July 2009

Point of View: The Digital Revolution Hits Home--Or Does It?

G. Calvin Mackenzie
Colby College

Recommended Citation

Mackenzie, G. Calvin (2009) "Point of View: The Digital Revolution Hits Home--Or Does It?," *Colby Magazine*: Vol. 98 : Iss. 2 , Article 6.
Available at: https://digitalcommons.colby.edu/colbymagazine/vol98/iss2/6

The Digital Revolution Hits Home—Or Does It?

By G. Calvin Mackenzie

One afternoon during my first year in college, studying in the library was interrupted by a group of men noisily moving a large machine into a corner of the reading room. When they were done, several of us gathered around to see what this was. With great panache, a librarian opened a book, laid it on the glass top, and pushed a button. Almost instantly, a piece of paper came crawling out of the side and into a tray. On it, to our astonishment, was an exact copy of the pages of the book. He called it a photocopy and said this was a Xerox machine. There was much discussion of this new marvel over dinner that night. We rejoiced that there would be no more tedious hand copying of material we might want to quote in a research paper.

That's ancient history now, but it's emblematic of what had been the historically slow seepage of technology into the hoary practice of higher education. Had you entered a college classroom in 1990, it wouldn't have seemed much different from entering one a hundred years earlier. A professor stood at a lectern in front of a group of people seated at desks who scribbled notes from a lecture. Occasionally, to illustrate a point or spell a name, the professor would write in chalk on a slate blackboard.

But over the past two decades, and since the millennium especially, technological aids for teaching and learning have multiplied at a dizzying pace. Let me share a few examples:

Doesn't it seem odd in a world where the information revolution has profoundly altered major industries and human interactions that the concept of a college education has changed so little?

Last October, I was invited to speak to a class of advanced graduate students about the meaning of the presidential election then underway. I spoke for about 20 minutes, then had a lively interchange with the students for the next hour. I've taught thousands of classes, enough to know that this was a good one. But it was unlike most, because I was sitting in the conference room in the Diamond Building at Colby and they were in the U.S. Embassy in Athens, Greece. They could see me and I could see all of them. It did not seem different in any way I could describe from a typical class where students and teacher are in the same classroom.

For the past year, I've been using software called MacSpeech Dictate. I talk and my words flow across the computer screen. With much greater accuracy than my typing, it converts my spoken words into text and my commands into actions. My comments on course papers now run for pages, and students no longer have to decipher my increasingly illegible handwriting. (If only they could take their exams this way….)

I commute 40 miles each way to work at Colby. Often I use that time to listen to recorded college courses from The Teaching Company. Recently I listened to an excellent course on the history of jazz, and now I'm about two thirds through 36 lectures on the history of scientific discovery. This doesn't fit my usual definition of college instruction, but there's no denying what I've learned.

I own a Kindle, the e-book reader marketed by Amazon. I can download a book, and even for the newest titles it's rarely more than $9.99. I read newspapers and magazines—and do much of my research—reading this way, too. You can try to take my Kindle away from me, but—apologies to Charlton Heston—you'll have to pry it from my cold, dead hand.

We find ourselves living in a world dramatically changed in a very short time from anything that's ever existed before. Our banker is more often a machine than a human; we calculate and pay taxes electronically; we buy clothes and almost everything else at "stores" online. We download the films we used to watch at a movie theater. We plan our travel online. People even meet their spouses there.

We're in the midst of one of the great revolutions in human history, rooted in the rapidly expanding technological capacity for digitizing and communicating information. And it's changing everything—except our traditional notions of a college education.

Doesn't it seem odd in a world where the information revolution has profoundly altered major industries and human interactions that the concept of a college education has changed so little? Perhaps it's time to consider ways in which we can harness the opportunities this information revolution creates—and avoid some of the genuine dangers it poses.

In fact, I think, we have little choice. If we don't prepare for the challenges that are already at our doorstep we may join the legions of sudden anachronisms—printed newspapers, video rental stores, snail mail, film cameras, etc.—that now litter the landscape. When the digital bomb goes off in higher education, will we be prepared to endure the fallout?

The conversation we should be having, but rarely have, could cover many topics. For example, the physical book—text printed on paper and then bound—has been the primary tool of teaching and learning for more than five centuries. But soon all the books in the world will be digitized and all the information they contain will be available electronically from anywhere. How will that change the way colleges operate and the ways professors teach and students learn?

The fastest-growing segment of American higher education is now asynchronous or online learning—where the professor is in one place and the student in another, and not always at the same time. We've always disdained this as "not our way." But contemporary technology has significantly narrowed the gap between distance learning (where teacher and student are apart in space or time) and traditional learning (where they are physically together). We are deluding ourselves if we think that the only truly effective teaching and learning occurs when all God's children are in the same place. How can we use the emerging possibilities for online instruction to complement and improve our product without diminishing the great benefits of a residential college?

And it's never been easier to join forces with other colleges in creative partnerships that allow us to share our strengths and cure our weaknesses. No small college can teach everything it would like. But can't we harness new communications technologies to create curricula that draw on the combined strengths of many institutions in ways that benefit us all?

We need as well to ask if four years should remain the norm for completing a college degree. Many Colby students, aided by technologies and resources that did not exist a generation ago, seem to have reached levels of proficiency as juniors that I didn't used to see until deep into their senior year. They can do good research and analysis, produce clear and insightful papers, and make effective oral presentations with almost professional skill. They are, in baseball parlance, ready for a higher league long before they get their degrees. With costs now so steep, shouldn't there be a powerful imperative to take advantage of our expanding array of technological resources to shorten the length and reduce the overall cost of a college education?

Things change. And they are changing now at an unprecedented pace driven by ineluctable technologies. Our task is to make those new technologies our servant, not our master, and certainly not our enemy.

G. Calvin Mackenzie is the Goldfarb Family Distinguished Professor of Government at Colby.