Questioning the Best Learning Technology

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When I was a new assistant professor, I gave much time, thought, and energy to my courses. I worked late the nights before on classroom presentations and rose early the mornings of my classes. I read and reread and underlined and took notes on the key books and chapters as well as the current articles on the topics that I was teaching. I continued to reorganize and revise my lecture notes (most of my teaching has been with large classes) until just before I walked to the classroom, adding additional material and making certain that I was prepared for any questions the students might raise. Looking back, I can see that I was making a simple error: I was mistaking my own learning for the students' learning. I thought that if I had learned the material well, my extra preparation would magically increase my students' learning.

Until recently, I was making a similar mistake, still working late into the nights and rising early the mornings before my classes. I continued to search the Web for information to add to my lecture slides and links to add to the course Web site. I continued to construct additional slides for my lectures as well as fuss with the content and formatting for previous slides. Until just before I walked to the classroom, I continued to search Google for more and better images to show during lecture, as well as rehearse the sequence and timing for the audio and video clips I had woven into my lectures. Looking back, I realize that this time I was mistaking my use of technology for the students' learning. I thought that if I was competent with classroom technology and my lectures were entertaining, my students would magically learn the material better.

I've learned from talking with students that some see the place and value of technology in their courses as follows: First, they like professors' lectures to highlight the main points in the assigned reading (so they don't have to do the reading, think, evaluate, underline, and take notes). Students like lectures presented with slides, so they can see what to copy into their notes (as opposed to having to listen, think, and select what is worth noting as well as assess whether they are understanding the material and, if not, form questions). And students like lectures illustrated with images (these make the class entertaining) and video clips (a welcome break from copying from slides). Next, they like professors' lectures to not go beyond the reading and they like the lecture notes to be posted on a course Web site (so that the students don't have to attend class). Last, before the exams they like professors to post review handouts and sample questions on the course Web site (so they don't have to read the lecture notes posted previously or review, organize, and think about the material prior to the exam). These students like the exams to be multiple-choice and computer-scored, rather than fill-in-the blank, short answer, or—worse—essay exams (so they can rely on recognizing the correct answer rather than having to work to recall it or—worse—having to think and write).

If my use of technology merely encourages and supports student attitudes and behaviors such as these, then I have lost sight of my primary goal and responsibility as a professor, which is to facilitate student learning. Instead of expanding and fine-tuning my use of classroom technology, I should be putting my time, effort, and creativity into promoting the active engagement, thinking, questioning, and learning of my students. Once we move beyond a transmission model of teaching and learning, in which students are passive, to a constructivist model of liberal education, in which students are actively engaged, curious, reflective, and thinking critically, the best learning technology becomes the posing of a problem, issue, or question for the students (and this is real, not magic). Yes, I continue to use a variety of technologies in my teaching, but less so than a few years ago, for often the students can best be stimulated by sharing a good story with a twist or sketching a simple table or diagram with chalk. The criterion for bringing technology into my courses should always be: will this enable me to pose questions that better engage my students, spark their curiosity, and push them to think critically and, ultimately, to learn? ■