

“MOOC Mania”

by Susan Meisenhelder

The push for increased use of online teaching in colleges and universities has been gaining momentum for some time, but even in that context the recent enthusiasm for MOOCs (Massive Open Online Courses), free online courses that often enroll tens of thousands of students, is remarkable and rightly dubbed “MOOC Mania.” As with so many so-called “innovations” in higher education, the advocates for MOOCs are as varied as their motivations. However, with the exception of a few individuals at elite universities (several of whom have recently become CEOs in their own MOOC companies), teaching faculty are not driving the conversation about and assessment of MOOCs. In fact, we are often not even in the public conversation.

My purpose in this article is to step back for a moment to examine some of the reasons why it is so difficult for faculty to get a toehold in the debate about MOOCs and to begin thinking about how we can position ourselves to have a stronger voice and greater influence in their development.

THE HYPE

If the MOOCs getting all the publicity today were simply described in the abstract, one could well wonder how they earned the “innovation” label.¹ Most are “talking head” or “sage on the stage” lecture videos that have been put online. There is often little (or no) required reading for students and usually no required writing assignments. Because of the size of each class, sometimes in the tens of thousands

*Susan Meisenhelder is professor emeritus of English at California State University, San Bernardino, where she has taught since 1980. She has also held Fulbright appointments at the University of Botswana, the University of Zimbabwe, and the University of Mauritius. In addition to serving as president of the California Faculty Association from 1999 to 2003, she has also served on the Executive Committee of the American Association of University Professors. Her books include *Hitting a Straight Lick with a Crooked Stick: Race and Gender in the Work of Zora Neale Hurston*. She is currently active in the Campaign for the Future of Higher Education (www.futureofhighered.org), a grassroots coalition of higher education faculty and staff organizations from around the country.*

of students, professors do not interact at all with students either to encourage them, to add insights, or even to tell them they are on the wrong track. Rather, students interact with one another on unmoderated discussion boards. Student learning is assessed through multiple choice tests or papers graded by other students.² The dropout rate for MOOCs at this point hovers at around 90 percent.³

A faculty member teaching an in-person course with these characteristics could expect the harshest criticism at evaluation time for his or her retrograde pedagogy, inadequate assessment of student learning, and dismal failure to foster student success. Clearly, some powerful forces are at work to transform this impover-

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ished, archaic educational model into the media darling it has become.

And darling it is. Consider the assessment of popular *New York Times* columnist Thomas Friedman in “Revolution Hits the Universities”:

Nothing has more potential to lift more people out of poverty—by providing them an affordable education to get a job or improve in the job they have. Nothing has more potential to unlock a billion more brains to solve the world’s biggest problems. And nothing has more potential to enable us to reimagine higher education than the massive open online course, or MOOC, platforms that are being developed by the likes of Stanford and the Massachusetts Institute of Technology and companies like Coursera and Udacity.⁴

Little wonder that 2012 was dubbed “The Year of the MOOC” by the *New York Times*.⁵

MOOCs, we are promised, will not only solve the huge problems of inadequate access to higher education in this country and around the world. According to Sebastian Thrun, founder of Udacity (a privately held MOOC provider), and Clay Christensen, the father of the “disruptive innovation” idea, MOOCs and other online education developments will profoundly change—even render obsolete—colleges and universities. Christensen has declared: “Fifteen years from now more than half of the universities will be in bankruptcy, including the state schools. In the end, I am excited to see that happen.”⁶

Lost in the general excitement about MOOCs are the cautionary words of faculty organizations and others who have been generally supportive of the potential of online learning. According to a recent survey, for instance, academic administrators remain unconvinced that MOOCs are a sustainable way to offer online courses.⁷ EDUCAUSE, an organization whose mission is to further the use of technology in education, recently offered a webinar titled “Beyond the MOOC Hype,” urging

more caution in the race to provide MOOCs and more careful assessment of their value. They cited a number of problems—course completion rates, student authentication problems, and a variety of “financial gotchas” such as hidden costs—that need to be addressed before massive movement in this direction.⁸

Even those at the center of higher education technology have offered tempered assessments of MOOCs. At a recent Higher Ed Tech Summit, according to a report in *Inside Higher Ed*, “There was fairly broad-scale agreement that MOOCs and other technology-enabled education will be truly transformative only at the point that they give educators the tools to do two things: (1) expand

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access to the low-income students who are disproportionately excluded from today’s higher education system, and (2) provide instruction that is more targeted to an individual’s educational needs. . . .”⁹

Still, the public conversation continues as if these and many other tempered, cautionary words have never been uttered. MOOC mania is like a tsunami, rolling over critiques and questions. Even in the face of dismal records on student success and embarrassing flubs such the recent Georgia Tech MOOC (ironically on online education) that had to be stopped because of technical difficulties, boosters in the corporate world and elsewhere steadfastly maintain their utopian vision for MOOCs and are increasingly successful in promoting it in the media and in government.

