Regional

# Technology fixes won't solve educational issues

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Letters from Academia

In December 2014, Student Monitor, a market research company, released a study showing that American college students say they would rather study with real books than with e-books.

Based on a survey of about 1,200 students in 100 American colleges conducted last October, they found that for almost every type of schoolwork students prefer to use a book rather than a computer. This is the latest of the bad news for those who keep advocating for technological fixes to all issues in higher education.

Less than two years ago, San Jose State University placed a moratorium on the use of MOOCs (massive open online courses) as offerings to their students after realizing that students taking those courses had much lower passing rates than those taking traditional classes. Most MOOCs are offered free of charge.

In February, the Babson Survey Research Group's annual survey of more than 2,800 academic leaders showed that support for MOOCs is weak, with only 16 percent believing that they are sustainable.

After much hype about the value of offering courses online for free, the results are far from satisfactory for a number of reasons. In addition to poor performance by students taking on-line instruction, there are high dropout rates, high demands on time and effort, a lack of digital literacy among many students and the creation of a potentially chaotic learning environment.

Last January, Susan Pinker, a developmental psychologist, published an op-ed in "The New York Times" summarizing a number of studies that show, among other things, that students who gain access to a home computer between the fifth and eighth grades tend to experience a persistent decline in reading and math scores. Further, the weaker students – who were supposed to be helped most by providing them with this technology –actually showed the most dramatic decrease in reading scores.

One fact that every instructor knows is that students use electronic gadgets oftentimes for non-pedagogical purposes, even during class time.

I will never forget the day I was invited to attend a class at the law school of the University of Chicago, one of the most selective institutions in the country. I remember that while the lecturer, a distinguished law professor, was explaining the material and trying to engage the students in the discussion, I could see from my seat in the last row that most of the students were using their laptops to either play games or surf the Internet.

Pinker also reminds us of the 2006 project called One Laptop Per Child, which was aimed at providing cheap laptops for free to all needy students over 6 years old worldwide. The program did not live up to expectations for multiple reasons, including the fact that kids spent more time on the laptops playing games than doing actual schoolwork.

This does not mean that technology lacks a place in education in general and higher education in particular. On the contrary, technology can provide opportunities to play with simulations that can be quite instructive and attractive in areas like the experimental sciences. Technology can also do a very good job in delivering content. But this requires an approach that sees the use of technology as just one more pedagogical tool, not as a fad.

There are several reasons behind the hype for the use of technology in education. One is the pressure to reduce costs in higher education. Since education is a labor-intensive activity, the logical shortcut is to reduce the need for teachers by using computers. Another has to do with the impression (sometimes accurate) that professors in the classroom do little more than recite what is already in the textbook.

But the other reason, particularly in the United States, is the almost blind faith in the notion of the quick "technological fix," that is, the idea that all problems can be solved using new technologies. Studies like the ones briefly mentioned above, as well as hundreds of others published in academic journals, show unequivocally that there is no substitution for face-to-face contact when it comes to delivering quality education.

To put it plainly, machines are great at helping us to wash clothes or dishes, as well as many other menial tasks, but a machine is not a substitute for a good teacher. After all, we are talking about humans learning from the experiences of other human beings.

When it comes to technological innovation in education, we should be weary of buzzwords substituting for in-depth analyses of the consequences of forcing new fads into our culture. Yes, innovation is important and many times necessary, but without a deliberate analysis of what we really need and what the consequences of the implementation of novelties will be, all we are doing is talking about gadgets that are visually appealing and make for good headlines.

Instead of relying on computers, professors need to use more experiential learning approaches in their classrooms. After all, what is memorized can easily be forgotten. What you actually experience is most likely to stay with you for the rest of your life. The problem for postsecondary education administrators is that such an approach requires smaller classes and a lower student-faculty ratio – which means a more expensive education. But should we sacrifice quality in education (or health care, or safety) because of cost?

As the old saying goes, "If you think that education is expensive, try ignorance."

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