

MOOCs for High School

Unlocking opportunities or substandard learning?

by MICHAEL B. HORN

If 2012 was the year of the MOOC—massive open online course—then 2013 was the year the MOOC hype returned to Earth. Largely lost in the coverage in both years, however, was the impact MOOCs might have in high schools. Although the jury is still out on that question, high schools around the country are experimenting with adding MOOCs to their offerings.

MOOCs burst into the public consciousness in 2011 with the online debut of a Stanford professor's course on artificial intelligence that drew 160,000 students from around the globe. The professor, Sebastian Thrun, followed up the course by creating a company, Udacity, which offered free online courses to the world and spawned the formation of a new sector in education—the so-called MOOC companies. Most notably, MIT and Harvard joined forces to create a nonprofit MOOC provider, edX, and two other Stanford professors formed Coursera, which initially signed up several elite colleges to create free online courses. By the end of 2013, more than 5 million students had enrolled in Coursera courses, and the company had raised over \$85 million in venture financing. (Disclosure: I cotaught a course on Coursera on blended learning for educators.)

National newspaper columnists wondered if this was the beginning of the disruption of higher education. If one could place MIT's courses online and offer them for nearly free, why should students pay exorbitant tuition and go into debt at a traditional college?

In 2013, people realized that the world might be more complicated. The low completion rates—often less than 10 percent—for MOOCs drew attention: some wondered if the courses the MOOC companies offered were relevant for the students who might benefit most from a low-cost college experience, and higher-education commentators asked whether students attending college were buying access to academic content or something else, like the credential or the network, that a college offers.

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The MOOC companies have continued to evolve, meanwhile, as they seek to improve their offerings and create business models that are sustainable, which has meant finding ways to charge for their products. At the time of this writing, it appears that the MOOC companies will survive and have an impact by moving beyond simply offering MOOCs, although they will continue to provide free online college-level courses.

The next question is, Could the original form of the MOOC transform teaching and learning in high schools?

The original MOOC offerings are not much more than courseware, that is, digital versions of educational materials.

They do not offer a full class experience, with a teacher dedicated to a contained group of students, but do offer more than just recorded lectures. MOOCs bundle various types of content—generally chunked-up lectures from college professors; assignments, quizzes, and some outside reading; and a discussion board, in which students—generally numbering in the thousands—and the teacher can interact.

The classes are in many ways similar to the online course content K–12 schools have had access to for more than a decade from companies like Apex Learning, Aventa Learning, Compass Learning, and Edgenuity, with a few significant differences, some positive and others negative.

First, on the positive side, in their most basic form, MOOCs are free. For cash-strapped public school systems, this is enticing. For schools, having access to the content from an online course for free instead of buying content from one of the established online course providers could represent real savings, as many online course providers charge schools well north of \$100 per student for access to all or most of their courses.

The state of Florida gave schools that opportunity when Governor Rick Scott signed a law in 2013 permitting MOOCs to be taken for credit in any subject where the state had an end-of-course exam, such as algebra and biology. According to the *Miami Herald*, Miami-Dade, Broward, and Pinellas counties are all experimenting with the MOOC format in the current school

what next

year, with an expectation that their pilots will expand across the state. Broward College is even working on a high school–friendly MOOC that integrates game-based learning techniques.

Entities like the Smithsonian Institution, according to *Education Week*, are also using the MOOC format to create partnerships with students and teachers around the world and deliver educational opportunities that previously required a field trip, including interactive experiences for students and trainings for teachers. Coursera is using its MOOCs to create professional-development opportunities for K–12 teachers. These efforts also create opportunities for districts to save substantial sums of money.

Second, access to MOOCs from top colleges represents an intriguing opportunity: the potential to disrupt Advanced Placement (AP) courses and tests. Several educators have questioned the quality of the AP courses and exams as they have become more widespread and democratized, and some colleges do not award credit for high marks on the AP exams. But what if a student could pass a physics course from MIT? Would that carry more weight from the perspective of a college than earning a top score of 5 on the AP Physics exam?

