

## [Clay Shirky](#)

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« [Save Homicide Watch](#)  
[Remembering Aaron by taking care of each other](#) »

### **Napster, Udacity, and the Academy**

Fifteen years ago, a research group called The Fraunhofer Institute announced a new digital format for compressing movie files. This wasn't a terribly momentous invention, but it did have one interesting side effect: Fraunhofer also had to figure out how to compress the soundtrack. The result was the *Motion Picture Experts Group Format 1, Audio Layer III*, a format you know and love, though only by its acronym, MP3.

The recording industry concluded this new audio format would be no threat, because quality mattered most. Who would listen to an MP3 when they could buy a better-sounding CD at the record store? Then Napster launched, and quickly became the fastest-growing piece of software in history. The industry sued Napster and won, and it collapsed even more suddenly than it had arisen.

If Napster had only been about free access, control of legal distribution of music would then have returned the record labels. That's not what happened. Instead, Pandora happened. Last.fm happened. Spotify happened. iTunes happened. Amazon began selling songs in the hated MP3 format.

How did the recording industry win the battle but lose the war? How did they achieve such a decisive victory over Napster, then fail to regain control of even legal distribution channels? They crushed Napster's organization. They poisoned Napster's brand. They outlawed Napster's tools. The one thing they couldn't kill was the story Napster told.

The story the recording industry used to tell us went something like this: "Hey kids, Alanis Morissette just recorded three kickin' songs! You can have them, so long as you pay for the ten mediocrities she recorded at the same time." Napster told us a different story. Napster said "You want just the three songs? Fine. Just 'You Oughta Know'? No problem. Every cover of 'Blue Suede Shoes' ever made? Help yourself. You're in charge."

The people in the music industry weren't stupid, of course. They had access to the same internet the rest of us did. They just couldn't imagine—and I mean this in the most ordinarily descriptive way possible—could not imagine that the old way of doing things might fail. Yet things did fail, in large part because, after Napster, the industry's insistence that digital distribution be as expensive and inconvenient as a trip to the record store suddenly struck millions of people as a completely terrible idea.

Once you see this pattern—a new story rearranging people's sense of the possible, with the incumbents the last to know—you see it everywhere. First, the people running the old system don't notice the change. When they do, they assume it's minor. Then that it's a niche. Then a fad. And by the time they understand that the world has actually changed, they've squandered most of the time they had to adapt.

It's been interesting watching this unfold in music, books, newspapers, TV, but nothing has ever been as interesting to me as watching it happen in my own backyard. Higher education is now being disrupted; our MP3 is the massive open online course (or MOOC), and our Napster is Udacity, the education startup.

We have several advantages over the recording industry, of course. We are decentralized and mostly non-profit. We employ lots of smart people. We have previous examples to learn from, and our core competence is learning from the past. And armed with these advantages, we're probably going to screw this up as badly as the music people did.

\* \* \*

A massive open online class is usually a series of video lectures with associated written materials and self-scoring tests, open to anyone. That's what makes them OOCs. The M part, though, comes from the world. As we learned from Wikipedia, demand for knowledge is so enormous that good, free online materials can attract extraordinary numbers of people from all over the world.

Last year, [Introduction to Artificial Intelligence](#), an online course from Stanford taught by Peter Norvig and Sebastian Thrun, attracted 160,000 potential students, of whom 23,000 completed it, a scale that dwarfs anything possible on a physical campus. [As Thrun put it](#), “Peter and I taught more students AI, than all AI professors in the world combined.” Seeing this, he quit and founded Udacity, an educational institution designed to offer MOOCs.

The size of Thrun and Norvig’s course, and the attention attracted by Udacity (and similar organizations like Coursera, P2PU, and University of the People), have many academics worrying about the effect on higher education. The loudest such worrying so far has been [The Trouble With Online Education](#), a New York Times OpEd by Mark Edmundson of the University of Virginia. As most critics do, Edmundson focussed on the issue of quality, asking and answering his own question: “[C]an online education ever be education of the very best sort?”

Now you and I know what he means by “the very best sort”—the intimate college seminar, preferably conducted by tenured faculty. He’s telling the story of the liberal arts education in a selective residential college and asking “Why would anyone take an online class when they can buy a better education at UVA?”

But who faces that choice? Are we to imagine an 18 year old who can set aside \$250K and 4 years, but who would have a hard time choosing between a residential college and a series of MOOCs? Elite high school students will not be abandoning elite colleges any time soon; the issue isn’t what education of “the very best sort” looks like, but what the whole system looks like.