WHAT DRIVES MOOC MANIA?

It is little wonder, really, that voices of caution and calls for evidence of MOOC effectiveness are drowned out in the current discussion about MOOCs. After for-profits lost their initial luster as the saving grace of higher education, MOOCs arrived with promises that they are now the answer to some of our most pressing problems. MOOCs will solve, we are told, the access problem (that we have more people, especially low-income and working-class individuals, who want a higher education than we have the capacity to educate) and the cost problem for just about every “stakeholder” in higher education—for institutions lacking the resources to provide needed courses, for governments hard-pressed to provide adequate funding, and for students and their families, who have paid the price of inadequate public funding through skyrocketing tuition and mushrooming debt.

These promises on access and costs alone could explain the popularity of MOOCs, but more is at work here.

Like the rhetorical strategies used to legitimate for-profit colleges and the



***Opportunity (The Wonder Years)*, 2012.**
Charcoal and colored pencil on paper, 11 x 14 inches.
The artist is Chloe Watson, an assistant professor of art, at the University of Maine at Farmington.

subprime mortgage industry, MOOCs are invariably wrapped in very progressive, liberal rhetoric. The strategy is so consistent and so powerful that even to raise questions about MOOCs, it is implied, is to question the value of expanding access to higher education itself and to position one on the side of maintaining exclusivity and educational privilege. That both for-profits and sub-prime lenders ultimately used that rhetorical strategy to bankrupt those they promised to save should surely give us pause.

Promoters of MOOCs have other equally powerful rhetorical tools at hand. In a wonderfully witty and trenchant series of blog posts, Michael Sacasas, author

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of *The Tourist and the Pilgrim: Essays on Life and Technology in the Digital Age*, describes what he calls "The Borg Complex," a series of argumentative strategies used by the most enthusiastic promoters of educational technology these days.¹⁰ He derives the term, he says, from the Borg, "a cybernetic alien race in the Star Trek universe that announces to their victims some variation of the following: 'We will add your biological and technological distinctiveness to our own. Resistance is futile.'" That basic message, recognizable in so many panegyrics on MOOCs, is buttressed by several other strategies that Sacasas identifies: making "grandiose, but unsupported claims for technology," labeling all opposition as Luddites, "equat[ing] resistance or caution to reactionary nostalgia," "starkly and matter-of-factly fram[ing] the case for assimilation," and "announc[ing] the bleak future for those who refuse to assimilate."¹¹

The political and economic context in which these rhetorical strategies swirl allows them to pass as solid arguments rather than the logical fallacies they often are. The public defunding of higher education has certainly driven a manic search for cheaper ways to educate people and the "new normal" rhetoric that defines this funding situation as immutable takes better public funding for higher education off the table for discussion as a solution to the problems of access and costs.¹²

Add to the equation the list of powerful players who stand to gain from pushing MOOCs and other so-called innovations: politicians who can campaign on their record of proposing "forward-looking" solutions like MOOCs that make increased public funding unnecessary; college administrators who can build résumés demonstrating their leadership in cutting-edge innovation; and as usual, entrepreneurs who can make money selling a variety of services and goods needed to offer MOOCs.¹³

When powerful forces in the economy, the government, and in our own col-

leges and universities have so much to gain from barreling ahead without deliberation, evaluation, or even discussion, it should be no surprise the MOOC phenomenon has such momentum. As one person quipped about that momentum, “The train has left the station. We do not know how far and how long it will run and where it will go. We do not even know if it has brakes.”¹⁴

BEGINNING A REAL PUBLIC CONVERSATION

MOOCs raise many important educational issues that warrant closer examination. For instance, several people have pointed out the need for thought about

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what MOOCs mean for knowledge and for the development of new knowledge in our society. Gerry Canavan, a professor of English at Marquette University, has argued that MOOCs assume that knowledge is fixed, that we know all there is to know, and that the only question is how to package and transfer it to the student.¹⁵ The dangers of that assumption or of totally homogenizing what people “know” in any culture are worthy of discussion.

