Technology Sometimes Moves So Rapidly That It’s Hard to Keep Up

3-7-2018

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I have had to face the fact that my students know more about technology than I do. And when something goes wrong with the technology during class, I know that a student will call out, “Click on the lower left-hand corner” or “You need to minimize that screen.”

As a history teacher, I have long criticized President Warren G. Harding who is considered one of our least intelligent—perhaps the least intelligent president. In surveys of presidential performance, he always finishes near the bottom. He famously said about pending legislation: “Somewhere there must be a book that tells all about it, where I could go to straighten it out in my mind. But I don’t know where the book is, and maybe I couldn’t read it if I found it.”

I thought it was a perfect example of his ignorance, but it also explains my position with the advance of technology. I have new sympathy for Harding, although I still vote for him to finish near the bottom.

For a couple hundred years, technology in education changed little. There were books, blackboards and students whose attitudes ranged from indifferent to enthusiastic. The students haven’t changed, but everything else has.

The original blackboards were made of slate, and during the 1930s there was a radical change as synthetic green boards replaced blackboards and white chalk gave way to yellow chalk. By the 1990s, the green boards—still called blackboards—began to give way to white boards, which eliminated dusty chalk and the terrible screeching sound, but did lead to dried-out markers and difficult-to-erase boards.

The arrival of the overhead projector in the 1970s seemed to be the ultimate in high technology, slowly replacing the huge wall maps that graced classroom walls for a century.

That was the state of education technology until the 1990s when computers revolutionized teaching and changed everything.
For students raised on computers, it has been a seamless transition, while for veteran teachers such as myself, it has been a challenge to keep up with the latest in technology. I had total command of the blackboard and chalk—an era when the only problem was other teachers hoarding chalk. I still have a box of chalk in my desk—just in case.

I also have hundreds of transparencies that I collected over a decade, slides, VHS tapes, and exhibits used to pass around the class. They are all useless in the computer age, but I can’t let them go.

The technology has come so rapidly and has changed education so much that it is difficult to keep up.

The biggest change is in online courses, which have grown exponentially. Today, nearly 6 million college students are enrolled in an online course and one in four college students is taking at least one online course.

For teachers, it has meant a sea change in how to reach students in a meaningful way. Schools such as the University of Central Florida have established training to encourage best practices in online teaching. What I have learned is that online teaching contains remarkable opportunities and great limitations. It is possible to reach students who otherwise would not be able to take classes. The student in Afghanistan serving in the U.S. military, the student with job limitations, or the student with a disability is able to take courses at a major university.

But I have found limitations, primarily in stirring discussions, which are often the vital part of a face-to-face class. Students also cannot learn to interact with other students and make contacts for the future.

We are also faced with the rise of personal computers in the classroom. As we look at our students during class, we see a sea of laptops and wonder if they are using them to take notes or writing their friends on Facebook. One study found that students using laptops spend one third of their class time on Facebook, YouTube, playing games, watching videos (look for the earplugs, they are the tipoff) or instant messaging. It might be easy to blame the students and social media, but surveys have found that there is also a correlation between boring professors and how students use laptops.

Researchers are beginning to question the effectiveness of laptops—even among those students who are actually taking notes. Too many of them are merely typing, not learning. They are using their laptop to parrot the teacher’s words, and their comprehension remains spotty. *Scientific American* reported that “Taking notes by hand is more effective than doing so with a laptop.”

Finally, there is faculty use of social media to reach students. Some professors have taken to Twitter, Facebook and YouTube to reach students. And some of the more intriguing ideas involve the students using social media to reach the teacher in online courses.
There was at least one advantage to the blackboard—the screeching sound kept everyone awake. But I doubt that a back-to-blackboards movement has any chance of success.

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