Edmundson isn’t crazy enough to argue that all college experiences are good, so he hedges. He tells us “Every memorable class is a bit like a jazz composition”, without providing an analogy for the non-memorable ones. He assures us that “large lectures can also create genuine intellectual community”, which of course means they can also *not* do that. (He doesn’t say how many large lectures fail his test.) He says “real courses create intellectual joy,” a statement that can be accurate only as a tautology. (The MOOC Criticism Drinking Game: take a swig whenever someone says “real”, “true”, or “genuine” to hide the fact that they are only talking about elite schools instead of the median college experience.)

I was fortunate enough to get the kind of undergraduate education Edmundson praises: four years at Yale, in an incredible intellectual community, where even big lecture classes were taught by seriously brilliant people. Decades later, I can still remember my art history professor’s description of the Arnolfini Wedding, and the survey of modern poetry didn’t just expose me to Ezra Pound and HD, it changed how I thought about the 20th century.

But you know what? Those classes weren’t like jazz compositions. They didn’t create genuine intellectual community. They didn’t even create ersatz intellectual community. They were just great lectures: we showed up, we listened, we took notes, and we left, ready to discuss what we’d heard in smaller sections.

And did the professors also teach our sections too? No, of course not; those were taught by graduate students. Heaven knows what they were being paid to teach us, but it wasn’t a big fraction of a professor’s salary. The large lecture isn’t a tool for producing intellectual joy; it’s a tool for reducing the expense of introductory classes.

\* \* \*

Higher education has a bad case of cost disease (sometimes called Baumol’s cost disease, after one of its theorizers.) The classic example is the string quartet; performing a 15-minute quartet took a cumulative hour of musician time in 1850, and takes that same hour today. This is not true of the production of food, or clothing, or transportation, all of which have seen massive increases in value created per hour of labor. Unfortunately, the obvious ways to make production more efficient—fewer musicians playing faster—wouldn’t work as well for the production of music as for the production of cars.

An organization with cost disease can use lower paid workers, increase the number of consumers per worker, subsidize production, or increase price. For live music, this means hiring less-talented musicians, selling more tickets per performance, writing grant applications, or, of course, raising ticket prices. For colleges, this means more graduate and adjunct instructors, increased enrollments and class size, fundraising, or, of course, raising tuition.

The great work on college and cost-disease is Robert Archibald and David Feldman’s [Why Does College Cost So Much?](#) Archibald and Feldman conclude that institution-specific explanations—spoiled students expecting a climbing wall; management self-aggrandizement at the expense of educational mission—hold up less well than the generic observation: colleges need a lot of highly skilled people, people whose wages, benefits, and support costs have risen faster than inflation for the last thirty years.

Cheap graduate students let a college lower the cost of teaching the sections while continuing to produce lectures as an artisanal product, from scratch, on site, real time. The minute you try to explain exactly why we do it this way, though, the setup starts to seem a little bizarre. What would it be like to teach at a university where a you could only assign books you yourself had written? Where you could only ask your students to read journal articles written by your fellow faculty members? Ridiculous. Unimaginable.

Every college provides access to a huge collection of potential readings, and to a tiny collection of potential lectures. We ask students to read the best works we can find, whoever produced them and where, but we only ask them to listen to the best lecture a local employee can produce that morning. Sometimes you're at a place where the best lecture your professor can give is the best in the world. But mostly not. And the only thing that kept this system from seeming strange was that we've never had a good way of publishing lectures.

This is the huge difference between music and education. Starting with Edison's wax cylinders, and continuing through to Pandora and the iPod, the biggest change in musical consumption has come not from production but playback. Hearing an excellent string quartet play live in an intimate venue has indeed become a very expensive proposition, as cost disease would suggest, but at the same time, the vast majority of music listened to on any given day is no longer recreated live.

\* \* \*

Harvard, where I was fortunate enough to have a visiting lectureship a couple of years ago, is our agreed-upon Best Institution, and it is indeed an extraordinary place. But this very transcendence should make us suspicious. Harvard's endowment, 31 billion dollars, [is over three hundred times the median](#), and only one college in five has an endowment in the first place. Harvard also educates only about a tenth of a percent of the 18 million or so students enrolled in higher education in any given year. Any sentence that begins "Let's take Harvard as an example..." should immediately be followed up with "No, let's not do that."

This atypical bent of our elite institutions covers more than just Harvard. The top 50 colleges on the [US News and World Report](#) list (which includes most of the ones you've heard of) only educate something like 3% of the current student population. The entire list, about 250 colleges, educates fewer than 25%.