And MOOCs raise huge issues for the future of the professoriate. The potential of MOOCs to contribute to further unbundling of faculty work, to even more reliance on contingent faculty, to the weakening of faculty intellectual property rights, and even to the elimination of faculty work altogether are serious concerns with implications beyond simply their negative effects on faculty members as individuals.

These and other issues are certainly important, but faculty must focus the debate on broader concerns affecting students and the public at large. To begin this discussion, it is important to unpack the claims about access that make MOOCs so attractive to a public worried about access to higher education in these tough times.

UNPACKING THE CLAIMS—ACCESS FOR WHOM? ACCESS TO WHAT?

Claims about increasing access to higher education are at the heart of arguments for MOOCs, and rightly so; expanded access and greater equity in educational opportunity must be at the heart of any discussion about the future of higher education.

But access is a complex, even slippery, term. It means much more than the mere opportunity to enroll in a course just as access to the middle-class dream of home ownership meant much more than the opportunity to get a loan and move

in for a while. For access to be meaningful—and not just an empty advertising slogan—students must have a real chance, if they work hard, to succeed in getting a quality education. How MOOCs measure up to their access claims can only be assessed by asking specific questions about the access they provide: Who is getting access to higher education through MOOCs? And to what?

It is in a close consideration of these questions that we find our best starting place for a more meaningful conversation about the value of MOOCs and the claims so often made about them.

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Access for whom?

At its most basic, the question of who gains access to higher education through MOOCs involves questions about access to the necessary hardware and IT infrastructure to take advantage of online education in any form. Will the “masses” of less privileged students in this country and abroad who are the poster children for the MOOC movement have the first-rate computers and reliable high-speed internet access required to take these courses successfully? Or will this expanded “access” mean that low-income and working-class students will have yet one more task to cram into in a schedule already overbooked with work and family responsibilities—namely, finding a good computer with reliable Internet access often enough to keep up with course videos and the online discussion boards in their MOOC?

The digital divide is real in higher education—bandwidth is unequally distributed in communities and high data rates can mean unmanageable costs for poorer students; but this serious problem is almost invisible and rarely discussed by MOOC promoters.¹⁶ Talking about the wonders of MOOCs for expanding access without acknowledging these fundamental economic and technological disparities will not help the students who most need access in the first place.

Assuming a student has the hardware and infrastructure for meaningful access through a MOOC, another question to ask is whether that format offers her/him a reasonable chance at success.

The existing evidence to date reveals that MOOCs do not do so.

Although they are rarely mentioned by MOOC supporters, drop-out rates in these courses hover at about 90 percent. Fewer than 10 percent of those who enroll in these courses complete them successfully. For example, in Duke University’s “Bioelectricity” MOOC, which enrolled a whopping 12,000 students, only 313 achieved even a basic pass.¹⁷

Equally telling are the demographics of the small percentages of students who successfully complete MOOCs. Overwhelmingly, they are academically well-prepared. In one study of a variety of MOOCs, 85 percent of the successful students had a BA or a BS degree.¹⁸ In a study of another MOOC, 80 percent of respondents who passed the course said they had taken a comparable course in a regular university before enrolling in the MOOC. As the reporter detailing these results opined, “One way to read the finding is to say that although [this MOOC] was open to anyone, anybody who had not already paid for traditional education would be ill-equipped to succeed in the course.”¹⁹

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Providing access for the already educated is a valuable goal, but it is neither the most pressing educational problem facing us nor the one MOOC promoters promise to solve. Even more disturbing, these data suggest that MOOCs are being pushed toward those most desperate for a chance at college but least likely to succeed in the educational “opportunity” they are being offered.

