

# Assisting Faculty Through Technology Transitions

Technology has been a boon to education, both in creating new educational opportunities for teachers and in expanding the ability of teachers to reach an ever increasing body of students. However, the same technology that has created a wealth of opportunity also has created its share of problems.

While some educators embrace the electronic or computerized classroom with enthusiasm, others shy away from it because they fear losing the personal interaction with their students or losing control of their classroom. While some students embrace the electronic classroom as a means to get an education without having to live on or near a college campus, others feel they are deprived by not being in the classroom with the instructor. And while some faculty, students, and administrators can adapt easily to new technology, others need more training and support to reach a level of comfort that allows them to work effectively in classrooms. A panel of technology experts and experienced electronic educators addressed meeting these and other challenges of the technology age in education.

## **New Technologies in Old Models**

“We have these wonderful new communication and computer technologies and our instructional programs are in the midst of dramatic changes in the classroom,” said Robert Threlkeld, dean of learning and technology and director of the Academic Innovation Center at California State University, Fresno. “The problem is we’re taking this new technology and trying to chase the classroom experience — to adapt and expand the technologies to the classroom. We’re trying to extend and replicate the classroom electronically. We may be trying to stretch the new technology to fit an old model.”

Fitting the new technology to the old classroom model concerned many who attended the session. Several audience members noted that they were troubled by the possibility of a diminished quality of education for students in the classroom because teachers have to be concerned that the technology is working properly for distant learners. In addition, many educators express concern that they cannot nurture students in distant classrooms.

## **Preparing Students and Faculty**

Glitches in technology are a problem but can be overcome by planning, said Kent Creswell, associate director of Michigan State University broadcasting services. Instructors must realize that there will be occasional technology failures. “It is essential to have backup technologies and assistants who can step in to provide substitute teaching at remote sites,” Creswell said.

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However, while being prepared technologically is one important aspect of creating an electronic classroom, preparing students and faculty to use and adapt to the technology is another. “When we began using the technology, we didn’t properly prepare students for interactive video,” said Robbie Kendall, assistant dean of the School of Education at the University of Tennessee at Martin and the university’s faculty trainer for interactive video. “We enrolled students in the classes without the preparation to deal with technologies. We found that if faculty members receive training, many of the concerns about differences between on- and off-site students were addressed.”

Kendall noted that many educators who had problems teaching in the electronic classroom were those who thought they could use traditional classroom methods. They had to learn first to deal with technologies and how to present materials in different ways, and then learn how to handle glitches that occur before or during class. Threlkeld agreed, noting that training faculty is a key to a successful interactive educational experience. California State, Fresno has a faculty mentoring program in which experienced faculty assist new faculty in learning distance education. “Faculty members are always in training.”

Margaret Nielsen, assistant professor of social work at Michigan State University, has taught a master’s\_level class of 100 students, more than sixty of them in northern Michigan, via interactive television. Early in the program some of her students complained they were getting the “short end of the stick.” Many student complaints were generated by problems with the technology. However, since they made improvements in the program and the technology, there have been fewer complaints.

Jon Sticklen, associate professor of computer science at Michigan State University, said educators he’s talked with are concerned that some classes cannot be adapted to electronic systems. In those cases, interaction is needed between the technology provider and the teacher to make electronic education work. “There is a lot of good teaching, but no one model of good teaching.”

Educators need to become better classroom managers, Kendall said. Teachers cannot use the same classroom management skills they have used in traditional settings; they need to use other technologies, such as telephones and electronic mail, to stay in touch with students. That can increase teaching time considerably. That raises another issue — proper compensation for faculty involved in distance learning. Compensation and workloads for distance educators can be problems because universities are using distance learning as a means to increase enrollments without expanding on-site facilities. That means more work as the student-to-instructor ratio increases. In many ways, therefore, the electronic classroom demands greater preparation.

## **Differences Social, Not Technological**

“Expanding the quality of instruction in technology classrooms, we find that professors are still the key,” Kendall said. Data from four years of evaluations at the University of Tennessee have shown no significant differences in test scores or the quality of learning between students in traditional and electronic classrooms. Differences that did occur were all social, such as the bonding between students and instructors.

Several panelists noted that the medium used in teaching doesn’t change the outcome of instruction. Even in the technology-driven classrooms of distance learning, students and teachers still have a great deal of influence over instructional quality.

Most of the experienced electronic educators on the panel said creating and using electronic classrooms is not about saving money or the novelty involved with technologies. They do it out of dedication to education and partly for the challenge. It is a way to reach students beyond local classrooms before and after graduation. Education is lifelong, and technology allows universities to provide ongoing training for older adults who may need additional education for their jobs but can’t take time off for more education. Distance education and supporting technologies can be used to teach traditional courses or short courses and also provide technology transfer to industry and businesses.

“I come from the field of special education,” Kendall said. “With interactive video I can have students eighty miles away. It enhances learning so all students have opportunity. Interactive technology is a tool for equal opportunity.” Providing that opportunity, panelists said, requires training of faculty as well as students to gain the greatest benefit from distance learning systems. Faculty and students must overcome their fear of the technology and work together for successful learning outcomes. As with anything new, it takes time to adapt to the challenges. “Universities must find ways to bring faculty and students closer together to address the challenge of technology transitions,” said Creswell.