

**Technology  
allows educators  
to go beyond the  
boundaries of the  
classroom.**



# Teaching

# Outside

# the Box

**G**eorge Kennard, S.J., adjunct professor in the philosophy department, said he is proof positive you can teach an old dog new tricks.

For more than 50 years, Kennard (A&S '43, Grad '49) had been teaching courses in ethics and philosophy pretty much the standard way. He lectured, assigned readings and papers, challenged students and facilitated class discussions. Then, a couple of years ago, he volunteered to help faculty at the School of Nursing prepare an online ethics course. That was all it took.

"I was hooked," Kennard said. "I thought 'Where has this been all my life?' Electronic instruction has liberated me from the tyranny of the textbook. With the touch of a button, I can bring the exact resource I want into the classroom."

Kennard said he thought his hands would be permanently stained with mimeograph ink from the many readings he copied for students over the years. Today, he uses a computer stationed in his classroom to bring up articles fresh from the morning *New York Times*. With the help of an educational software program, Kennard creates Web sites for his courses where he lists assignments, recommended readings and study guides. An electronic bulletin board allows him to answer questions and encourage students to discuss his lectures or articles.

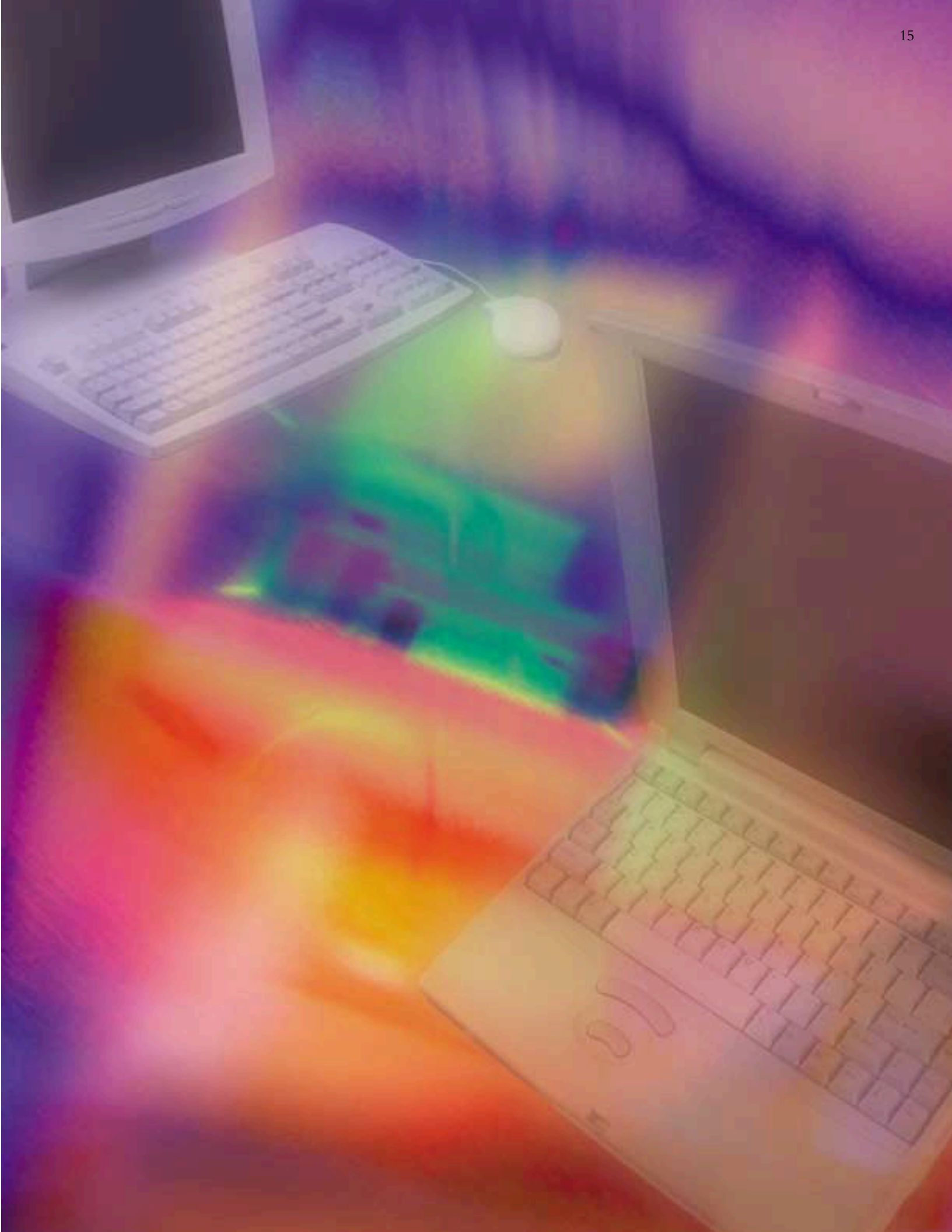
"You'd be surprised at how much the quiet kid in class has to say when you give him the opportunity to write, rather than speak, his thoughts," said

