

A professor of English describes university life.

Aim: To change things.

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### [Click-Thru U](#)

Once again we take note of the way an alliance of commercial interests and slothful professors creates a shitty, expensive education for American students. The proud university sponsor in this case is Iowa State.

UD almost never copies articles in their entirety. She hopes the [Chronicle of Higher Education](#) doesn't mind if she does here. In order to understand the contempt some universities show for their students, you need to follow the narrative as well as the analysis in this essay. The author is Michael Bugeja. The last sentence is a beaut.

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“Last spring I received an e-mail message from my university's Center for Excellence in Learning and Teaching that read like an advertisement:

*If you are thinking of ordering personal response system units, or clickers, for your class next fall, be sure to attend the upcoming CELT session, Using TurningPoint Clickers to Engage Students in the Classroom.*

Staff members at the center provide valuable services to evaluate and improve teaching. Their first impulse is to help, a trait they share with information-technology and bookstore personnel. In this case, though, the center was helping a company by providing workshops and promotion for a device resembling a television remote control.

Clickers, or “audience-response systems,” were designed in the 1960s in Hollywood to test unreleased movies, commercials, and television shows. A decade later, a retired planner at IBM, Bill Simmons, developed a rudimentary response system to simplify boring business meetings. Soon the business world commercialized and adapted audience-response systems to augment consultations and presentations.

Then, in one rhetorical stroke, manufacturers substituted “student” for “audience,” introducing clickers into education.

To use clickers, instructors adapt their pedagogy, soliciting responses via keypads. Students funnel data to a receiver connected to a laptop with proprietary software that displays results through presentation software, such as PowerPoint, into a projector and onto a screen.

Ira David Socol, a scholar of technology in special education at Michigan State University, states,

“The idea of wasting money on a device no more sophisticated pedagogically than raising your hand drives me nuts, whether it is students’ money or the university’s.” Cellphones, he says, can perform the same tasks as clickers with more interactivity and less inefficiency.

Clickers function through several layers of hardware and software and, like television remotes, can be incompatible with other brands’ components or upgrades of previously compatible ones. If Microsoft updates PowerPoint in Office 2007, for example, the clicker system develops a glitch, and teachers must use Office 2003 until someone divines a fix.

Marketers seem to know our business better than we know theirs. That was apparent a few years ago, when publishers introduced infrared clickers bundled with specific textbooks or series of textbooks. In a class of 400 students, each of whom would spend \$40 for a clicker, many institutions paid for the purchase and/or installation of receivers, in effect helping to sell the company’s products. Companies suggested clickers for multiple-choice questions based on a book’s content, an easy adaptation from previous instruction booklets with answer keys — not exactly innovative, but cost-effective, making books appear interactive overnight.

In the past, vendors introducing educational products would respond to requests for proposals on a low-bid basis, covering installation and maintenance costs as well as training workshops. Now those vendors pitch directly to professors, relying on IT departments to assume costs and on centers of teaching excellence to provide training in workshops and promotion in posters, e-mail blasts, and new-product releases.

In a ploy to get educators to adopt or retain textbooks, publishers infected academe with a grossly inefficient infrared system. That was later replaced by a more versatile and usable radio-frequency technology, but not before colleges and their students had spent untold millions on installation, purchases, and additional fees, not to mention utility, maintenance, and staff-support costs.

Businesses routinely take advantage of the helpful cultures of information-technology and teaching-excellence centers. The first impulse of many such campus programs is to be of service; the second is to be on the cutting edge of innovation in a technological environment. Such virtues, however, can be vices when manipulated by marketers whose goal is profit, not pedagogy.

In a 2004 document, “Introducing Student Response Systems at MU,” which is still online, educational-technology personnel at the University of Missouri noted that “national publishers have been promoting this technology to higher education as a way to increase their profits. By providing free receivers and discounts or rebates for student clickers sold with new textbooks, they hope to reduce the number of used-book sales. Additionally, different publishers have proprietary agreements with different response-system companies. ... Please be aware that this may lead to confusion as instructors change texts or classrooms, and as students begin having multiple classes using different kinds of clickers.”

