it to a specific class that all first-year students take. The exact course title depends on whether they’re in engineering, or biology ... Our hope is that each instructor

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Ethics training tips

David Wright offers these tips for other universities considering online ethics training:

- “Have a policy in place. A broad campus community contributed to ours, so approval was fairly straightforward. It was an important beginning.
- Resolve any issues related to computer-ethics training, like judicial issues -- what you’ll do when you’ve caught a student behaving illegally.
- One of easiest things universities can do is to have campus-wide announcements by key administrators advocating that students, faculty and staff obey IT policies on file sharing and ethical computer behavior. This reinforcement helps ensure that the message has the greatest possible impact.” ●

Seven Steps to Meeting the Technical Needs of Online Students

By Susan Gaide

Recently, one of my online students tried to e-mail a PowerPoint presentation to me.

“You’ll need to reduce the file size in order for it to come through,” I told him.

“File size?” he asked.

I gave him step-by-step instructions, and after a couple of hours (and a goodly amount of frustration) he finally “got it.”

Problem solved. Or was it really? Chances are, there’s still plenty of other technical information he needs to learn.

All institutions of higher learning require students to be able to read and write at a certain level, so why not apply similar standards to students’ technical abilities as well—especially in the online learning environment?

Institutions that offer online distance education must consider providing online student orientation programs—including an assessment of students’ technical skills with software, hardware, Internet navigation, e-mail functions, and word processing. And they need to offer remediation if necessary.

Establishing an online support system

Southwest Wisconsin Technical College (SWTC) has done just that, with financial assistance from a U.S. Department of Education Title III “Strengthening Institutions” grant. According to Sue Medeke, online lab assistant for SWTC, the college’s grant proposal incorporated the establishment of a technical support system for online students.

“Even the establishment of my position—online lab assistant—was

made possible through the Title III grant,” says Medeke. “And I believe that my accessibility to online students has helped retention in the online programs here at SWTC. I know each student by name, so when they call me, I already know not only who they are, but what their technical strengths and weaknesses are as well. This makes them feel more ‘connected’ to the college.”

According to Medeke, students are counseled about basic skills requirements from the time they first inquire about SWTC’s online programs.

“Because SWTC has an open door policy, we don’t turn students away simply because they lack the technical skills required for online learning. Rather, we assess, orient, and tutor students so that they can gain those skills,” explains Medeke.

Medeke advises that the seven “modules” of SWTC’s online student orientation program serve as a guideline for institutions that seek to enhance online student support services.

The seven modules of online orientation

1. Time-Management Skills.

Students are encouraged to set goals for learning, e.g., a certain number of hours per day or a specific day of the week in which they will engage in learning activities.

“Students need to set aside time for coursework in the same manner they schedule their work hours so that the completion of assignments becomes part of their regular daily or weekly routine,” says Medeke.

2. Student hardware/software skills evaluation. SWTC gathers information about the computer hardware and

software owned by or accessible to the student and that can be used in the online learning process.

“Unfortunately, not everyone has the most state-of-the-art computer hardware and software. And not everyone has broadband Internet connectivity, either. Plenty of students still have dial-up Internet access because broadband connectivity is not yet available in the rural areas in which they live. These are issues that affect the students’ ability to achieve online course objectives,” says Medeke.

3. E-mail skills. According to Medeke, most students have the ability to send and receive simple e-mails, but lack the skills needed for attaching and sending files. SWTC’s online student orientation addresses this issue and provides students with basic information about related issues such as the reduction of file size in order to optimize portability over the Internet.

4. Word Processing skills. SWTC students are encouraged to use Microsoft Word for word processing applications, as MS Word has become the “standard” in the business world. To maximize affordability, SWTC has entered into a partnership with Microsoft wherein SWTC is able to offer the MS Office suite (which includes MS Word) at a substantial discount to students.

“With this partnership, SWTC is able to offer Microsoft Office at a price that is about one-third of retail,” says Medeke. “This affordability has made it much easier for us to help students equip themselves with the software needed for online classes.”

5. Learning style activity. SWTC assesses how each student best learns.

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requires students to use the tutorial as part of the course.”

Instructors’ approaches to the training module vary. “In one class, students may be expected to use all the materials and quizzes, and they get credit for it,” explains Wright. “Other classes may focus just on the sub-module covering copyright issues—the academic freedom issue. It’s strictly up to the instructor.”

Wright calls this issue the biggest

challenge in implementing the tutorial. “Having a broad adoption is really important, but faculty members want to have control of their classrooms, and you can’t always dictate exactly how they use materials.”

Still, UD is seeing fewer file-sharing violations than Wright is aware of at other campuses. “We’re the largest private university in the state,” he says, “and the impact isn’t on the same scale.”