Steven Downes, himself a pioneer in the MOOC movement, has decried the fact that MOOCs are being pushed for the wrong people and for inappropriate purposes. A MOOC, he argues, should be “an environment where people who are more advanced reasoners, thinkers, motivators, arguers, and educators can practice their skills in a public way by interacting with each other. If we can get past the idea that the purpose of a MOOC is to ‘teach people stuff’ then we can begin to talk about what benefits they bring. But so long as we just think of them as another way of doing the same old thing, we’ll be misunderstanding them.”²⁰

David Wiley, a leader in the open education movement and an expert in instructional technology, has been outspoken in critiquing the current propensity to push MOOCs for any and all students. When asked whether MOOCs would work for everyone, he responded without qualification:

No, absolutely. Research has shown time and again that the less well prepared a person is academically, the more supportive structure they need as they begin their intellectual foray into the area. Even once they know what material to study, less well prepared individuals are also famously poor at estimating their own level of understanding, making very poor decisions about when they’ve “gotten it” and can “safely” move on to the next topic.

In response to claims that MOOCs will solve the global education gap, he had this to say:

The people best positioned to succeed in MOOCs are people who are already prepared well academically. In other words, the people who are best served by MOOCs are people who have already had their foundational learning needs met elsewhere. Because so many of the learning-related problems globally concern access to high quality basic education (e.g., at the tertiary level, remedial math), MOOCs are not a solution to the problem of large and growing demand for higher education for people who are less well prepared.

Now, there are some very well prepared students who are denied access to additional educational opportunity, and MOOCs would serve them well. But this

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relatively small group of people is not generally who we are talking about when we speak of the global education crisis.

There is, however, a useful role for MOOCs in the future of higher education, he argues. It is just not the role MOOC promoters, politicians, and corporate supporters are imagining:

Technologically savvy, academically well-prepared people will likely benefit greatly from participating in MOOCs. And I see no problem with the rich getting richer when the world is not zero sum, and those gains don't come at the expense of others. However, should we start to focus on MOOCs as an answer to large-scale, broader problems in education, we will do so at the expense of the less well prepared—exactly the people many of us in open education are interested in helping.

"MOOCs are another tool in the box," Wiley concludes. "If we start swinging them, hammer-like, at everything, we will do so to the detriment of students. We should be honest about the situations they may be appropriately used in, and make heavy use of them there. We shouldn't make inappropriate claims about broader applicability."²¹

It is a bitter irony that MOOCs are being used in precisely the ways Wiley decries and are being promoted as a boon for students least likely to succeed in them.²² It's important to think about how and why we got here and to demand that MOOC promoters substantiate their access claims.

Access to what?

The current (and laudatory) goal of increasing the number of Americans with college degrees sometimes makes it easy to forget this basic point: our goal isn't (or shouldn't be) just to increase the number of people holding a piece of paper; it should be to increase the number of people with a quality higher edu-

cation. While “quality,” like “access,” is a complex term involving many factors, a truly democratizing, quality education must involve helping students become more careful thinkers and more effective communicators so that they can become active participants in all aspects of their society. A quality higher education, one that is truly transformative and empowering, is more than a narrow skill set.

Whether MOOCs can provide that kind of authentic education is an open question, according to the National Institute for Learning Outcomes Assessment. Can MOOC students, they ask, “reflect on what they learned in these courses, can

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they integrate the knowledge they obtained in them with what they gained in other courses, and can they apply their new knowledge in multiple settings”?

“Without evidence of these outcomes,” they conclude, “the effectiveness of MOOCs will remain in doubt.”²³

A quick look at the features of most current MOOCs doesn’t inspire confidence that MOOCs can pass this test. Often on offer are short videos; no interaction with a professor; little or no required reading; multiple choice tests; and few, if any, written assignments beyond postings on discussion boards. Given the numbers enrolled, professors don’t read student papers when they are assigned; instead, papers are graded by other students while the search continues for “satisfactory” robo-grading programs.

As most people would agree and as the research on teaching writing certainly bears out, the practice of having students grading other students or even commenting on their work in an unmoderated environment simply does not provide developing writers with the kind of feedback and guidance most need to improve. The argument often offered by MOOC supporters—that peer grades, in large enough numbers, track reasonably well with those of more trained readers—assumes that grading and “sorting” student performance is the only thing that happens in assessment of student writing. Missing is any acknowledgment of the importance of teacher feedback in helping a student actually develop his abilities and become a better writer.

At the heart of authentic education that develops the complex skills and abilities that matter most for a person’s future are guidance and feedback by a qualified, dedicated teacher. Those of us who can, demand that for our own children. We must demand it for everyone’s.