The upper reaches of the US college system work like a potlatch, those festivals of ostentatious giving. The very things the US News list of top colleges prizes—low average class size, ratio of staff to students—mean that any institution that tries to create a cost-effective education will move *down* the list. This is why most of the early work on MOOCs is coming out of Stanford and Harvard and MIT. As Ian Bogost says, [MOOCs are marketing](#) for elite schools.

Outside the elite institutions, though, the other 75% of students—over 13 million of them—are enrolled in the four thousand institutions you *haven't* heard of: Abraham Baldwin Agricultural College. Bridgerland Applied Technology College. The Laboratory Institute of Merchandising. When we talk about college education in the US, these institutions are usually left out of the conversation, but Clayton State educates as many undergraduates as Harvard. Saint Leo educates twice as many. City College of San Francisco enrolls as many as the entire Ivy League combined. These are where most students are, and their experience is what college education is mostly like.

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The fight over MOOCs isn't about the value of college; a good chunk of the four thousand institutions you haven't heard of provide an expensive but mediocre education. For-profit schools like Kaplan's and the University of Phoenix enroll around one student in eight, but [account for nearly half of all loan defaults](#), and the vast majority of their enrollees fail to get a degree even after six years. Reading the academic press, you wouldn't think that these statistics represented a more serious defection from our mission than helping people learn something about Artificial Intelligence for free.

The fight over MOOCs isn't even about the value of *online* education. Hundreds of institutions already offer online classes for credit, and half a million students are already enrolled in them. If critics of online education were consistent, they would believe that the University of Virginia's [Bachelor of Interdisciplinary Studies](#) or [Rutger's MLIS degree](#) are abominations, or else they would have to believe that there is a credit-worthy way to do online education, one MOOCs could emulate. Neither argument is much in evidence.

That's because the fight over MOOCs is really about the story we tell ourselves about higher education: what it is, who it's for, how it's delivered, who delivers it. The most widely told story about college focuses obsessively on elite schools and answers a crazy mix of questions: How will we teach complex thinking and skills? How will we turn adolescents into well-rounded members of the middle class? Who will certify that education is taking place? How will we instill reverence for Virgil? Who will subsidize the professor's work?

MOOCs simply ignore a lot of those questions. The possibility MOOCs hold out isn't replacement; anything that could replace the traditional college experience would have to work like one, and the institutions best at working like a college are already colleges. The possibility MOOCs hold out is that the educational parts of education can be unbundled. MOOCs expand the audience for education to people ill-served or completely shut out from the current system, in the same way phonographs expanded the audience for symphonies to people who couldn't get to a concert hall, and PCs expanded the users of computing power to people who didn't work in big companies.

Those earlier inventions systems started out markedly inferior to the high-cost alternative: records were scratchy, PCs were crashy. But first they got better, then they got better than that, and finally, they got so good, for so cheap, that they changed people's sense of what was possible.

In the US, an undergraduate education used to be an option, one way to get into the middle class. Now it's a hostage situation, required to

avoid falling out of it. And if some of the hostages having trouble coming up with the ransom conclude that our current system is a completely terrible idea, then learning will come unbundled from the pursuit of a degree just as as songs came unbundled from CDs.

If this happens, Harvard will be fine. Yale will be fine, and Stanford, and Swarthmore, and Duke. But Bridgerland Applied Technology College? Maybe not fine. University of Arkansas at Little Rock? Maybe not fine. And Kaplan College, a more reliable producer of debt than education? Definitely not fine.

\* \* \*

Udacity and its peers don't even pretend to tell the story of an 18-year old earning a Bachelor's degree in four years from a selective college, a story that only applies to a small minority of students in the US, much less the world. Meanwhile, they try to answer some new questions, questions that the traditional academy—me and my people—often don't even recognize as legitimate, like “How do we spin up 10,000 competent programmers a year, all over the world, at a cost too cheap to meter?”

Udacity may or may not survive, but as with Napster, there's no containing the story it tells: “It's possible to educate a thousand people at a time, in a single class, all around the world, for free.” To a traditional academic, this sounds like crazy talk. Earlier this fall, a math instructor writing under the pen name Delta enrolled in Thrun's [Statistics 101](#) class, and, after experiencing it first-hand, concluded that the course was

...amazingly, shockingly awful. It is poorly structured; it evidences an almost complete lack of planning for the lectures; it routinely fails to properly define or use standard terms or notation; it necessitates occasional massive gaps where “magic” happens; and it results in nonstandard computations that would not be accepted in normal statistical work.

[Delta posted ten specific criticisms](#) of the the content (Normal Curve Calculations), teaching methods (Quiz Regime) and the MOOC itself (Lack of Updates). About this last one, Delta said:

So in theory, any of the problems that I've noted above could be revisited and fixed on future pass-throughs of the course. But will that happen at Udacity, or any other massive online academic program?

