July 20, 2009

When Computers Leave Classrooms, So Does Boredom

by Jeffrey R. Young

College leaders usually brag about their tech-filled "smart" classrooms, but a dean at Southern Methodist University is proudly removing computers from lecture halls. José A. Bowen, dean of the Meadows School of the Arts, has challenged his colleagues to "teach naked"—by which he means, *sans* machines.

More than any thing else, Mr. Bowen wants to discourage professors from using PowerPoint, because they often lean on the slide-display program as a crutch rather using it as a creative tool. Class time should be reserved for discussion, he contends, especially now that students can download lectures online and find libraries of information on the Web. When students reflect on their college years later in life, they're going to remember challenging debates and talks with their professors. Lively interactions are what teaching is all about, he says, but those give-and-takes are discouraged by preset collections of slides.

He's not the only one raising questions about PowerPoint, which on many campuses is the state of the art in classroom teaching. A study published in the April issue of *British Educational Research Journal* found that 59 percent of students in a new survey reported that at least half of their lectures were boring, and that PowerPoint was one of the dullest methods they saw. The survey consisted of 211 students at a university in England and was conducted by researchers at the University of Central Lancashire.

Students in the survey gave low marks not just to PowerPoint, but also to all kinds of computer-assisted classroom activities, even interactive exercises in computer labs. "The least boring teaching methods were found to be seminars, practical sessions, and group discussions," said the report. In other words, tech-free classrooms were the most engaging.

It's worth pointing out that PowerPoint presentations are generally better than many older classroom technologies, like slate chalkboards or overhead transparencies filled with hand-scrawled notes that students struggled to decipher. So computers have probably led to a slight improvement in teaching. But technology has hardly revolutionized the classroom experience for most college students, despite millions of dollars in investment and early predictions that going digital would force professors to rethink their lectures and would herald a pedagogical renaissance.

Brandon Thibodeaux

PowerPoint presentations are not welcome during classes taught by Kevin Heffernan, associate professor at the Meadows School of the Arts at Southern Methodist University. He uses his computer to show his cinema students movie clips, which trigger lively class discussions, he says.

Mr. Bowen is part of a group of college leaders who haven't given up on that dream of shaking up college instruction. Even though he is taking computers out of classrooms, he's not anti-technology. He just thinks they should be used differently—upending the traditional lecture model in the process.

Here's the kicker, though: The biggest resistance to Mr. Bowen's ideas has come from students, some of whom have groused about taking a more active role during those 50-minute class periods. The lecture model is pretty comfortable for both students and professors, after all, and so fundamental change may be even harder than it initially seems, whether or not laptops, iPods, or other cool gadgets are thrown into the mix.

No Power in PowerPoint

Mr. Bowen delivers his pitch about "teaching naked" with the energy and confidence of a seasoned performer, which makes sense when you learn he has been on stage as a professional jazz musician for some 30 years. The goateed administrator sported a suit jacket over a dark T-shirt while giving a recent talk about his approach at a conference on "Emerging Technology Applications for Online Learning" put on by the Sloan Consortium, a nonprofit group that encourages technology use in education.

Although he made a philosophical argument about the best way to engage students, he grounded it in his own classroom experiences using podcasts and video games about jazz history that he helped produce. He did not use PowerPoint, but he did use his laptop to show off one of his games, which lets students pick famous jazz musicians to play in a fictional supergroup.

His philosophy is that the information delivery common in today's classroom lectures should be recorded and delivered to students as podcasts or online videos before class sessions. To make sure students tune in, he gives them short online multiple-choice tests.

So what's left to do during class once you've delivered your lecture? Introduce issues of debate within the discipline and get the students to weigh in based on the knowledge they have from those lecture podcasts, Mr. Bowen says. "If you say to a student, We have this problem in Mayan archaeology: We don't know if the answer is A or B. We used to all think it was A, now we think it's B. If the lecture is 'Here's the answer, it's B,' that's not very interesting. But if the student believes they can contribute, they're a whole lot more motivated to enter the discourse, and to enter the discipline."

