

News

Clicker U.

November 3, 2008



ORLANDO -- To some academics, clickers are [a great new technology](#), allowing professors to measure instantly whether students in a large class are grasping new concepts (or are even in class). [To others](#), clickers represent a depersonalizing influence.

At the annual meeting of Educause, an organization of college technology officials, the former appeared solidly in the majority. Indeed, at a session on the use of clickers, officials of three large universities reported that once professors start to use clickers, the devices' popularity took off, and not just in mammoth lecture classes. To these officials, the questions about clickers weren't of the "Should we use them or not?" variety but of the policy variety: Should institutions support only one model on campus or whatever professors pick? Who is responsible for training professors in their use? Should certain uses of clickers be discouraged or encouraged?

To inform the discussion, officials of the Universities of Delaware, Maryland at College Park, and Pittsburgh each conducted surveys of students and faculty members on clicker use. The findings and their implications were discussed here Friday at the Educause meeting.

Why click: By far, the top reason cited by faculty members using clickers was to see instantly whether students were understanding a concept. Every Maryland professor identified that as a reason while more than 80 percent of those at Pitt and Delaware cited that use. Measuring student opinion and obtaining anonymous responses from students were other reasons cited. Smaller percentages were using clickers to monitor attendance (about half at Delaware and less than 40 percent at other institutions) or to administer quizzes (popular at Delaware but rare elsewhere). Whatever their reasons, the survey data suggest that professors are repeat users of clickers, with large majorities reporting that they have used them previously and are continuing to do so.

Clicking and attendance: Officials of all three universities generally spoke more enthusiastically about the use of clickers to promote student understanding than to check up on students. Christopher Higgins, manager of learning technologies at Maryland, said that while professors report that using clickers for attendance tends to get students to class more consistently, he's not sure that's "the best practice" for the technology. One concern is students will trade off, and one student may show up in class with clickers for a few friends and click them all present. Nancy J. O'Laughlin, instruction designer at Delaware, said that the student code of conduct there was specifically amended to make it a violation to click for someone other than yourself. There haven't been many problems, but "we felt it was important to give the faculty confidence" that there would be a way to deal with clicker abuse, she said.

Large classes and small: When the clicker concept started to attract attention, it was generally discussed in terms of large lecture courses, but the use of clickers appears to extend beyond that. More than a quarter of the courses using clickers at Pitt and Maryland have at least 200 students. But at Delaware more than a quarter of clicker classes enroll fewer than 50 students, and at Pitt, more than 20 percent of courses using clickers have fewer than 25 students. At Delaware, the courses with the greatest clicker use are in chemistry, biology, physics, psychology, nursing and political science. At Maryland, clickers are most prominent in the sciences and business. At Pitt, clickers are most commonly used in the biological sciences, nursing and pharmacy.

Critical mass: At these universities, clickers have in the past few years changed from being something used by a few professors to becoming, if not standard, certainly not unusual. Maryland has more than 12,000 students using clickers in at least one course, for example.

Training and support: While students typically are comfortable with clickers from day one, not all professors are. O'Laughlin said that "students know some faculty who are not comfortable with any technology, let alone clickers," and that students "want their faculty to

be prepared and comfortable." Michael Arenth, assistant director for instructional media services at Pitt, said faculty members need training not just on how to use clickers, but on security and privacy issues, so that they are used in ways that don't create problems. All three officials said that if colleges want to encourage clicker use, it is important to have designated staffers available for support, especially just prior to the start of the semester and the first few weeks of the semester.

Uniformity vs. personal preference: At Maryland and Delaware, once more professors started to use clickers, the universities created committees to try to make clicker use more consistent. IT departments didn't want to support multiple systems, and students didn't want to have to buy multiple clickers to satisfy the preferences of different professors. At Pitt, however, Arenth said that "we didn't succeed in mandating a standard." Even with standardized systems, however, there are pressures on campus technology officials when, for example, a system works well with a PC but not a Mac or vice versa.

One reason that clickers are likely here to stay is that students are generally pleased with them. While there were complaints that some professors didn't know how to use them or take full advantage of them, support was high and enthusiastic when faculty members knew what to do. In many cases, students reported that clickers transformed their student experience.

A quote from a Delaware student: "I absolutely loved using the clickers. It encouraged me to go to class every day and truly enhanced my overall learning experience in this class," the student wrote. "I'm the kind of person who never raises their hand to talk during a class whether it's to ask a question or to answer a teacher's question, so with the clickers being individual and anonymous (to my classmates), it allows me to be able to participate in class without being in front of anyone... I hope all of my classes from now on will use this clicker system!!!"

— **Scott Jaschik**

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