

FACT CHECK: "Classroom Clickers and the Cost of Technology"

Michael J. Bugeja, Author. Run Date: December 1, 2008

I. Emails from Center for Excellence in Learning and Teaching

Subject: CELT News and Tip, 4.3.08: Effective Use of Classroom "Clickers"
Date: Thu, 3 Apr 2008 11:51:00 -0500

CENTER FOR EXCELLENCE IN LEARNING AND TEACHING
Weekly News and Tip, April 3, 2008
<http://www.celt.iastate.edu>

Tip - Effective Use of Classroom Clickers

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**, Thursday, April 24, from 12-1 p.m. in 1230 Communications.

In the meantime, check out these useful sites on using clickers effectively in teaching:
For an overview, see **Personal Response Systems (Clickers)** at:

<http://www.olin.org/ILT/prs.php>

From York University, Canada, see **What Are the Challenges in Using Clickers Well?** at:

<http://www.yorku.ca/cst/ideas/tel/clickers/challenges.html#designing>

And, CELT's own set of suggestions is the top Google hit for clickers plus "teaching tips"! See **Clicker Tips from ISU Faculty** at:

<http://www.celt.iastate.edu/TurningPoint/tips/homepage.html>

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DATE: Thu, 9 Oct 2008 08:14:49 -0500
Subject: CELT News and Tip, 10.9.08: Using Clickers in Class

CENTER FOR EXCELLENCE IN LEARNING AND TEACHING
Weekly News and Tip, October 9, 2008
<http://www.celt.iastate.edu>

Tip - Using Clickers in Class

The CELT newsletter recently reported on faculty and student use of clickers over the last few semesters. We can now report that for the Fall 2008 term, **188 class sections within 42 separate courses** are using clickers. A total of **14,000 clickers** have been used across campus since fall semester 2006. To learn more about what students like about clickers, how faculty use them, and recommendations for clicker use, see:

http://www.crlt.umich.edu/publinks/CRLT_no22.pdf

II. On remote control technology:

Zenith, the first to introduce remotes, called its product "Lazy Bones." See:
http://www.zenith.com/sub_about/about_remote.html

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III. History of audience response systems:

See 4th paragraph of "Trends and developments in moment-to-moment research," by Wes Breazeale in *QUIRKS: Marketing Research Review*, December 2000, at
<http://www.quirks.com/articles/a2000/20001209.aspx>

Also see "Consensor History" on development for business meetings, including video of Bill Simmons, at <http://www.comtec-ars.com/consensor-history.asp>

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IV. E-mail Interview with Ira Socol:

From: "Ira David Socol" <socolira@msu.edu>
To: Michael Bugeja <bugeja@iastate.edu>
Subject: Re: Clickers
Date: Mon, 28 Apr 2008 21:45:33 -0400

Michael,
Permission? Absolutely. I'd love to see an article from you on this, so I'm thrilled to contribute.
Ira

At 02:27 PM 4/28/2008, you wrote:

Michael,

What you and I share, above all, in this, is a distaste for using "technology" badly. Technology which is used to reinforce worst-practices is obviously going the wrong way, and the false interactivity of the clicker drives me mad.

A few thoughts on your thoughts...

1. I know from the publishing business that a lot of these clickers were distributed "free" at trade shows to tie a teacher to a textbook so that he or she wouldn't change publishers. This is an issue of academic freedom, of course; but worse, it uses technology not as learning platform but as antiquated, one-way marketing tool. [Yes, yes. \[The infrared clicker\] ties teachers to the textbook in really awful ways. Besides, you and I might disagree some on learner-generated content and context, but I know we both prefer teacher-generated content and context to textbook-publisher-generated...](#)

2. Worse, these early clickers often were infrared rather than radio frequency so that wireless classrooms had to be adjusted (more expense). Sometimes students had as many as four or five clickers, and in addition to cost, there is the registration time-expense, etc. [Yes, again. I](#)

really wasn't promoting mobiles in the classroom as much as suggesting that if you could not do interactivity any other way, at least do it in a cost-effective way, via devices and networks already existing. 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.

3. Because only certain rooms were enhanced for IR clickers, scheduling became an issue. Unbelievable. We're fighting over the chance to use this? We're disrupting people's lives over something this worthless?

4. Several universities went through Nos 1-3 above before organizing ad hoc committees and settling on a RF universal clicker that could operate more efficiently. Again, spending time, energy, and real money on something which adds absolutely nothing to learning, or, which could be accomplished virtually free. ...

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V. On glitches with updates of PowerPoint:

See <http://www.it.iastate.edu/office2007/> Excerpt:

TurningPoint and Clickers. There appears to be a conflict between the TurningPoint software for the university university-supported clicker system and the Microsoft Office 2007/PowerPoint product. With the clicker software/Office 2007 tandem, data captured by the clicker system and transferred to WebCT is still accurate, but the display of that data in PowerPoint 2007 can sometimes be inaccurate or even unreadable.

The company that makes the clicker software is working on an update that will correct these issues, but it has not yet been released. Until then, we recommend that you always use the Office/PowerPoint 2003 version when using the TurningPoint clicker software. If you have questions, the support team can be contacted at clickerhelp@iastate.edu.