UD is in the process of changing

how it manages the ethics tutorial. “At one point we had a separate office of computer ethics; now we’ve rolled it into our information technology (IT)-training office,” says Wright. “We’re not seeing it as something that should be managed from a separate office.”

He notes that UD supplies all students with a laptop computer imaged with standard software. “The work we do educating students on computing covers whole the

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Seven Steps...from page 4

“Every student has a learning style,” explains Medeke. “In a traditional classroom, some students like to sit right up front, while others prefer to sit in the back of the room. Some like to follow the instructor’s lecture with an open textbook. Well, the online learning environment is no different. Assessing students’ individual learning styles makes it easier to help them understand how to effectively manage their time and fulfill course objectives.”

6. Blackboard® Skills. Online students must understand the navigational structure and functionality of the online learning interface that is used by the institution to deliver online courses. As is the case with many institutions, SWTC uses the Blackboard Learning System™ powered by Blackboard®.

According to Medeke, important Blackboard functions that students need to learn during an online orientation are how to access group “rooms,” how to attach files to discussion board postings, how to create active links within postings, and how to upload files to the Digital Drop Box.

“Students have the greatest difficulty with uploading files to Blackboard’s Digital Drop Box,” says Medeke. “Most first-time Blackboard users don’t

realize—or forget—that in order to upload files to *Digital Drop Box*, you must first ‘add’ the file, then ‘send’ it. If this two-step process isn’t followed, the file will be deposited in Digital Drop Box, but will not be visible to anyone but the student. This is a potential source of frustration for online students and faculty alike.”

7. Internet Skills. According to Medeke, while most students have a basic ability to navigate the Internet, they lack sufficient knowledge to effectively perform more intricate Internet activities such as “WebQuests.” Students often also do not know how to bookmark Web sites for subsequent revisiting, nor do they know how to access online libraries and repositories.

Online Library Resources

And speaking of online libraries and repositories, Southwest Wisconsin Technical College has used a portion of its Title III grant to purchase a subscription to Ebrary, one of the largest Internet-based libraries.

“It is not at all uncommon for students to realize at the last minute that they need to do research for a paper that’s due the next day. Unlike most colleges’ own libraries, Ebrary is accessible twenty-four hours a day,

seven days a week. Students very quickly learn to appreciate this resource—and it helps them utilize their new and improved Internet skills!” says Medeke.

According to Medeke, the bottom line is that in order to truly help students succeed in online distance learning, institutions must offer students a well-established technical support system. Ideally, someone like Medeke will be on hand to personally interact with students and assist them with technical questions and issues as they arise.

“Ultimately, a lack of technical skills and a lack of access to information on how to resolve technical problems and issues lead to student frustration and eventual withdrawal from online distance education programs,” says Medeke. “Southwest Wisconsin Technical College provides the resources, tools, and support system that students need. As a result, we’re seeing increased student satisfaction and retention.”

Susan Gaide is a New York-based freelance writer and adjunct online instructor for Indiana Wesleyan University. She may be reached at gaide@att.net. ●

Online Student Services for Multiple Institutions: Lessons from Texas

Jennifer Patterson Lorenzetti

The University of Texas system is a wide and varied group of institutions. Comprised of nine academic campuses and six health science centers, the campuses span the length and breadth of the large state. And, although some mistakenly assume that the system is a single flagship campus with several satellites, each institution is actually its own unique and independent entity.

Constructing a coherent approach to student services would be difficult enough for those who see the students every day. But what of the challenge of supporting students who study exclusively online?

To address this problem, UT has created the TeleCampus, which it defines as “a service-driven, central support system for online education initiatives.” The TeleCampus offers all the services students need to enroll in courses and degree programs at any of UT’s campuses without navigating the administrative procedures of each. Along the way, the system saves time, money, and duplication of effort.

Do the things you do best

Lori McNabb is the student and faculty services manager for the UT TeleCampus. She explains that distance students at UT typically enroll in degree programs that fit one of two models. One model, as exemplified by the MBA program, allows students to apply to be a student at any of eight campuses. However, every student, regardless of institution of enrollment, will take two courses from each of the eight participating institutions.

The second model is that used by programs such as the M.A. in educational technology. For program like this, students enroll as a student in only a single institution, but they can take courses offered by several campuses.

For either of these two models, requiring all participating institutions to offer online students services in registration, financial aid, and other similar endeavors would likely result in confusion for the student and duplication of effort for the institution. For this reason, the TeleCampus was born in 1998.

