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The Changing Ecology of Higher Education and Its Impact on Accreditation
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New Ecosystems in Higher Education and What They Mean for Accreditation and Assessment

Richard DeMillo

Georgia Institute of Technology

Introduction

In its American incarnation, accreditation exists because of a confluence of two otherwise unrelated historical trends. The first involved the massive outpouring of philanthropy to institutions of higher learning at the beginning of the 20th century. Shocked by the dismal state of university administration and accountability, industrialists like John D. Rockefeller and Andrew Carnegie demanded minimal standards as a condition for receiving grants and gifts. These were men of industry who were enamored with industrial management practices, including quality control and measurement. The second trend was spurred by the massive increase in enrollments in the mid-20th century, increases that threatened to overwhelm the nation's colleges. The solution was to make institutions more efficient. Efficiency in post-WWII America meant factory efficiency, and so colleges and universities adopted the methods of the factory floor.

By the 1950's it was officially decided: universities were going to operate on a factory model. Raw materials (students) were to be moved efficiently through (classes, majors, high student-teacher ratios) a factory (universities) in which defects were discarded (selective admissions and normative grading) and high-quality products (graduates) were stamped with seals of approval (degrees). Accreditors were the quality control department of the factory. It was a role they adopted enthusiastically. The mission statement of nearly every accrediting body begins with a recapitulation of the need for quality control in higher education.

The factory model that is crumbling, and it is being replaced by a new ecosystem for higher education. This does not bode well for traditional accreditation. It is technology that has shaken the factory model. This is the "Year of the MOOC." A MOOC is a Massive Open Online Course, a kind of online reimagining of what a college learning experience should be like. Technology-enabled teaching to global classrooms of 150,000 students has been the subject of feverish coverage by virtually everyone with a passing interest in the dire condition of American higher education. The New York Times called it the Tsunami¹. Salman Kahn's "academy" of thousands of short instructional videos has drawn hundreds of millions of viewers, and his ubiquitous thoughts about how this technology might redefine higher education has attracted the attention of Charlie Rose, David Brooks and Tom Friedman². The technology of higher education has become sexy.

It is easy to dismiss this, as many of my colleagues do, as a faddish rush to an over-hyped, shiny new technology, but there is a serious rationale for what is taking place in higher education. The technology itself is just a metaphor for change.

Hype Factors

There is a lot of hype in current discussions of educational technology, but that does not diminish its importance. In fact, hype factor is an important part of innovation. For that reason alone, there is much known about hype curves and the role they play in long-term change. Whether that change endures depends on how much value it creates, but in the beginning, when long-term prospects are unclear, there is a kind of mania that fuels innovation.



In the case of the British Railroad, that mania began with this announcement in the May 1, 1829 edition of the Liverpool Mercury:

The directors of the Liverpool and Manchester Railway hereby offer a premium of £500 (over and above the cost price) for a locomotive engine which shall be a decided improvement on any hitherto constructed, subject to certain Stipulations and Conditions, a copy of which may be had at the Railway Office, or will be forwarded. As may be directed, on application for the same, if by letter or post paid.

It did not hurt that the winning steam engine could reach up-hill speeds of 24 miles per hour, that the legacy technology defeated itself when a horse crashed through a wooden floorboard, or that Queen Victoria declared herself “charmed” by the technology, and thereby deemed the technology to be the 19th century version of sexy. The hype began in earnest.

Business innovation (ticketing, first-class seating, and agreements allowing passengers to change carriers mid-trip) was rapid and fueled as much by intense competition as by a chaotic, frenzied stock market in which valuations soared beyond any seeming sense of proportion, causing John Francis in 1845 to despair: “*The more worthless the article the greater the struggle to attain it.*” When the market crashed during the week of October 17, 1847, in no small measure due to the 1845-6 crop failure and potato famine, and established companies failed, railway financiers like George Hudson were exposed as swindlers.

In the end, the modern-day equivalent of \$2 trillion was pumped into the investment bubble, as even desolate and economically insignificant outposts were connected by some of the 2,148 miles of railway capacity that entrepreneurs built during the British railway investment mania of the 1830s. Conventional wisdom is that early investors in British railway companies were played for suckers, but as my colleague Andrew Odlyzko pointed out³, conventional wisdom is sometimes false.

