

## Bricks and MOOCs

PARENTS EVERYWHERE KNOW THAT A COLLEGE EDUCATION FOR THEIR CHILDREN IS KEY TO A prosperous future. At a recent Summit on Higher Education,\* journalist Fareed Zakaria, the keynote speaker, recalled a conversation with the prime minister of a large developing nation who stated (only half in jest) that his strategy for accessible higher education was to provide broadband wireless network capability to every corner of his country and tell students to take advantage of free online offerings from U.S. universities—the massive open online courses (MOOCs). Mitch Daniels, president of Purdue University, responded to the topic of online learning with the question: “How can universities articulate the value proposition that will motivate students to move in for four years?” In his words, how can universities pass the “pajama test”? Will MOOCs exist as a parallel track alongside residential university experiences, creating new opportunities and new markets? Or are they a disruptive technology that will replace conventional universities, sending them the way of the record player or typewriter?

For research universities, much is at stake in this outcome. It is not possible to separate their higher-education mission from their research mission, and it is all undertaken within an experiential learning environment on campus. Online education does not substitute for hands-on training in the laboratory of an active researcher. Students become part of a research team to address problems that cannot be solved with the skills of one person alone. They see at first hand the applications of research ethics and scientific integrity, and they are inculcated with the culture of science—a process difficult if not impossible to replicate remotely. And yet even the research environment is changing. Many research teams are now collaborating over great distances, and members are challenged to cope with the interpersonal facets of team interactions when there is scant direct

contact to build trust. A unique aspect of MOOCs is the interactive participation aimed at building a community for students and faculty. Experiencing team building through online courses could help tomorrow’s researchers learn the future skills they need in an increasingly distributed network of collaborators.

I believe that colleges and universities will survive the online learning revolution and perhaps even thrive as a result. The simple fact is that income increases with educational attainment, and by 2018, more than 60% of all jobs in the United States will require at least some college education.\* Maintaining the affordability of college in the United States is therefore a core issue. Colleges and universities should embrace innovative online learning environments and determine how best to incorporate them with traditional classroom, laboratory, seminar, and field classes to reduce the cost of education, improve pedagogy, and increase the accessibility of higher education to all who seek it. Rather than resisting this movement, premier research universities in the United States have been at the forefront of the online learning revolution. They are creating much of the educational content and are discovering ways to best take advantage of online delivery methods to teach large numbers of students in interactive ways that are not possible in a conventional classroom format. For example, MOOCs can be effective vehicles for providing lifelong learning opportunities to keep the current workforce up to date with the latest career opportunities.

Online and traditional universities are connected for the foreseeable future. Without the bricks-and-mortar universities and their reputations behind these distance learning efforts, it is not clear that there is a viable business model to sustain online efforts. After all, the only continuously operating human institution older than the university system is the Vatican; universities have endured this long by remaining essential, and they will continue to be so.

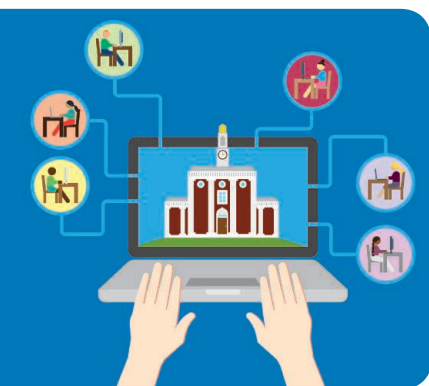
— Marcia McNutt

\*Sponsors of the summit were the Carnegie Corporation, the Bill & Melinda Gates Foundation, and the William and Flora Hewlett Foundation.

10.1126/science.1246943



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*Science* **342** (6157), 402.  
DOI: 10.1126/science.1246943

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