Many have written eloquently about the crucial importance of interaction with and feedback from faculty as well as the shortcomings of MOOCs in provid-

ing it.²⁴ It's at the heart of the real education we should be providing access to, and it is directly at odds with the "scalability" of MOOCs that otherwise makes them so attractive.

George Siemens, one of the early developers of MOOCs for knowledge creation, has developed what he calls "a duplication theory of educational value" that pinpoints the fatal flaw of MOOCs as currently popularized:

... if something can be duplicated with limited costs, it can't serve as a value point for higher education. Content is easily duplicated and has no value. What is valuable, however, is that which can't be duplicated without additional input costs: per-

*It's fair to ask: Are MOOCs just the latest push
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based on social class?*

sonal feedback and assessment, contextualized and personalized navigation through complex topics, encouragement, questioning by a faculty member to promote deeper thinking, and a context and infrastructure of learning. Basically: human input costs make education valuable. We can't duplicate personal interaction without spending more money. We can scale content, but we can't scale encouragement. We can improve lecturing through peer teaching, but we can't scale the timely interventions and nudges by faculty that influence deeper learning.²⁵

Joshua Kim has also made the point that "authentic learning does not scale"; and therein lies the problem for MOOCs: "Past a certain ratio of students-to-educators learning efficacy degrades rapidly. Technology can be a mechanism that helps bring intimacy and personalization to learning, but we can only push this so far. I love the idea of pre-recorded lectures and rich online practice and assessment opportunities, but only if these elements free up time, space and energy for genuine and sustained interactions between students and instructors. A real education requires the development and nurturing of real relationships."²⁶

To maintain "scalability" and therefore make a MOOC cheaper than a traditional course, you have to subtract "costs"; and removing faculty time needed for interaction gives the biggest bang for the buck. The hidden social cost is high, however; if we accept this equation, we risk sacrificing a meaningful, quality higher education for any but the privileged.²⁷

MOOCS AND PRIVILEGE

At this point it's fair to ask a basic question that drives to the heart of claims about MOOCs: are MOOCs the democratizing force they are marketed as? Or are they just the latest push toward a two-tiered higher education system based on social class—rich experiences with live teachers and other students for the elite and rewindable videos and unmoderated discussion boards for the rest? Do

MOOCs offer cutting-edge, quality educational experiences or are they just courses that are “good enough” for someone else’s children?

If you listen to some of those in institutions currently offering MOOCs, it certainly appears these courses are only good enough for someone else’s students. In a survey of MOOC professors reported on in the *Chronicle of Higher Education*, a whopping 72 percent of respondents felt that those succeeding in their MOOCs should not get credit at their own universities.²⁸ One reason for that sentiment is offered by administrators at two universities offering MOOCs. One explained their reasoning this way: “We do not control the learning environment of these

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students. . . There are 250,000 signups in our six courses, with open enrollment so anybody can sign up, and those anybodies can influence negatively the learning environment of students who are serious about taking it.” Another argued that students at the home institution (an elite one) get “an entirely different kind of educational experience” than that offered by a MOOC, namely one involving “substantial interactions between students and the faculty member.”²⁹

One is left to marvel at the disarming frankness and dazzling clarity of these remarks.³⁰

WHAT DO WE DO?

In what passes for the public discussion of MOOCs in higher education, faculty have been carefully cast by many tech boosters as backward-looking, slow-moving, self-promoting Luddites cloistered in our Ivory Towers. Getting out of that box will be challenging, but we must take the lead (if not us, then who?) in moving toward a fuller and more honest discussion about MOOCs and the future of higher education.

If we keep our focus on promoting (and making) proposals that truly expand meaningful access to quality higher education and unmasking those that offer only illusion, we can remain true to our own highest professional ideals and connect with the progressive educational values still held by those yearning for higher education opportunity.

We already have a good analysis of what is problematic with MOOCs, and we must continue to develop and refine that analysis. But we will only make a difference if we use that analysis in action.

Fortunately, there are many, many things we can do.