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VI. For paragraphs referencing the Missouri document:

See "Introducing Student Response Systems at MU," <http://etatmo.missouri.edu/toolbox/doonline/StudentResponseSystems.pdf>

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For passage about students routinely being left out of committees, visit "Successful Clicker Standardization," page 2, first paragraph to the right, at <http://www.educause.edu/ir/library/pdf/EQM07410.pdf>

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For comments attributed to Clark Ross, see "Searching for Strategies for Tough Times," by Scott Jaschik, *Inside Higher Ed*, May 12, 2008, available at <http://www.insidehighered.com/layout/set/print/news/2008/05/12/tiaa>

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V. Minutes of ISU meeting during which clicker fees were discussed:

See: CCSG Meeting Notes, May 25, 2005, available at <http://www.it.iastate.edu/ccsg/notes/2005-05.html> (The document is long and so use the find feature and input "business model" to verify the citation.)

Here's the excerpt in question:

Q: Why the \$15 upfront/\$16 per semester thing instead of just charging the enrollment fee as part of the bookstore purchase?

A: That's the business model of the company; the student doesn't have to buy a new clicker each semester, but the company gets steady cash flow from enrollments.

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VI. For Iowa's Board of Regents policy on non-tuition related fees:

See memorandum at this URL:

<http://www2.iowaccess.org/regents/Meetings/DocketMemos/02Memos/aug02/auggd01.pdf>

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VII. Confidential e-mail exchange with publishing executive:

This sounds about right. I would not say that publishers began associating clickers with texts to "cut down on new editions": rather, they are marketed as instructor and student friendly devices to make lecture classes more interactive, and are used to help drive adoption decisions.

In a message dated 5/9/2008 9:00:38 A.M. Eastern Daylight Time, bugeja@iastate.edu writes:

I'm writing today as a researcher and asking you to provide some information off the record. I won't name you, of course, in anything I write or say. But the issue has to do with publishing, and I think you would know some details that I am trying to piece together. The issue is the proliferation of clickers in academe tied to textbooks and now used everyday in the thousands at research institutions.

As I understand it, publishers began associating clickers with texts to cut down on new editions and to keep a book in print longer. Some textbook companies combined the price of the text with a clicker and called the clicker "free" when it really was incorporated in the text price. Those clickers were infrared and could not be used with other texts. Moreover, students had to register to use the clicker system. So in the past several years, students were not only datamined through IR clickers purchasing 4 or 5 of them but also paying fees for licenses to use them. For instance, with a class of 400, the company not only charged for the text but also for the license (perhaps this was outsourced) with \$6,000 in additional fees that didn't have to be approved by the Regents because students were paying a company, and not the state. The company was relying on the institution to upgrade its classrooms to use clickers through which companies benefitted at least in three additional ways: (a) the teacher invested time

learning the company's clicking system and so would not change textbooks as frequently as before, (b) datamining student responses and using or selling that information, probably to credit card companies, (c) spending taxpayer money to vend their own products through IT, teaching excellence centers and bookstores. Does this sound about right to you? (Again, I have no intention of identifying you; I just want to make sure that I am accurate.)

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VIII. Student Response Systems Committee Final Report, Iowa State University, June 2006.

Citation, p. 6: The University Book Store (UBS) stocked CPSrf clickers, at a cost of \$16 to the students. UBS worked to channel faculty requesting clickers to the elnstruction system. Still, a few faculty insisted on using other systems. In addition to the \$16 hardware cost, elnstruction's business model required students to log on to elnstruction's servers and register their clickers for the semester. This registration fee was an additional \$15 per semester. This ongoing registration fee became a sore spot for students and the faculty clicker users who represented them. The ongoing fee concept, even though in some cases it rendered cheaper systems costs to students, was perceived as more expensive and an ongoing burden to students. Other clicker systems that carry higher hardware costs with no fee are perceived to be the better value, even though the economic advantages are debatable. In the Fall 2005 semester, 12 classes used the clicker systems, representing more than 2,000 students. All faculty and many students were polled about their clicker use, and the results of those surveys are summarized in Attachment A.

D. FERPA

The use of elnstruction clickers on campus quickly raised questions regarding the Federal Educational Rights & Privacy Act (FERPA) legislation. FERPA protects the educational records of students, in part by insuring secure data flow. The registration process for elnstruction carries student records beyond the ISU network, where the control of such records cannot be assured. The committee therefore worked with ISU's Office of University Counsel to craft an agreement with elnstruction regarding the transfer of student records. The two-page agreement assigns to elnstruction responsibility for student records beyond the ISU networks, and makes the manufacturer liable for any breach of student data. The original agreement is on file with the committee, with a copy in the Office of University Counsel. It should be noted that elnstruction's business model is the only one among clicker manufacturers that calls FERPA into play. Other clicker systems do not require student records to leave the campus network.

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IX. Quote attributed to Jay Newell based on this email:

Subject: Re: AEJMC papers

Date: Fri, 16 May 2008 18:21:04 -0500

As for clickers: Earlier this year I discussed the possibility of using clickers in the large Advertising Principles class with the course's student advisory committee. Based on their own experiences, the students on the committee were against clickers,

One student 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.

Jay