The very next day, [Thrun answered that question](#). Conceding that Delta “points out a number of shortcomings that warrant improvements”, Thrun detailed how they were going to update the class. Delta, to his credit, [then noted that Thrun had answered several of his criticisms](#), and went on to tell a depressing story of a fellow instructor at his own institution who had failed to define the mathematical terms he was using despite student requests.

Tellingly, when Delta was criticizing his peer, he didn't name the professor, the course, or even his institution. He could observe every aspect of Udacity's Statistics 101 (as can you) and discuss them in public, but when criticizing his own institution, he pulled his punches.

Open systems are open. For people used to dealing with institutions that go out of their way to hide their flaws, this makes these systems look terrible at first. But anyone who has watched a piece of open source software improve, or remembers the Britannica people throwing tantrums about Wikipedia, has seen how blistering public criticism makes open systems better. And once you imagine educating a thousand people in a single class, it becomes clear that open courses, even in their nascent state, will be able to raise quality and improve certification faster than traditional institutions can lower cost or increase enrollment.

College mottos run the gamut from Bryn Mawr's *Veritatem Dilexi* (I Delight In The Truth) to the Laboratory Institute of Merchandising's *Where Business Meets Fashion*, but there's a new one that now hangs over many of them: *Quae Non Possunt Non Manent*. Things That Can't Last Don't. The cost of attending college is rising above inflation every year, while the premium for doing so shrinks. This obviously can't last, but no one on the inside has any clear idea about how to change the way our institutions work while leaving our benefits and privileges intact.

In the academy, we lecture other people every day about learning from history. Now its our turn, and the risk is that we'll be the last to know that the world has changed, because we can't imagine—really cannot imagine—that story we tell ourselves about ourselves could start to fail. Even when it's true. Especially when it's true.

This entry was posted on November 12, 2012 at 12:31 pm and is filed under [Uncategorized](#). You can follow any responses to this entry through the [RSS 2.0](#) feed. Both comments and pings are currently closed.

## 74 Responses to “Napster, Udacity, and the Academy”

1. [Open Mobile Learning» Blog Archive » Unbundled Learning with OpenPath](#) Says:  
[November 18, 2012 at 7:57 pm](#)

[...] Learning with OpenPath November 18th, 2012 at 19:57 In the post, “Napster, Udacity, and the Academy,” Clay Shirky connects the current state of higher ed—rising costs, variable quality, [...]

2.  *Anna H.* Says:

[November 18, 2012 at 2:48 pm](#)

> even non-elite universities are still focus points for the local free thinking, openness supporting progressive people of all kinds. If higher education is disrupted, what will take the place of universities as focal points for this community?

That is a \$64k question. When should we start working on it?

The Gates Fndn grants (thanks DK) & their goals are very cool. (<http://buff.ly/Wc9rww>) (including "...Better understand different "use cases" for MOOCs...")

3.  *Jack Stansbury* Says:

[November 18, 2012 at 11:45 am](#)

I was talking with the vice-provost of a local university about this the other day. She told me the story of a 9-year old girl in Iran that was taking an online Calculus class. When Iran found out she was taking it, they shut off her internet connection. Well, turns out she had made some friends in the class, like a boy in England and another boy somewhere else. When they saw she wasn't participating in the class anymore (blog or whatever), they figured out how to get her reconnected, and she was able to take the rest of the class.

4.  *John Iskra* Says:

[November 18, 2012 at 10:54 am](#)

As a professor at a (decidedly non-elite) liberal arts college, I worry about this quite a bit. Not just because my livelihood is being threatened by it, either. My institution belongs to a consortium which won a grant to fund the creation of a medium sized MOOC. I served on the hiring committee for the director/instructor of the program. I asked each candidate, most of whom had some teaching experience at Phoenix or DeVry or some similar on-line 'school', the following question: How have you and how do you plan to ensure academic integrity in the course. I always got the same answer. Roughly it was 'ha! Are you kidding?' What they told me is that in many cases they were pressured to not pursue suspicions of cheating as that would hurt the bottom line of the institutions. Also, failure was not an option. Again, money was the biggest factor. The push for MOOCs is not coming primarily from students who want to take classes in their pajamas. Instead it is coming from administrators and investors who see a big opportunity to make a big pile of money – just so long as no one cares if any one learns anything. You cite the numbers of people who enrolled in and completed the Stanford AI course. What you don't cite is the number of students who learned enough to have passed the course. My recollection is that it was something like 2% of the students enrolled. And the percentage is probably smaller given that many of them may have cheated their way to that result. Is that what the future narrative of education looks like? If so, I will be checking, very carefully, the credentials of my doctors and nurses before I count backwards from 100 inhaling the anesthetic.