What strikes me about the document is its collegial tone and willingness to be of service even while acknowledging the corporate profit motive.

Early infrared systems required several sensors to tabulate responses. Students had to point clickers at multiple receivers with sharpshooter precision. If a person’s head in front of you blocked

transmission, the instructor's receptor failed to register that response. A tech-support employee at Iowa State University, where I teach, recalls that students in one classroom purportedly had to walk up to the front of the room, a few feet from the receiver, for the system to work. An employee in academic advising recalls complaints about receivers' failing to capture responses, resulting in "elaborate grading schemes" to compensate those making that claim.

To their credit, staff members at Missouri offered to help instructors determine if they really needed clickers. "If cost is not an issue," the document says, "then instructors need to look at the different software and hardware features that best match the way they want to use the system in their class."

The phrase "if cost is not an issue" seems to apply to the professors' departments and not to students or their parents. In fact, at some institutions, students were routinely omitted from committees adopting these gadgets, on the presumption that they would focus on cost and overlook pedagogical benefits.

The irony astounds me. We invest in technology believing that it democratizes the classroom, fostering peer learning and engagement. In the case of clickers, we could have polled students (with or without clickers) on whether they thought the benefits of the technology outweighed the cost. They probably would have said no because of excessive student fees, which in Iowa and elsewhere have risen sharply in the past decade, due in part to inefficient technology typified by infrared clickers.

The economist Clark G. Ross, vice president for academic affairs at Davidson College, defined the prevailing mentality on a typical campus: If you can identify a benefit, you can justify the expense. Ross wasn't speaking about clickers at a recent convention but about cost containment, which, in the wake of the student-loan scandal, is a major factor in retention because students no longer have access to easy money. To prepare for that reality, he said, we must abandon the notion that every new program or system with "a marginal benefit greater than zero" is worth the investment.

Before we switched to universal clickers at Iowa State University, we, like our peers at Missouri, went through the costly and inefficient infrared stage, requiring students to buy multiple clickers, which operated inefficiently on several platforms.

We asked our information-technology office to help resolve technical and other conflicts associated with the devices. In our search for a radio-frequency solution, we adopted a clicker model requiring some 2,000 students at the time to pay a \$15 registration fee. When an IT employee at a meeting in 2005 was asked about that, he responded that this was the business model of the company desiring "steady cash flow from enrollments."

Online registration using credit cards affords opportunities for data-mining names, types of cards, and other personal information. But in this case, a more serious privacy concern arose: Registration included access to such student records as quizzes and surveys. That generated concerns regarding the Federal Educational Rights and Privacy Act, so our legal department had to craft an agreement making the manufacturer liable for any breach of student data.

Students using radio-frequency clickers no longer pay registration fees for the devices at Iowa State, and our new vendor does not have access to records. But the history of clicker proliferation underscores important lessons about accountability.

In Iowa, state law requires the Board of Regents to review nontuition-related fees in excess of \$1 per semester. Because the clicker fees go to the vendor rather than to the university, the company offering the devices has legally circumvented our accountability system.

To verify the extent to which business could infiltrate academe, I interviewed a publishing executive at a major house, asking him to respond to allegations that companies typically rely on institutions to provide free installation, support, maintenance, and promotion of infrared clickers, and that data-mining is possible via online registration, with the potential to resell that information, probably to credit-card companies.

Without acknowledging that his or other companies actually did this, the executive replied, “This sounds about right.”

I tried to ascertain how my university went in a few short years from zero to 14,000 clickers — a scenario that has probably played out on your campus, too.

The trail led not to IT, nor to the campus bookstore, nor to our teaching-excellence center, but to a handful of professors getting infrared clickers in pitches to adopt textbooks. In 2003, without classrooms wired for reception, these clickers were of little use. But marketers looked to early adopters to scurry to IT departments to make systems operational.