As faculty we have the expertise and the access to numerous platforms for

exposing the fake access claims made for MOOCs. Even the simple act of demanding that those institutions beginning to push MOOCs for credit inform students about the data on success in MOOCs could empower a student to make wiser choices—and ask some hard questions. Demanding that administrators answer questions about the digital divide among students being “targeted” will not only highlight a very concrete problem with MOOCs but also open discussion of other social class and equity issues in their use.³¹

As faculty we can also demand—and actually do—research on MOOCs and other innovations. Right now, the research “agenda” on MOOCs is largely being

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driven by universities sponsoring them and corporate providers. We need not only to scrutinize their research claims; we also need more independent research that pushes beyond what Phil Hill has called the “billions served” metric currently passed off as MOOC assessment.³²

Questions we already know are important include: Who does well in this format? Who does not? What courses, if any, are most appropriate? If MOOCs become more than a flash in the pan, we must also stay on top of assessment of learning in MOOCs. We shouldn’t allow MOOC providers to use their own “pass” statistics as unquestioned evidence of quality.

The hidden costs of MOOCs is another topic faculty are well-positioned to tackle. Legislators offering up MOOCs instead of funding, administrators building the “efficiencies” sections of their résumés with MOOCs, and corporate providers of MOOC-related goods and services are not likely to look hard at the costs of actually developing and offering such a course. The sparse evidence out there about the time faculty put into a single MOOC, not to mention the technical support, hardware, and software required to put one on, suggests that these courses are not cheap.³³ Let’s do the math.

And let’s follow the money being made by corporations and the cottage industry of consultants driving the MOOC train. One of their main talking points is that faculty are just protecting our own economic self-interest in critiquing their proposals. Let’s take that fight and put the average salary of faculty members (including the 75 percent who make a pittance as contingent faculty) up against the billions made by for-profit educational providers in their “bold” project of “transforming” higher education. The public needs to see the wide gap between those trying to make a living and those making a killing in higher education.


As a part of all that we do, we must get beyond our propensity to talk with one another and begin reaching out more effectively on these issues to students, to community groups around our campuses, and to those most likely to be adversely affected by the trend toward MOOCs.³⁴

Our students will get it. In the best tradition of authentic education, they will answer the questions themselves if we ask the right ones. If students prefer in-class experiences (as the research suggests); if employers are leery of online universities (as the research also suggests), why are MOOCs being pushed on us?³⁵ If MOOCs are such a cutting-edge innovation, why aren't those in positions of power signing up their own kids in droves? Why, instead, are the students in remedial courses, community colleges, and cash-strapped public universities the target audience for these courses?

Our students deserve better. And they deserve our support in fighting for the kind of empowering education that changed the lives of so many of us.

The Borgs, of course, can be counted on to argue that “resistance is futile.” In his debate about MOOCs and online education with Aaron Bady, Clay Shirky, author of *Here Comes Everybody* and other works on internet technology, delivers this message with a world-weary flourish:

I lived in that world of widely subsidized education, and it was lovely when it worked, but I don't think it's coming back. As a result, I value 'better than nothing' as a starting place far more highly than you do. This is partly because I see not much evidence that anyone inside the system you are defending is planning to do much for the ten million people and change getting a crappy education today.

I believe Shirky is wrong to see this dreary future as inevitable. As none other than Marshall McLuhan, the original techie, has reminded us, “There is absolutely no inevitability as long as there is a willingness to contemplate what is happening.”³⁷ Faculty can—and should—take the lead in fostering a public conversation about how we get beyond “better than nothing” and make higher education truly inclusive, empowering, and transformative for all. 

ENDNOTES

1. In the article “Got MOOC?,” Patricia McGuire, president of Trinity Washington University, had this to say about the “innovative” aspects of MOOCs: “Consider the concept: large amounts of knowledge produced by exceptional minds become massively available to the general public—we used to call that concept ‘the library.’”
2. George Siemens, researcher on a variety of issues related to digital media and an early developer of MOOCs, has emphasized, in the article “MOOCs Are Really a Platform,” the difference between his version of MOOCs (connectivist or cMOOCs) and what have come to be called the xMOOCs that are getting all the publicity lately:

Largely lost in the conversation around MOOCs is the different ideology that drives what are currently two broad MOOC offerings: the connectivist MOOCs (cMOOCs) that I have been involved with since 2008 (with people like Stephen Downes, Jim Groom, Dave Cormier, Alan Levine, Wendy Drexler, Inge de Waard,

Ray Schroeder, David Wiley, Alec Couros, and others) and the well-financed MOOCs by Coursera and edX (xMOOCS). Our MOOC model emphasizes creation, creativity, autonomy, and social networked learning. The Coursera model emphasizes a more traditional learning approach through video presentations and short quizzes and testing. *Put another way, cMOOCs focus on knowledge creation and generation whereas xMOOCs focus on knowledge duplication* [emphasis added].