5.  *Mark Neustadt* Says:

[November 18, 2012 at 10:43 am](#)

I think one of the questions unanswered by this excellent, substantive post is how much to dynamic and tendencies of the interactive, Web-based network applies in other walks of life. For several years now, we've read forecasts and prescriptions from those who are successful in the blogosphere for the economy as a whole. There is no question that the Internet economy creates enormous amounts of value. There is also no question that its promise is not all it is sometimes cracked up to be. The monetization models are sometimes lacking. Remember the Youtube superstars wandering around a waiting room on Southpark hoping to cash in on their fame.

If the on-line world were the only way to create value then there is little question that the people who could master the new on-line learning universe would be the winners. But what if the on-line world will not be the only, or even the best, way to create value? What if other kinds of social networks will still be important? If that is the case, perhaps we'll still need institutions that socialize people into particular social practices as a way for them to thrive in life. Shirky, in essence, admits this is the case for social elites, who will still flock to the top 50 USN&WR schools. What if this is also true for other social groups? Then we still need many bricks and mortar institutions.

The point about the MP3 is that its major value is in the area of entertainment. We can't all make a living repackaging leisure time content. That is not a good long-term model for any society, although granted, it's a soothing story to tell in America since we are the unchallenged kings when it comes to entertainment.

6.  *Pete St. Onge* Says:

[November 18, 2012 at 10:29 am](#)

Don Tapscott (Wikinomics / Macrowikinomics) brings up an interesting point as well: Each faculty member in each University teaching a course (eg. Economics 101) each puts together their own course so there are literally hundreds of ‘Econ 101’ courses being taught every year. His reasoning is that there are probably a handful of ‘best ways’ to teach a particular course, so why should so much effort go into creating yet another version of a course that could just as easily come from one of a number of particular ‘stock’ courses that could maintained by a particular institution, or perhaps managed a la wiki — Hence MOOCs.

None of this obviates the other elements of a course — namely, coursework (assignments, projects, etc) and testing (tests and exams), but particularly tutorials. While these can also be ‘canned’ to some extent (say using testing materials provided by the source organization / institution), “multiple guess” might be easier to grade automatically but in my experience essay questions provide a considerably more robust assessment of the student’s learning. I don’t see offhand how that can fit into an automatic grading mechanism, which in my view still necessitates local marking, assessment, and tutoring/tutorials.

An opportunity I see MOOCs provide are as a means to provide the basis for or background for a course, with one or more faculty presenting supplementary or associated material. If MOOCs account for an increasing amount of core courses (the first- and second-year courses that so many people have to take), it should (in theory) free up teaching resources to provide more breadth on upper year courses that provide a greater exposure into deeper / broader areas of study.

One more thing: Our provincial (Ontario) government has come forward and said, gee, wouldn’t it be great if our first- and second-year undergraduate students could take courses as part of their degree program in University A at other universities in the province? Our Universities may ultimately remain places of Higher Learning, but the branding of that learning (eg. I’m a Harvard vs McGill vs U of Toronto vs Trent U grad) may become less important at least at the Undergraduate level, particularly if a growing number of formative courses you take don’t actually originate from the ‘home’ institution.

7. [Rearranging Our Sense of What’s Possible](#) « [PrattleNog](#) Says:

[November 17, 2012 at 4:21 pm](#)

[...] his recent post titled Napster, Udacity, and the Academy, Clay Shirky writes a few very important things about the future of higher education that I believe [...]

8.  [Rockiger](#) Says:

[November 17, 2012 at 10:30 am](#)

I think MOOCs are exciting development. It’s the first time in human history where you can teach higher education to relatively poor people world wide. Don’t think United States or Europe; think Uganda! All you need is the will to learn and a internet connection; this could be a real game changer.

On the other MOOCs won’t replace classic universitys anytime soon; especially in more practical disciplines like medicine or engineering.

9.  [Marie Hicks](#) Says:

[November 16, 2012 at 6:28 pm](#)

Great, insightful post.

I would add that soon, it’s reasonable to assume, universities will transition to using tools like MOOCs to disseminate research and new knowledge more than traditional publication models (which are also currently in a period of crisis/transition). I think we lack vision when we think of MOOCs as merely low-level teaching tools for getting standardized courses out to anonymous students.