The collapsing bubble is not the end of the story. Between 1845 and 1855, an additional 9,000 miles of track were constructed. By 1915, England’s rail capacity was 21,000 miles. British railways had entered a golden age. But what really happened to all that early investment? The surprising conclusion is that during the height of the 1830’s hype cycle, railways were built that were viewed as triumphant successes in the end. Early investors were rewarded for the wildly speculative exuberance of the 1830s.

The term hype factor is a code phrase for rejecting innovation cycles, and there is a great danger that legacy institutions and processes in higher education will fall into that trap. The conclusion that is usually drawn from British Railway Mania may lead markets and investors astray because it seriously misrepresents actual patterns. The whole point of a cycle (hype, innovation, or investment mania) is that it can be used as a risk-averse template for rejecting sales pitches that start with “*This time is different.*” But that does not mean that this time is never different.

This Time is Different

Critics have had colleges and universities in their sights for a long time, and there have always been innovations aimed at fixing the problems with higher education⁴. Like Detroit concept cars, classrooms of the future come and go. Internet connectivity, interactive clickers, ubiquitous computers, and distance education were all sold as solutions at one time or another to the ills facing higher education. But these were solutions for legacy organizations that had no particular motivation to change. The critics who demanded change had few options and no leverage at all.

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Traditional institutions, or the incumbents, had no overwhelmingly hostile economic reality to cope with. In fact they had an overwhelming economic advantage: they were gatekeepers, and anyone who wanted a university credential had to respect their boundaries. Society and the marketplace put a high value on those credentials, and the incumbents could charge accordingly.

MOOCs have exposed a bypass. The gatekeepers are no longer in charge, and that is why this time is different.

Around the time of the market collapse of 2008, public sentiment about the cost of a college degree began to shift dramatically. Millions of disadvantaged students, recent immigrants, returning military, non-traditional and older students poured into universities. Driven by shrinking state budgets, public institutions began hiking their prices at shocking rates. Recent graduates found themselves unemployed and unemployable, but still responsible for paying off college loans. A debt crisis emerged as college loans passed credit card debt (second only to mortgage loans) and default rates rose. It was a cumulative effect. By 2010, polling showed that a majority of the American public no longer regarded a college degree as affordable and not worth the price⁵.

In a flight to quality, students tended to bypass lesser-known schools which, in an attempt to compete on price, offered unsustainably steep discounts. Institutional debt rose as private donors retreated in the face of the deepening recession⁶.

It had not escaped the attention of employers that the value of dearly purchased credentials had been eroded over the years. The gap between what course catalogs promised and what was actually taught in the classroom began to grow⁷. Grade inflation awarded A's and B's to two thirds of all students⁸. Silicon Valley companies placed so little regard on university credentials⁹ that they instituted their own screening exams to determine which applicants actually had the required skills.

In short, conditions were right for the destruction of gatekeeper-enforced boundaries¹⁰. In such situations markets seek bypasses. Open Courseware, edX, Coursera, Udacity, Kahn Academy, Codecademy, Udemy, iTunesU, YouTube, TED, and dozens of similar services showed students how universities might be replaced by outside networks with hidden assets at low or no cost.

This time is different because economic reality is different: a bypass economy is springing up at exactly the time that the higher education market is seeking a bypass.

The New Ecosystem

Around the crumbling boundaries of incumbent universities is an odd combination of traditional institutions that seem bent on redefining their value, and institutions that see change around them but are convinced that they will be unaffected. They are trying to find their way in a marketplace that is growing accustomed to the rapid pace of change and an investment culture that seems to have learned the lessons of the investment mania of 1830s England.

What pumps energy into this new ecosystem is the optimistic view that old limitations can be overcome. The “can't do's” have changed mainly because technology has taken down barriers. Let me mention three of them.

Cost. College costs are controlled by high labor costs, the high cost of physical plants, and high materials costs. All three of these factors have held university budgets hostage for decades, but technology enables new approaches. For example, open courseware and online delivery allow both deskilling and the use of lower-cost more flexible physical plants, both of which lower costs¹¹.

Learning. It has been known since Benjamin Bloom's 1982 landmark study¹² that the best classroom outcomes are achieved by non-normative mastery methods in which student progress is tailored to the

individual, an approach that is prohibitively expensive without technology. With computer-assisted mastery classrooms, student performance can be reliably improved by two standard deviations at negligible marginal cost.