In short, don't be boring.

To help encourage his teaching theories, when Mr. Bowen arrived at Southern Methodist three years ago to become dean of its arts school, he decided to make some structural changes in 20 or so main classrooms.

He says most of those classrooms had two computers (a Mac and a PC), a DVD player, a VCR, and a tape deck, along with "one of those complicated control panels where you need a Ph.D. to figure it out."

Last summer Mr. Bowen had most of that gear removed—though he left in projectors so that professors could plug in their laptops and do PowerPoint presentations, if they must. He also took out the old desks and replaced them with tables and chairs that professors could move around to allow students to work in groups more easily.

One reason for the changes was financial. The classroom computers were old and needed an upgrade when Mr. Bowen arrived, so ditching them instead saved money. Plus, the move cut support costs—the school was able to eliminate one staff position for a technician who responded to calls from professors about the classroom systems.

To encourage the kind of technology use Mr. Bowen did want, the school gave every professor a laptop and set up support so they could create their own podcasts and videos.

Some professors have complained about lugging their laptops to class, but others have jumped in with both feet.

One of the fans is Maria A. Dixon, an assistant professor of applied communication. She's made podcasts for her course on "Critical Scholarship in Communication" that feature interviews she recorded with experts in the field. "Before, I was always complaining that I never had time to go in-depth and talk with my students," she says. "Now they come in actually much more informed about a subject than they would have if they had been assigned a reading."

Kevin Heffernan, an associate professor in the school's division of cinema and television, has also created podcast lectures—essentially narrated PowerPoint slide shows—for students to watch before class. During class he shows movie clips from his laptop and has students discuss them based on the background lectures.

"I don't have to explain to them how film censorship in America changed in 1968" during his class session on *Midnight Cowboy,* says Mr. Heffernan. "They have that information from the online podcast."

Student Resistance

Most students seem more attentive now, he says, though a few have been thrown off by the new system.

"Strangely enough, the people who are most resistant to this model are the students, who are used to being spoon-fed material that is going to be quote unquote on the test," says Mr. Heffernan. "Students have been socialized to view the educational process as essentially passive. The only way we're going to stop that is by radically refiguring the classroom in precisely the way José wants to do it."

Ms. Dixon has seen similar reactions. "If you've spent years not speaking, you're going to be ticked off" when you are asked to participate, she says. "We have to move past that resistance."

The same sequence of events occurred at Miami University, in Ohio, where Mr. Bowen worked before coming to Southern Methodist, and which pioneered some of the same teaching strategies.

"Initial response is generally negative until students start to understand and see how they learn under this new system," says Glenn Platt, a professor of marketing at Miami who has published academic papers about the approach, which he calls the "inverted classroom." "The first response from students is typically, 'I paid for a college education and you're not going to lecture?'"

Whatever griping students do about being asked to participate in class, though, it's better than the boredom induced by a PowerPoint lecture, say fans of the new approach.

Sandi Mann, the British researcher who led the recent study on student attitudes toward teaching, argues that boredom has serious implications in an educational setting. Students who say they are frequently bored are more likely to do poorly on tests, according to some studies.

But Mr. Bowen and Mr. Platt see the stakes as even higher. Now that so many colleges offer low-cost online alternatives to the traditional campus experience, and some universities give away videos of their best professors' lectures, colleges must make sure their in-person teaching really is superior to those alternatives.

"Schools need to be thinking this way," says Mr. Platt. "It's where they're going to prove they add value to being there in the room, and not being online."

Moving to PowerPoint from transparencies was the easy part of upgrading teaching for the digital age. Now that an entire infrastructure for instant online delivery is widely in place, all that's left is the hard part of changing what happens in the classroom, which might need to stay a low-tech zone to survive.

College 2.0 explores how new technologies are changing colleges. Please send ideas to jeff.young@chronicle.com.