In the long, or even near term, I think MOOCs will have a transformative effect on say, the 50-150 “top” universities through encouraging (or forcing) us to contend with new ways of getting our research out there. This is already underway, actually. I’ve gone into a bit more detail in the response on my blog: <http://mariehicks.net/blog/?p=169>

10.  [William Gunn](#) Says:

[November 16, 2012 at 4:05 pm](#)


When I was growing up in a small town in Mississippi, the local university employed about half the town. The university is what allowed the town to be what it was – a tiny speck of blue in a sea of red. When I was recently in Ohio, at Miami U, I noticed that the same was true for the town of Oxford Ohio. Perhaps it’s not well appreciated that even non-elite universities are still focus

points for the local free thinking, openness supporting progressive people of all kinds.

If higher education is disrupted, what will take the place of universities as focal points for this community? Do we want to play into the hands of Peter Thiel, a noted foe of higher ed but also Ron Paul's biggest campaign donor. Are MOOCs promoting libertarianism, almost exclusively at the expense of liberalism, and what effect will that have on progressive society?

11. [Napster, Udacity, and the Academy Clay Shirky | Brent Sordyl's blog](#) Says:  
[November 16, 2012 at 2:20 pm](#)

[...] Story: Napster, Udacity, and the Academy Clay Shirky) Like this:LikeBe the first to like this. clayshirky, e-learning, innovation, Kaplan [...]

12.  [Dana F. Blankenhorn](#) Says:  
[November 16, 2012 at 9:46 am](#)

I want to echo all the praise for this great piece of work, Clay. Most blog posts have a half-life of nought. This one should be saved and savored.


MOOCs fulfill one of two roles for universities, which as you say is educating people, and I agree that is vulnerable to disintermediation, and that MOOCs can do a better job than the teachers at many, many schools.

But there's a second role for universities, which is research. I think that's why Harvard and the other elite institutions will be fine. I think that is the real reason they have such big endowments.


What factories were for our fathers, what offices were for us, so campuses are for our children. They're the center of economic activity, they're where the real "stuff" happens that drives value.

Drive around any such institution and you'll see it happening. Around Georgia Tech in Atlanta, areas to its north and west that were once ghettos are flowering into hipster havens, built around graduate student housing and the start-ups seeking to sup at the lab tables those graduate students toil at. Same for Emory University — my neighborhood went from poor to wealthy in 10 years because of Emory.

Point is, big time colleges like Harvard will do fine with MOOCs serving most of the education. The quality will be better, and they'll have more strong degree holders from which to fill the graduate student holes that are the real "secret sauce" of today's education industrial complex.

13.  [Tom Beardshaw](#) Says:  
[November 16, 2012 at 9:37 am](#)

A great piece Clay, something that should serve as more than adequate warning to the academy that it is currently surviving on a flawed business model and that it may lose its ability to pay for research on the backs of young people. In the UK, the government has recently introduced loan funded student fees, up to a ceiling of £9k per year. As a father of a young 12 year old lad who is very interested in computer gaming, I am very seriously wondering whether there is any competitive advantage in him getting into a university. Not only is he unlikely to be learning anything at uni that he couldn't learn online, but most universities are behind cutting edge practice, and I'm not sure he'd benefit much from the social life either!

14.  [Norman McBrien](#) Says:  
[November 16, 2012 at 5:51 am](#)

Thanks for the great post Clay.

I agree with Haggie regarding the split between formal degrees and the new type of graduate. MOOC's will democratise the education process and allow for a greater diversity of courses being presented.

This will stick in the future as skills required for the workplace are changing dramatically. Employers will place more emphasis on skills acquired than traditional degrees.

15. [Clay Shirky, MOOCs, and Living the Deeper Mission of Education « Rewiring Virtue](#) Says:  
[November 15, 2012 at 11:03 pm](#)

[...] theorist Clay Shirky wrote a great piece that contextualizes the revolution in education within the "big pictures" of both [...]

16.  *DK* Says:

[November 15, 2012 at 7:58 pm](#)

Mindblown – thank you – as an addendum, The Gates Foundation awarded 12 grants, totaling more than \$3 million into MOOC’s a couple of days ago: <http://buff.ly/Wc9rww> – BOOM!

17.  *Alberto* Says:

[November 15, 2012 at 7:37 pm](#)

Hello Clay,

well put. If I may add a couple of thoughts, as a suggestion for a next post:

1. Unbundling learning from the classroom environment changes the profile of the student – “amateur” students come to the fore to join “professional”, full-time ones. I am taking Coursera courses and very clearly you get housewives, stockbrockers, whatever, alongside doctoral candidates.

2. Unbundling learning from exams makes for an environment that downplays exams and emphasizes intrinsic motivation for studying.