3. Katy Jordan, a researcher in educational technology, has kept a log of research on various aspects of individual MOOCs that can be viewed at www.katyjordan.com/MOOCproject.html.
4. Friedman, "Revolution Hits the Universities." Coursera co-founder, Daphne Kollner, offers another interesting utopian vision of MOOCs in her TED talk.
5. Pappano, "The Year of the MOOC."
6. Cromwell Schubarth, "Disruption Guru Christensen: Why Apple, Tesla, VCs, Academia May Die."

Nathan Hardan made similar predictions in "The End of the University as We Know It":

In fifty years, if not much sooner, half of the roughly 4,500 colleges and universities now operating in the United States will have ceased to exist. The technology driving this change is already at work, and nothing can stop it. The future looks like this: Access to college-level education will be free for everyone; the residential college campus will become largely obsolete; tens of thousands of professors will lose their jobs; the bachelor's degree will become increasingly irrelevant; and ten years from now Harvard will enroll ten million students.

7. Elaine I. Allen and Jeff Seaman. "Changing Course: Ten Years of Tracking Online Education in the United States," p. 3.
8. The webinar can be viewed at www.educause.edu/search/apachesolr_search/Beyond%20the%20MOOC%20Hype.
9. Doug Lederman, "MOOCs Assessed, Modestly."
10. Michael Sacasas, "Borg Complex: A Primer."
11. The closest thing to an actual debate about MOOCs, technology, and the future of higher education more generally is the interesting (and ongoing) interchange between Clay Shirky and Aaron Bady. For an overview of their positions, see Maria Bustillo's article, "Venture Capital's Massive, Terrible Idea for the Future of College." For the actual interchanges, see Clay Shirky's pieces, "Napster, Udacity, and the Academy" and "Your Massively Open Offline College is Broken" and Aaron Bady's "Questioning Clay Shirky."
12. The Campaign for the Future of Higher Education has recently released three papers about alternative models of funding higher education. See the articles at <http://futureofhighered.org/workingpapers/>.
13. The case of Teresa A. Sullivan, president of the University of Virginia, dismissed (but later reinstated) for not pushing online education hard enough, is instructive.
14. S. Lakshminarayanan, "Ruminating about MOOCs," p. 227.
15. Canavan, Gerry. Blogpost February 18, 2013.
16. For discussion of the bandwidth divide, see Jeffrey Young, "'Bandwidth Divide' Could Bar Some People From Online Learning." For a discussion of data caps and how the costs that result could make online education out of reach for many, see Benjamin Lennett and Danielle Kehl, "Data Caps Could Dim Online Learning's Bright Future."
17. Yvonne Belanger, "Duke's First MOOC: A Very Preliminary Report." And Yvonne Belanger and Jessica Thornton, "Bioelectricity: A Qualitative Approach Duke University's First MOOC."

