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Graduate Student Views on Instructional Technology

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Reading reports of new educational trends, one gets the impression that the days of professors lecturing in front of students in classrooms are numbered. As institutions of higher education explore the possibilities of distance learning, and professors increasingly utilize course Websites, course-bulletin boards, and other electronic means of communicating with their students, the terrain of teaching is changing. Surely traditional, face-to-face teaching will persist and perhaps always have a place, but it is hard to deny the fact that technology is revolutionizing education.

How are doctoral students at Brown and other universities — the future professoriate — planning to negotiate this changing terrain? What are they doing to prepare themselves to teach in the 21st Century? Having grown up with computers, many are unfazed with all the changes that technology is bringing to education. Some have TA'd for Brown professors who have maintained course web-sites or used instructional technology in other ways, and had an opportunity to observe its impact firsthand. Others think of it as something they will decide on later — when they assume faculty positions and begin to design and teach their own courses. Still others believe instructional technology is something they ought to know more about, and begin to think about now.

Margo Echenberg, who earned her doctorate in Hispanic Studies this past May, has already been exposed to instructional technology; she is familiar with websites for language courses. "I think they are most useful; perhaps not as tools that enhance learning directly but ones that definitely save the instructor valuable class time that can be dedicated to learning rather than busywork," she said recently. "The webpages also

enhanced 'content' learning for those students who were motivated to search related links."

When she teaches, Echenberg says she "definitely plan[s] to have web pages and to have handouts and relevant links posted online" as well as "an interactive bulletin board for questions and discussion, which would function primarily student-to-student," but that she would monitor on occasion.

She believes more could be done to train Brown graduate students to use instructional technology. Said Echenberg: "I've participated in discussions about technology that have not been terribly useful because we were all speaking hypothetically. I think it would be great to have instructors who use technology in their classrooms to show grad students in an interactive media presentation how they use whatever it is they use and to then field questions. In addition to finding out "what's out there" in terms of technology at Brown, grads should be informed as to where to seek help in the more technical matters. I think a series of "hands on" workshops at the CIT for Sheridan Center participants would be great. The assignment would also be a practical application of technology [such as] creating a bulleting board."

Sarah Dance, a graduate student in Applied Math, TA'd for two courses in which instructional technology played an important role. In one course, she helped maintain a website; the class also used a software package called Matlab. "Using Matlab was definitely beneficial," recalled Dance. "There's a certain amount of drudgery involved in solving differential equations and using the computer enabled the students to get a visual idea of solutions much more easily (and accurately than by hand). The point of the course was to teach the students solution methods, so they also had to do the handcalculations, but the computer gave them an easy way of checking their work."

Dance is dubious, however, about the prospect of teaching Applied Math on-line. As she explained, "I'm not sure how well distance learning in Applied Math would work. Reading math is not something that people generally are very good at. You need to work things out for yourself as you go along. This is a lot easier if you have someone in front of you talking you through it and asking you questions. My students in general don't find reading an example in a textbook instructive, unless they already have a certain level of mathematical maturity."

Rachel White, a graduate student in Religious Studies, would welcome the opportunity to use instructional technology in classes she will one day teach, but, like a lot of people, wonders how she will incorporate it into her teaching. "I think I would like to make use of computer technology as part of my teaching, but I'm not sure where I would start to think

about how I would do this. I have never taken or TA'd a course that used such technology so I don't have models to work with," White said recently.

For White, decisions about using instructional technology are not just technical, how-to matters. She believes it is important to ensure that the technology truly enhances learning. Asked about the kind of training Brown graduate students could benefit from in this regard, she responded: "Well, I think for starters it would probably be helpful to introduce grad students to the possibilities, merits, drawbacks, etc. of using web sites, discussion groups, etc. in courses. Perhaps the best way to do this would be to offer lectures and seminars led by professors who use such technology. From here, it might be helpful to offer some classes that provide the technical skills to do these sorts of things."