3. Much learning is peer-to-peer – just look at the forums at Coursera.


All in all, it looks very much like 13th century learning – Universitas Studiorum, which you could loosely translate as “learning united”. I am 46, and very grateful for this gift. I plan to keep taking courses until I die (or become senile).

If you are interested in my experiences, I blogged them:

<http://www.cottica.net/2012/09/26/disrupting-learning-ii-day-of-reckoning/> (on Coursera)

[http://edgeryders.ppa.coe.int/classroom-wire/mission\\_case/test-driving-khan-academy-how-i-learned-use-conditional-probabilities-an](http://edgeryders.ppa.coe.int/classroom-wire/mission_case/test-driving-khan-academy-how-i-learned-use-conditional-probabilities-an) (a test drive of the Khan Academy, with some reflection on how technology allowed Sal Khan to rewire the learning process).

Keep up the good work.

18.  *EngineerScotty* Says:

[November 15, 2012 at 6:14 pm](#)

One other issue that has to be solved; though I’m sure it will be:

Accreditation and acceptance of MOOC educations in the professional world.


Many employers, in many professions, still view a piece of paper from an accredited college that they have heard of, as a prerequisite for employment. While such paper is no guarantee of competence in the field; employers trust that well-known and accredited colleges and universities do at least some teaching and vetting of the students they graduate, and likewise assume that applicants lacking this credential are unsuitable. Not all employers are like this, of course, but many still are.

That said, many predictions that Wikipedia would fail due to (alleged) lack of traceable provenance have been proven incorrect.

OTOH, if MOOC work becomes broadly acceptable to employers, how soon before we see the MOOC equivalent of “diploma mills”; fraudulent entities which mainly exist to produce bogus qualifications, rather than actually imparting useful skills? Right now, most users of MOOC programs are actually motivated by learning things; but many college students at traditional schools re only there to get wasted, laid, and receive their paper.

One answer might be greater involvement of post-educational examinations, like many professional certifications. If employers were to take the posture of “I don’t care what diploma you have, so long as you can pass this test”; and certification were more broadly decoupled from education, this decoupling might pose the same danger to the traditional college’s business model as Craigslist did to the newspaper business. (There’s a reason colleges and unis don’t permit students to audit four years of coursework, after all, and simply take a test and receive a degree). We already see this to some extent in the IT industry, where many employers care more about professional certifications from system vendors (such as MSCEs) than they do about university degrees.




19.  *M. Scott McBride* Says:  
[November 15, 2012 at 5:32 pm](#)

As an academic laborer at one of the non-elite Ivy's, it should be understood that the assertion: "The cost of attending college is rising above inflation every year," does not consider that any increase in the cost of higher education has come primarily from the energy and health benefits sectors of the budget, not from salaries and other operational expenses. In fact, the overall cost of higher education has remained largely unchanged for at least a decade. And for those "mediocre" institutions that were once state supported with 60-70% of their funding, they are now state located with students that are paying 60-70% of the cost. Why? Statewide entitlement expenses (retirement, healthcare, etc.) and the increased prison population (along with the cost of incarceration) have outpaced all other areas of state budgets by a huge margin.

I find all other aspects of this post insightful and intriguing.

20.  *Mike* Says:  
[November 15, 2012 at 5:16 pm](#)

I teach English language..all over the world..software to teach languages has been around for ages..CD, CD Roms, Videos, internet, etc. etc..and many chain language centres using software primarily have come and gone..But classes with teachers are still the basis of much foreign language teaching. Its all about contact, however messy, inefficient etc. it may be as a means of learning a language...I see no problems of being replaced by machines in the future...that wave has already come and gone.....might the same apply to college somewhere down the line after a generation gone online for education and found they were missing something?

21.  *Patrick Newbery* Says:  
[November 15, 2012 at 4:01 pm](#)

The Napster example, and the publishing example, often omit a significant point, which is that there are two sides to the economic coin: distribution/access and the true cost of developing valued content.


We typically see that digital technology disrupts the distribution/access side and it's easy to argue that it is inevitable, and those who have previously controlled distribution/access have enjoyed an effective monopoly; and they now get what they deserve for exploiting the artist and the customer. Often this POV is justified because a real claim can be made that with digital, the cost of production per unit drops to almost zero.

The distribution/access models being disrupted evolved largely under the paradigm and constraints of the true cost of developing valued content. Not every female singer-songwriter is going to be as big as Alanis. Alanis does not produce a hit every time she puts pen to paper, or fingers to keyboard. Few artists do. Most "new" artists that break big have had many years to develop the material that catapults them to fame. Often they have only months to out-do themselves once they have arrived (hence the one-hit wonders). Just as a good college course may evolve overtime, or a jazz ensemble gets better with experience, valuable content doesn't spring into the world full formed from every available source every time. Talent is iterative and benefits from subsidization.