Kennard, who even takes digital photos of his students and posts their bios on the site so they can get to know one another better and sooner.

"The technology extends the teaching space beyond the boundaries of the classroom," said Kennard, who is so wired he took a laptop computer on a recent trip to Alaska to stay in touch with his students. "Students have access to me physically only certain times of the day, but they have access to my 'virtual presence' no matter what time of day or where they are."

Kennard is among a growing number of SLU educators who have become savvy not only with the mechanics of computer technology but also with the technology's power to enhance their teaching. All from the comfort of their classrooms and labs, educators

**BY MARIE DILG**





*From left: Stephen, Green and Ashby*

are taking students on virtual tours of distant cities, to operating rooms for surgical procedures and to universities overseas where students collaborate on projects with peers.

### Enhancing the Hardware

The educators can do this because they have the best tools at their fingertips. A \$5 million grant from the Danforth Foundation allowed SLU to upgrade every one of its 217 classrooms during the past three years. The basic classroom (Level One), with high-grade chalkboard, projector screen, zoned lighting, front/rear electrical outlets and computer jack, was extinct as of 2001. All classrooms now are either Level Twos or Threes, and all have an Internet connection. A Level Two classroom adds, at a minimum, a permanently installed video/data display, such as an LCD projector that allows for laptop computer hook-ups, and a VCR with academic cable TV options.

Level Three classrooms meet Level Two standards but with substantial extras: remote controls, slide projector, built in multimedia computer with a network connection, audio mixer, document camera, electric screen and dial-up options that can bring guest speakers from remote locations into the classroom.

Although the equipment may sound intense, it is simple to operate. Each classroom has an instructor's station with an intuitive control screen that allows professors to turn on equipment, dim

lights, increase volume or switch from computer screen to a cable TV/distance learning feed with a single touch.

"It's an interesting trend to watch," said John Ashby (A&S '74, Grad '80), director of educational technology in the University's information technology (IT) services division and a member of

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the former Technology Planning Council. "When we began upgrading classrooms, we asked deans and faculty for input on developing their teaching spaces, and a majority wanted Level Two classrooms. But as more faculty get a taste of what a Level Three offers, that's what they want. They're becoming less intimidated by the technology."

Although the University's technological enhancements have been featured in national technology and computing magazines, Ashby said the equipment itself is not what is so impressive. It is the way the system hangs together with simple ideas such as single-key access for

all classroom cabinets throughout the University.

"Make it control the room, make it intuitive, make it talk to the outside world and make it invisible," said Ashby, who began his career at SLU 28 years ago making slides and transparencies in the nursing school. "Technology shouldn't get in the way of teaching; it should complement it. There need not be huge podiums loaded with equipment separating student from teacher in order to offer intuitive tools. The system can be more subtle but still offer a lot of capability."

The system also is uniform. Prior to the Danforth grant, technology upgrades were piecemeal, and user interfaces varied widely. Many departments purchased their own equipment when funds became available, usually through grants. The quality and type of equipment varied from classroom to classroom. Now playing a video in the business school is the same as playing a video in the law school. The projectors in the medical school are comparable to those in Parks College of Engineering and Aviation. The document cameras in the College of Arts and Sciences work the same as the ones in School of Social Service. The universality of the equipment and user controls not only makes it easier for faculty to move from room to room, it also makes upkeep and upgrades easier. But Ashby pointed out that improving the technology was not an end in and of itself.