18. Osvaldo C. Rodriguez, "MOOCs and the AI-Stanford like Courses: Two Successful and Distinct Course Formats for Massive Open Online Courses."
19. Steve Kolowich, "The MOOC Survivors."
20. Steven Downes, "What a MOOC Does."
21. David Wiley, "Clarifying My Feeling Toward MOOCs."
22. A recent opinion piece in the *New York Times*, "The Trouble with Online College," is a welcome step toward more discussion of these issues in online education more generally. The editorial highlights the research of the Community College Research Center at Columbia University and their studies which consistently show that community college students are less successful in a variety of ways in online courses compared with traditional, face-to-face courses.
23. Wallace Boston and Jennifer Stephens Helm, "Why Student Learning Outcomes Assessment Is Key to the Future of MOOCs."
24. See, for instance, Douglas Rushkoff, "Online Courses Need Human Element to Educate"; Chad Hanson, "The Art of Becoming Yourself"; Bob Samuels, "Being Present"; Joseph Harris, "Teaching 'By Hand' in a Digital Age"; Maria Bustillo, "Venture Capital's Massive, Terrible Idea for the Future of College"; and Jonathan Marks, "Who's Afraid of the Big Bad Disruption?"
25. George Siemens, "Duplication Theory of Educational Value."
26. Joshua Kim, "Playing the Role of MOOC Skeptic: 7 Concerns." As Kim points out, low levels of interaction with professors are equally bad in traditional courses: "If our campuses are running courses that are absent real dialogue between students and instructors then we are guilty of educational malpractice. MOOCs might expose this pathology (which would be a good thing), but they will not be the cure." In "4 Things That Netbooks Might Teach Us About MOOCs," Kim emphasizes that MOOCs change the game in face-to-face instruction: "No longer can we offer courses that are more about information transfer than designed around the co-development of knowledge between faculty and student. A traditional lecture class, one where the information flows only one-way, is today as anachronistic as punch cards. MOOCs will change higher ed, but they will not bring about an era when the campus experience is replaced by only a few massive courses taught to everyone by the world's greatest professors."
27. While the rhetoric is high-minded, the economic motive is certainly driving the most recent push to turn small remedial courses into MOOCs. The short-term savings are obvious; but many have noted the huge human cost of taking away the guidance and personalized teacher support underprepared students especially need. See Patricia McGuire, "Got MOOC?" and the comments of Amy Slaton in Paul Fain, "Gates, MOOCs and Remediation." In *Back to School: Why Everyone Deserves a Second Chance at Education*, Mike Rose has argued eloquently that we need to think carefully about how we use technology in remediation because its use often entails "a very passive, low-level notion. As Bill Gates said during a recent radio interview, we will pinpoint what a student has trouble with and then 'drill in' on that skill. This approach—and note his language—doesn't change the mechanistic theory of learning underlying such a program and doesn't represent a robust notion of literacy or numeracy." He worries that "such technology is quickly being cast as the magic bullet of basic skills," p. 140.
28. Steve Kolowich, "The Professors Who Make the MOOCs."
29. Doug Lederman, "Expanding Pathways to MOOC Credit."
30. For an excellent discussion of the social implications of MOOCs and other higher education "innovations," see Scott Carlson and Goldie Blumenstyk's article, "For Whom Is College Being Reinvented?" In "The Higher-Education Lobby Comes to Madison," Sara Goldrick-Rab has offered a blistering critique of the MOOC movement that she feels offers "a disturbing vision of colleges and universities frantically trying to pull up the drawbridge and create a new moat for their protection. They want to keep those unwashed masses of unkempt, post-traditional students off their campuses; they want to prevent federal 'intrusion' into colleges and universities. If they can't meet costs by raising tuition (the public won't stand for it), they shift to pro-

tecting the elite survivors of today's downturn...by generating MOOCs that can be launched into the cloud to create a virtual wall between the chosen and the rest. In this way, they try to satisfy those new degree-seekers, whom colleges will not adapt to serve in person the way their administrators and professors will continue to educate their own kids."

31. For a good start on questions that should be asked about MOOCs, see Jeff Kolnick, "A Teacher's Take on Online Education."
32. In "The Most Thorough Description (to date) of University Experience with MOOC," Phil Hill has pushed hard for more research and more sharing of data. As he argues, "If the course is open, why not make the process and results open as well?"
33. See accounts given by MOOC professors in Yvonne Belanger and Jessica Thornton, "Bioelectricity: A Qualitative Approach Duke University's First MOOC" and in Steve Kolowich, "The Professors Who Make the MOOCs."
34. Thanks to Rich Moser for excellent ideas on this topic he offered in a document prepared for the Campaign for the Future of Higher Education.
35. See "The Adult Higher Education Consumer 2012: Which Way Now" for survey research suggesting that students prefer in-class experiences and Karin Fischer, "The Employment Mismatch" for research on employer preferences.
36. See comment section in Aaron Bady, "Questioning Clay Shirky."
37. Thanks to Michael Sacasas in "Borg Complex: A Primer," for the McLuhan quote and for his thoughtful response to it:

The handwaving rhetoric that I've called a Borg Complex is resolutely opposed to just such contemplation when it comes to technology and its consequences. We need more thinking, not less, and Borg Complex rhetoric is typically deployed to stop rather than advance discussion. What's more, Borg Complex rhetoric also amounts to a refusal of responsibility. We cannot, after all, be held responsible for what is inevitable. Naming and identifying Borg Complex rhetoric matters only insofar as it promotes careful thinking and responsible action.

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