“The TeleCampus is like a utility. We don’t do the things campuses [already] do very well,” said McNabb. But the campuses could not always provide consistent service to online students registered at any of the 15 campuses in any of a variety of degree programs, so the TeleCampus stepped in. “[Students take] courses through the TeleCampus, no matter which campus offers the program. Services are consistent across the degree program,” McNabb said. “We open up the resources of the UT system to any student regardless of where they live. The campuses don’t have to bear the full weight of an online program.”

Additionally, the TeleCampus is financed by a very straightforward system. Individual campuses retain the tuition, fees, and state moneys paid by each student to their home campus, just as they do with campus-based students. The institutions pay an annual financial assessment to support the TeleCampus.

One of the things that the TeleCampus can do better than a decentralized system is handle registration. The TeleCampus Information System (TIS) functions as an overarching student information system that makes use of electronic Inter-institutional Distance Education Admission and Registration (IDEAR) forms. This system allows for the transmission of necessary student information to be sent to the campus through which the student is taking a course, regardless of

that student’s “home” institution.

The TeleCampus offers a variety of student services geared to online student success. There is a 24/7 help desk, as well as “Getting Started” CDs that are printed annually. A “Computer Basics” course is offered. The student handbook is online, and students can take advantage of a digital library. “We started with what all students needed,” McNabb said of such basic functions as registration. “Then we added the things a few students would need, such as a full-time librarian. We assure students they will never have to go to campus for any reason.”

But perhaps the most important key to offering student services for the online students from various campuses across the state is the campus liaisons. McNabb describes the liaison as “an individual in each office that students will need to interact with...as they weed through the bureaucracy of higher education.” This is particularly important for a large system such as UT, for which online students make up a very small percentage of total enrollment. Workers in any of the various student support offices on any of the campuses may well assume that the policies and procedures that cover campus-based students also apply to online students, when that may not be the case. The TeleCampus identifies a person in each office who will learn both their home office policies as well the policies pertaining to TeleCampus students. The students are then given these contacts so that they may be sure they are always directing questions to the people most knowledgeable about their needs.

Future plans and current benefits

Bolstering the roster of campus

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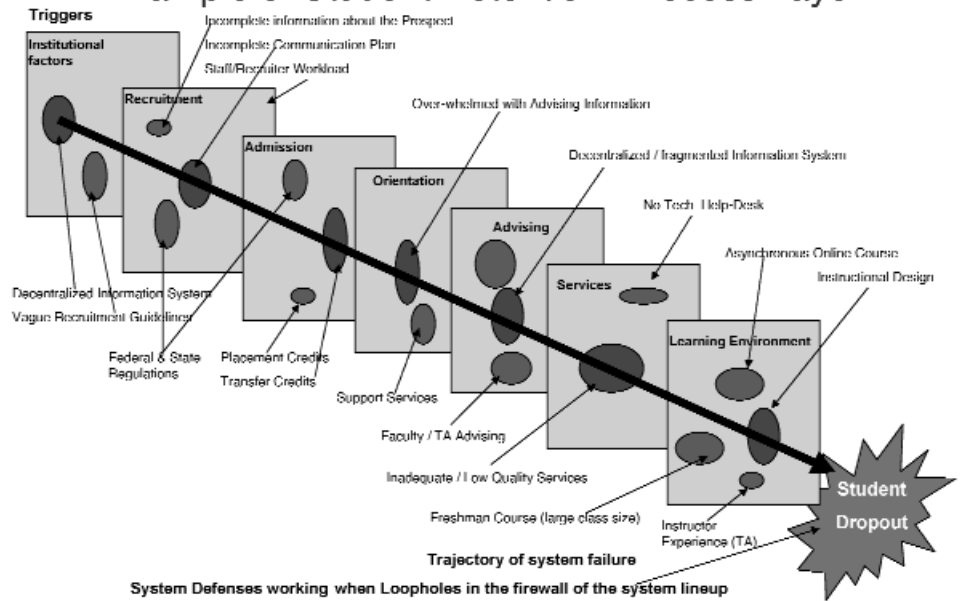
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- The dropout phenomenon is described as attributable to divergent origins, from technological failure and managerial oversight to organizational weakness.
- The goal is to highlight the importance of organizational environment relative to individual performance.

Shaik tested this framework with three online graduate programs at the University of Illinois at Urbana Champaign (UIUC). He noted that the administrators of these programs developed successful strategies in the context of recruitment and admissions, registration, student and faculty orientation, learning environment, learning community, and support services. Thanks to their efforts the university has achieved an impressive 95 percent retention rate.

In November, when Shaik meets with his colleagues at the Sloan-C Conference and encourages them to join him in building a consensus, some

Example of Student Retention: Process Layer



Adapted from James Reason. *Human Error*. Cambridge University Press, 1990.

administrators may begin exploring the idea of forming a partnership with Shaik and the University of Illinois. Some may already have begun.