In our case, a 2006 report notes that infrared clickers were “peddled by different publishers,” requiring students to purchase multiple handsets, “an obvious financial burden.” The report cites additional burdens on our bookstore and IT department in stocking, managing, and equipping classrooms for multiple systems. Worse, often the entire infrastructure had to be moved to another classroom as a result of schedule changes from one semester to the next, adding more expense and creating scheduling snafus for facilities personnel. Because of those and other issues, the Iowa State report advocated for more-efficient radio-frequency clickers, which didn’t require registration fees or student records. Users then multiplied quickly throughout the university.

The story could have been worse. Our IT experts intervened early in the process, helping us save time and expense by adopting a more efficient TurningPoint system, for which the marketing strategy was to sell clickers rather than textbooks. Our teaching-excellence center helped professors use clickers more insightfully rather than simply for attendance and quizzes.

But I am still wary of clickers, and I asked professors in my unit if they were using them.

Jay Newell, who teaches advertising, consulted with his student advisory committee about using clickers in his large class. The students were against clickers, he observed: “One said that she and her friends would slow down lectures by inputting incorrect answers to poll questions. Another said that it was not unusual to have one student bring multiple clickers as a favor to friends in classes in which clicker responses were used to award credit.”

I was intrigued that Newell had consulted with students and had created an advisory committee, an idea recommended by the same center for excellence in learning and teaching whose e-mail message triggered this essay.

And that's the moral of the story. Institutions have much to learn from students about the cost and effectiveness of technology. Chief information officers need to be consulted before departments invest in expensive for-profit consumer technologies. Professors need to realize that technology comes at a price, even when advertised as "free." Finally, administrators need to double their efforts at cost containment, demanding assessment before investment, especially in schemes that bypass mandated accountability standards.

Otherwise business as usual will continue to disenfranchise our students, who will hold their debt-ridden futures in their clicking hands. "

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**UPDATE:** The author of the *CHE* piece, Michael Bugeja, responds to my post, as do a number of other very thoughtful readers. Click on *comments* and take a look.

Margaret Soltan, 7:27AM

Posted in: [CLICK-THRU U](#), [technolust](#)

**Trackback URL for this post:**

<http://www.margaretsoltan.com/wp-trackback.php?p=6304>

## 10 Responses to "Click-Thru U"

1. *theprofessor* Says:

[December 2nd, 2008 at 8:14AM](#)

The clicker phenomenon is, of course, appalling, but I have to admire these entrepreneurs for once again bamboozling the dopes of academe.

2. *Margaret Soltan* Says:

[December 2nd, 2008 at 8:22AM](#)

Yup, tp. The term 'sitting ducks' comes to mind.

3. *david foster* Says:

[December 2nd, 2008 at 8:27AM](#)

I can imagine situations in which these things might be useful; for example, a large lecture class in math or science in which the instructor is trying to identify which points are particularly difficult for the students to understand so that he can explain them in more depth. But this only works if the instructor has the ability to react to the clicker data on-the-fly...a skill which is probably rare and is likely \*extremely\* rare among the read-the-words-off-the-PowerPoint-slides set.

4. *Bonzo* Says:

[December 2nd, 2008 at 9:00AM](#)

Very well-written article with a lot of useful insights - and not just about clickers.

5. *Pat Scully* Says:

[December 2nd, 2008 at 9:51AM](#)

The author writes, "Such virtues, however, can be vices when manipulated by marketers whose goal is profit, not pedagogy." While I won't argue that marketers are driven by profits, I believe that there is a body of research that supports the effectiveness of clickers in the classroom. In fact, they may be one of the more pedagogically sound technologies used in the classroom. I don't have the research at my fingertips. Is anyone else aware of this research?

6. *Timothy Burke* Says:

[December 2nd, 2008 at 12:19PM](#)

I think David is right that there is an extremely limited set of pedagogical circumstances where you could imagine that a clicker could be a very useful tool that accomplishes something in a way that no other technique could. In a large lecture class where extremely concrete information is being presented and where comprehension is essential, it might be hard for a professor to feel confident that the class understands some of that information. You could stop to ask people out loud to find out, as in many cinematic recreations of law school pedagogy, but if you're dealing with 100 or 150 students or more that might not tell you very much about the general state of knowledge. Moreover, a lot of students are inhibited about answering some questions in front of a large audience: the anonymity of a clicker system might give you a much more honest picture of comprehension.