### Click and Teach

"Buying equipment, no matter how cool, is a bad investment if no one is ready to use it," Ashby said.

Which is why a key component of the Danforth grant covered faculty development. While Ashby's group works on the hardware, the academic computing staff supports the software. This team helps professors identify and apply appropriate educational software tools in their courses to meet their teaching and research goals.

"Our faculty are very much specialists in their areas and entrepreneurs in their own classroom environment," said Charles Green, director of academic information technology services (AITS) within the University's IT division. "But they may not have had much experience in designing or developing online content. We help them convert

their traditional classroom content into digital forms.”

The most popular software package on campus is WebCT, a major provider of e-learning technology. WebCT allows faculty members to develop online course material, such as quizzes, test reviews or discussion boards, to augment work in the classroom. WebCT also allows students to work together on projects without being in the same room — solving the age-old student complaint that they can’t get together outside class. SLU has more than 400 active courses on WebCT.

Many of the University’s full- and part-time faculty members have been through AITS doors. In one week alone, the faculty support team received 74 new requests to put course material online and provided 81 individual faculty consultations and 79 individual student consultations.

“There’s a growing recognition of the need to be engaged in information technology to some degree in teaching and research because students are arriving with greater expectations,” Green said. “They expect their faculty members to have access to e-mail and to be able to present material in a non-traditional way. Faculty today are teaching to the digital generation, and those who are proficient have an advantage.”

To help educators become more proficient, Green’s group works closely with the Paul C. Reinert, S.J., Center for Teaching Excellence (CTE). The CTE has a technology and learning laboratory where faculty can come for one-on-one consultations about using technology in their teaching, critiques of PowerPoint presentations or workshops

on subjects such as integrating technology into teaching strategies, teaching with online cases and using online tools to foster collaboration.

“A few years ago the emphasis in professional development was on how technology could make a faculty member’s job easier,” said Dr. Mary Stephen (Grad ’97), associate director and coordinator for technology and learning at the Reinert Center for Teaching Excellence. “Faculty wanted to know how technologies could help them with practical things, such as making handouts or calculating grades. Today, the emphasis is on finding ways to use technologies to help students learn. It’s about doing their jobs as teachers better.”

To help meet the demand for services, Stephen created a mentoring program. Faculty experienced in integrating technology into their teaching serve as mentors for faculty members interested in integrating technology for the first time or in new ways.

### Reaching the Digital Generation

Mark Reinking, assistant professor of physical therapy in the Doisy School of Allied Health Professions, uses technology heavily in his courses on orthopedic physical therapy and kinesiology, and he shares his techniques with peers. He uses PowerPoint presentations, digital images and video clips to help students understand three-dimensional relationships. He posts radiological images on his WebCT site where students can take their time studying them. He created a discussion room where students can post resources or experiences they found useful in their study.

“Technology helps me affirm to students that they have access to multiple sources of information,” Reinking said. “They also can learn from each other, which makes their education more dynamic.”

Reinking said technology also allows him to customize his instruction. Some students learn better with the help



**Reinking**

of three-dimensional dynamic images. Others prefer static images. Some students like audio. Some prefer straight text.

“I can relay information several ways,” Reinking said. “I just have to find what hook works for a student. That’s an infinitely easier task with the technology we have.”

Of course, high-tech teaching raises some concerns. Professors can become overwhelmed with student e-mail and requests for information. Upon returning from a recent weekend trip, Kennard had 200 e-mails waiting for him — the majority from students. Another concern is keeping the equipment current. What is cutting edge today may be outdated next year. Upgrading is a constant and expensive job.

In addition, some wonder how the Jesuit mission translates online. SLU offers several courses online but only two degrees: a master’s degree in nursing and one in aviation safety. The University has a committee assigned to explore ways of preserving the mission in cyberspace.

Regardless of the concerns, there is no turning back, Kennard said.

“Electronic instruction is a tool, and like any other tool, you have to learn how to manage it,” he said. “But it’s one of the best tools that has come along in my day to help wrestle with students’ minds. With this kind of equipment, I wouldn’t mind teaching for another 50 years.” ♣



**Kennard**