Undergirding the potential benefits of MOOCs in K–12 schools is an access and equity agenda: extending access to all students, regardless of zip code or SAT scores, to the “best” from the nation’s education system. One superintendent of a large, urban school district said that low-income high-school students in his district were beginning to take MOOCs in greater numbers than students from more privileged backgrounds. His challenge was to figure out a way to give them credit for their work, but he thought surely colleges would look highly upon a résumé full of MOOCs taken and mastered. The opportunity to extend access for free to personalized, student-centered online offerings—the promise that generates hype around online learning—would be a boon.

The list of negatives begins here, however, and casts doubt on the potential of MOOCs to revolutionize high school. On average, MOOCs are not great educational experiences. They are not yet the beacons of personalized learning people hope they will one day be. Many MOOC providers have reinforced the notion of time-based learning and so far have missed the opportunity to advance competency-based learning. Many others have noted that MOOCs by themselves are only suited for students who are motivated, independent learners. Leaving aside low completion rates, the reasons for which

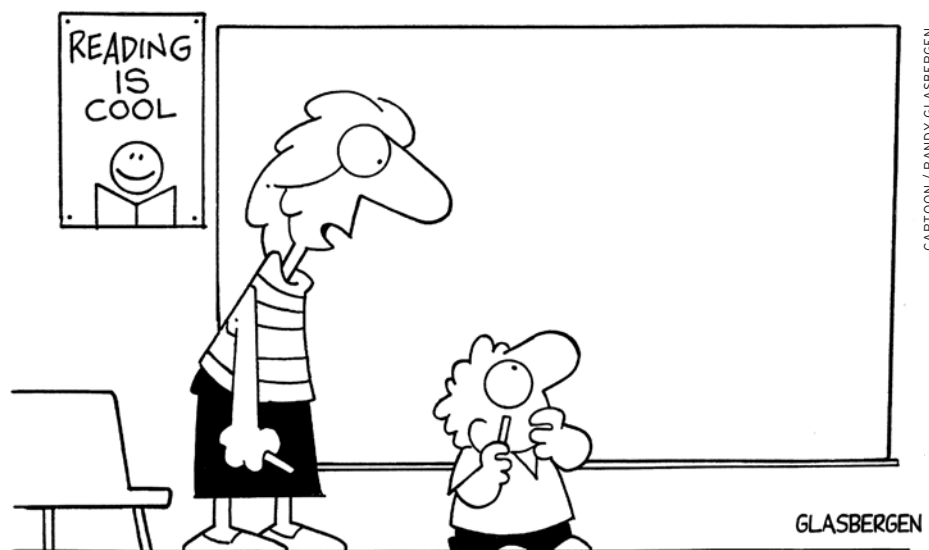
are complicated, most MOOCs today have been built with far less attention to learning design than have courses from established K–12 online learning companies. Professors from elite colleges typically know little about pedagogy, even as they have expertise in their particular subject matter. As a result, the pedagogy behind most MOOCs is weak, and the MOOCs are not well suited for high school students.

This feeds into another negative, which is that the online content is not the most expensive part of offering an online course. Instead, as in all of K–12 education, the human resources—namely the teachers who interact with students—drive the costs. In Florida, the new law requires that Florida-certified teachers manage the MOOCs for the course providers. It is hard to imagine that to the extent MOOCs gain adoption in K–12 schools that they will do so without certified teachers playing a significant role. Perhaps MOOCs will offer schools far less savings or success than they might hope.

But if MOOCs can provide an avenue for gifted students to unlock opportunities that they would never otherwise have—through the disruption of AP courses and by offering unusual learning experiences—perhaps that would be impact enough. As Chester Finn and others have observed, far too many U.S. schools neglect their gifted students, with untold consequences.

If MOOCs could disrupt the AP system in the short term, then that could be just the foothold they need to have even more impact over the longer haul.

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“There aren’t any icons to click. It’s a chalk board.”