Najmuddin Shaik's e-mail address is najjuic@hotmail.com. His URL is www.continuinged.uiuc.edu/outreach/najshaik.cfm. ●

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liaisons is first on the list of enhancements and expansions for the TeleCampus. McNabb wants to develop this relationship with the ADA offices, as more and more students are undertaking study with the knowledge that they have a learning disability or other need for accommodation that will require translation into the online environment. Other possible future locations for the development of campus liaisons include career services, the business office, and the bookstore.

Overall, McNabb believes the emphasis on providing consistent, centralized student services for online

students allows the online academic programs to grow in very important ways. For example, the MBA program that now allows eight campuses to offer courses in concert may well have not existed without TeleCampus, forcing each campus to offer its own independent MBA. While the collaborative program includes all tenured faculty teaching its courses, this may not have been the case with a single campus program. "[It allowed them] to bring the best of the best together," McNabb said. It also allowed the campuses to avoid costly and unnecessary competition. "With the geographic boundaries removed, they would all be competing with each other" if each campus offered

an online MBS, said McNabb. "For each to offer [the same] courses would be very expensive.

This emphasis on collaboration extends beyond online programs to traditional, campus-based programs and institutions as well. By breaking the ice of learning to work together, departments are more likely to continue to collaborate on other endeavors. "[We] facilitate relationships across the system," McNabb said. And building relationships is one of the keys to serving students well. ●

Online Course Evaluation Project Launched

The Monterey Institute of Technology and Education (MITE), an educational non-profit organization focused on improving access to education, has developed the Online Course Evaluation Project (OCEP), an initiative to provide distance education educators, designers, and administrators with a resource to explore the availability, quality, and completeness of online courses.

OCEP uses a team evaluation method to identify and measure online high school, advanced placement and higher education courses against a set of objective evaluation criteria.

Each evaluation team consists of a course evaluator (instructional design expert), academic evaluator (subject-matter expert), and a technology evaluator.

Each evaluation uses 52 criteria in the following areas:

- Scope and scholarship
- User interface
- Course features and media values
- Assessments and support materials
- Communication tools and interaction
- Technology requirements and interoperability
- Course developer and distribution models.

For a detailed description of the evaluation criteria, visit http://www.montereyinstitute.org/pdf/OCEP%20Evaluation%20Categories_Distribution%20Version%204_28.pdf.

The results of OCEP will be available in a Web-enabled comparison tool developed by MITE and the *EduTools* project (www.edutools.info/about/) from the Western Cooperative for Educational Telecommunications (www.wcet.info/about/).

The National Repository of Online Courses (NROC), a library of online courses for high school, advanced placement, and higher education students and faculty, is a related project intended to facilitate collaboration among content developers.

All the courses in NROC have been through the OCEP evaluation process. More information about OCEP and NROC can be found at www.montereyinstitute.org/.

Online Research Mentoring

Faculty at Syracuse University have developed Web-based materials—streaming videos, a discussion board, and a facilitator's guide—that address issues of academic and research integrity.

The video vignettes present situations that bring up ethical questions and are intended to foster informal (online or face-to-face) discussions among faculty, postdocs, and graduate and undergraduate students. Topics include data manipulation, data management, data ownership, intellectual property, inappropriate sharing of lab resources, plagiarism and inappropriate citation, conflict of interest, and sexual harassment.

These resources, which were developed through a contract with the Office of Research Integrity, U.S. Department of Health and Human Services, are available at <http://gradschpdprograms.syr.edu/resources/videos.php>. ●

Ethics...from page 5

spectrum—how to maintain the hardware and software, how to use the network—we might as well teach ethics at the same time.”

Since the training is delivered via WebCT, UD can track individual students' progress in the system and award grades. “The grade only counts where instructors have chosen to make the ethics tutorial part of the course grade,” says Wright. “But it allows us to have an idea of their usage.”

Looking Forward

In the future, UD may develop a certification program incorporating “Computer Ethics 101.” “Students could only be certified if they completed the hardware and software navigation modules and the ethics piece,” says Wright.

“We're also looking at ways to further integrate the ethics training into students' education about their entire computer use, including how to use our e-mail product and how to use Microsoft Office,” he says. “Students would use a great deal of this material before coming onto campus.

“We've been building what we call a virtual orientation. When students register, before they set foot on campus, they start the process,” Wright continues. “They find roommates, decide on classes, and learn about student life. They also learn how to use their notebook computer and how to understand the computer resources available to them.” He says the ethics piece will be increasingly central.

Wright believes UD is going in the right direction with its ethics-training module. “We're learning as we go about what we need to do,” he says. “Our policy helps define a culture in which unethical behavior is inappropriate. That helps define everything that comes after it.” ●