But this presupposes several things:

- 1) As David notes, it presupposes a lecturer who is talented enough to parse clicker data on the fly *without* breaking the flow of their lecture. In other words, someone who isn't just reading PowerPoint slides or a prewritten text.
- 2) Equally, it presupposes a lecturer who is willing to back up and spontaneously try explaining a concept that students didn't understand properly on the first pass, and explaining it in a different way. In other words, a lecturer who is a skilled communicator and improviser rather than a plodding droner.

If the lecturer in question doesn't have the skills and confidence to make good use of the information he or she gets through a clicker, the clicker is worse than useless. And here's another thought: a lecturer who has the right skills is likely to already have a pretty good intuitive "feel" for whether a class is understanding the material or not just by reading facial expressions, watching note-taking, paying attention to sub-verbal cues. So this lecturer doesn't really need the clicker, in all likelihood, though they might find it interesting and instructive to get that data now and again.

The only other person I can imagine benefitting in a distinctive way is a newly-minted professor who might find it very helpful to know when and how they've explained something in an exceedingly clear way.

Note too that these being at all useful depends on them having a high degree of reliability and the data coming through on a screen visible to the lecturer very rapidly and consistently.

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Bugeja is also correct that universities do very poor cost-benefit analysis much of the time. If you ran through the assessment that David started off, it would be clear that this is a boutique technology to be used in a very small subset of the total instruction that any university does, and with a very particular subset of the instructional staff. In the wrong class or with the wrong person, this technology only exaggerates pedagogical flaws and failures. So what's it worth? Not very much. If it were cheap, and you were buying only a few, sure. If it is expensive and you're being sold enough for every classroom? Total waste of money.

7. [Michael Bugeja](#) Says:

[December 2nd, 2008 at 12:24PM](#)

I just want to compliment this blog, which I read from time to time, as I have a Ph.D. in English (and am an NEA fellow [1990]).

I am a journalism director because of my many years as an correspondent for United Press International. Thus, I have to know these technologies.

I also pay for them.

My chief concern is how we are disenfranchising our students because of debt.

There is a body of corporate research supporting clickers. But it's difficult to ascertain what is corporate and what is educational because those lines are incredibly blurred now in colleges of education.

Vanderbilt is big on clicker research: [http://www.vanderbilt.edu/cft/resources/teaching\\_resources/technology/crs\\_biblio.htm](http://www.vanderbilt.edu/cft/resources/teaching_resources/technology/crs_biblio.htm)

But that's not the issue. Cost is the issue. No research to my knowledge documents any learning benefit according to empirical analysis—in this case, raising hands as opposed to clicking keypads in those hands.

Here's my point:

Unless we stop underwriting any benefit, especially without the above analysis, technology—which promised to democratize academe—will continue to corporatize it, at the expense of the Humanities, I'm afraid.

8. [Margaret Soltan](#) Says:

[December 2nd, 2008 at 12:59PM](#)

Michael: Many thanks for your kind words and for your additional thoughts. I've updated the post to direct my readers to your comment. I also thank the other commenters on this thread,

who've made a number of important points.

9. *RJO* Says:

[December 2nd, 2008 at 1:32PM](#)

*The phrase "if cost is not an issue" seems to apply to the professors' departments and not to students or their parents.*

This eerily echos the viewpoint of an athletic department mouthpiece I once heard addressing a group of faculty. The faculty objected to yet another increase in student fees to prop up the sinking sports program. The athletics spokesman was genuinely befuddled, and it showed on his face. "But we're not taking this money away from *you guys*. We're getting it from the *students*."

10. *Stephen Karlson* Says:

[December 3rd, 2008 at 1:02AM](#)

RJO, you've just illustrated why economists will never lack for work. If everyone could get their brains around the notion of opportunity cost, we'd not have this sort of material to strengthen our majors' self-esteem.

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