So, it is a real possibility that when digital distribution/access changes the economics of consumption, it also affects the viability of economics to support quality content, and there can be a net-loss.


Despite digital technology allowing a pooling of cognitive resources, it doesn't guarantee that the value of the whole is greater than the sum of the parts. When it comes to creativity and the human mind, time and experience are key components. If the economics to support the allocation of time and experience are removed, then we can't expect to be able to get the same level of quality content as we had before. That doesn't mean it's impossible, but the probabilities may change significantly.

It's also tempting to say that digital means that there is now access to a broader quantity of sources of content, and that will offset the problem of cannibalizing the economics of quality content development. But for that to be true, we would expect a higher proportion of people with the raw talent in the world that could easily satisfy market demand, if only it had easier access. I am not sure that there is persuasive evidence today, or anywhere in history, that would support this premise.

22.  *Connor Lee* Says:  
[November 15, 2012 at 2:14 pm](#)

I like what he said about cost disease. I think what we're seeing are new mediums being introduced to a broader audience (like MP3's did from CD's) but in this case tablets, computers, etc. to bring MOOC's to a greater audience. So with that will come

alternatives to, like Shirky said, institutions that can't last. Courses like Udacity, iTunesU and Coursera will become popular, but especially through other forms of institutions that will allow these courses to become accredited.

23.  *Ethan Benatan* Says:  
[November 15, 2012 at 1:24 pm](#)

Brilliant. Bravo! And yet there is still so much to learn and do.


As a society, what is our success measure for higher education? Producing programmers at Internet scale is certainly one reasonable metric, but there are others. A favorite question of mine is “how does this get us closer to world peace?” Prosperity through improved job skills is a good thing. But unevenly spread prosperity does not seem to be solving our biggest problems.

A handful of high-profile autodidacts are headlined as success stories on Coursera. I suspect that those people would have succeeded just as gloriously even without Coursera; these stories are just another version of using Harvard as an example. “Empowering the autodidacts to educate themselves” is just another tautology .

It's not clear to me that “Unknown U.” is doing any better at expanding the beneficiaries of learning than is Coursera, particularly when measured in terms of the student's ROI. But I'd sure like to create an institution that uses the efficiency of these educational MP3s to change the lives of those who need some help on the path. I hope there is a niche and a need there that may present a future for some of our smaller and lesser-known schools.

Mind a plug? Here's my attempt at provoking the discussion: <http://www.educause.edu/ero/article/why-job-fish>

ps thank you, Clayton Christensen.

24.  *Jesse Farmer* Says:  
[November 15, 2012 at 12:36 pm](#)

Disclaimer: I'm co-founder of Dev Bootcamp (<http://devbootcamp.com>).

Udacity, Coursera, and other sources of free, online, high-quality curriculum are amazing. But it reminds me a bit of Netflix.

When Reed Hastings was starting out everyone pooh-poohed the idea. “You're going to mail DVDs to people? Everything will be streaming in the next few years.” Turns out the “next few years” was really the “next few decades.”

I agree that MOOCs are a sign of shifting seas, but they're not the only boat out there.

“The possibility MOOCs hold out is that the educational parts of education can be unbundled.”

This is 100% true. It's important to distill \*why\* students value an education, because right now our institutions of higher education are meant to be everything to everyone.

Some reasons people attend universities:

1. Access to expertise and high-quality teaching materials
2. To be surrounded by similarly motivated people
3. The promise of a transformative experience
4. A certificate that is valued by the marketplace
5. Employability, job skills, etc.

Right now the Udacities and Couseras of the world are focused on (1), and to a lesser extent (2) and (3). Dev Bootcamp is focused on (2)-(5) and it's working.

We have a 95% placement rate. We're nearing the end of our first year and we'll have graduated around 110 students. We'll more than double that next year.

Our students have been hired into companies like Hipmunk, Twitter, New Relic, Pivotal Labs, and ThoughtBot.

The in-person experience is not going to die out, but I do agree that the reasons students attend universities will become unbundled. Dev Bootcamp is another instance of just that unbundling, albeit a different part than Udacity.

I attended the University of Chicago and studied mathematics and linguistics. Chicago's answer to “What is an education?” is

incredibly opinionated. It's not for everyone. The school has no "practical" majors like engineering, pre-law, pre-med, pharmacology, etc.

I loved my school for having a strong opinion. I think universities should welcome initiatives like Dev Bootcamp and MOOCs like Udacity.

It will free universities to be universities again.

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