Individualization. The trajectory of American higher education has been toward increased specialization and individualized instruction. New program costs increase nonlinearly without technological support but new internet-based personalization technologies enable tailored curricula, content-based advising and individualized analytics that would otherwise be impossible. The idea, viewed as a pipedream as recently as last year, that students can “hack degrees”¹³ to suit their goals and expectations, is now gaining support as tens of thousands of students are beginning to combine courses from dozens of top-rated universities.

In this new ecosystem, value dominates. It is open by design and construction and so incumbents risk playing a diminished role as attention shifts from institutions and programs (where accreditation and assessment have traditionally focused their attention) to individual students. Economically, it is the scale of the Internet that dominates. Hundreds of millions of new students, combining courses offered by many institutions in unexpected ways require not authorities, bureaucracies, and processes, but platforms that are flexible and adept at scaling to the demands of the new bypass economy. The question for all legacy organizations in the new ecosystem is, “What value do I add?”

The Challenge for Accreditation and Assessment

It is now economically feasible for a student anywhere in the world to piece together, jigsaw like, a curriculum that matches his or her needs and to have both the curriculum and the student’s performance certified in a way that is accepted by academic institutions and employers alike. This is not a factory. The focus on higher education has irrevocably shifted from institutions to students. The factory model with its manufacturing vocabulary will be irrelevant, and so will the language of quality control that has dominated higher ed policy for the last hundred years. That is a shift that accrediting bodies need to be prepared to make.

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In the midst of a growing realization that a diploma does not represent quality, or even a close match for what the job market demands, the challenge for accreditation is to find a new value proposition that, even if it does not replace the traditional quality function, is better suited to the new ecosystem.

Competency-based assessment, once regarded as a poor cousin of real assessment, will almost certainly play an important role in the new ecosystem. MOOC providers like Coursera and Udacity have recently embarked on monetization strategies modeled on the successful LinkedIn™ model of referrals. In this model, non-institutional providers offer proof that a student has accomplished a goal, learned a skill, or demonstrated an ability that an employer seeks. The American Council of Educators (ACE) has already signaled its willingness to equate such demonstrations to standard university credit¹⁴.

This is an approach to assessment that is outside the boundaries of existing institutions. It is an approach whose only role is to provide transparency and accountability so that realistic assessments can be made. Federal regulators and accreditors who try to create standards that accommodate such arrangements will realize quickly that standards-based approaches do not scale to the number of combinations of students, courses, instructors, providers, and referrals that are possible. Traditional accreditors might be tempted to kick the problem back to

institutions and require compliance for each university-program-course combination. That burden is too heavy.

Accreditation is a standards-based industry in a marketplace where standardization is being marginalized. It is a difficult position for standards-setters and evaluators to be in and heaping more institutional requirements on an already strained system is not the answer.

There is a promising-sounding, but apparently unused section of Federal Title 34 Regulations called Direct Assessment that allows for the substitution of “direct assessment of student learning or the recognition of direct assessment of student learning by others.”¹⁵ Rather than let course outcomes speak for themselves, §668.10 does exactly the opposite. It attempts to equate a direct assessment outcome with “credit or clock hours” and requires each “institution that offers a direct assessment program [to] apply to the Secretary to have that program determined to be an eligible program for Title IV, HEA program purposes,” an overwhelming burden for any institution.

The world will still need a way to judge who has learned what (in the same way that Amazon.com and eBay customers need to know the quality of products and merchants). So what will replace accreditation? The outlines of an answer are just beginning to take shape. In fact, some of the answers have already been tried. Take high school Advanced Placement (AP) exams for example. Universities of all stripes routinely grant college credit for successful completion of AP courses upon presentation of satisfactory exams scores, a model not unlike the one recently proposed by the American Council of Educators (ACE) for “accrediting” MOOCs.

Other approaches that should be tried include accrediting course repositories. That would require only accrediting the courses themselves, not the processes in which they are embedded, and letting the market place sort out the value of an individual curriculum. Crowd-sourced ratings for courses already exist and as technology matures will be an increasingly accurate reflection of actual course content and quality. Community colleges, corporate training programs, and online schools like Western Governors University will have access to high quality online materials that can be packaged for traditional degree programs at reduced costs. Most importantly, the new ecosystem allows higher education to establish a market for quality.

The business of running the nation’s colleges and universities is not on a sustainable path for reasons that have been vividly described elsewhere, and, while there are many fingers pointing in different directions, almost no one has focused on the unique role that accreditation and accreditors play. In the new ecosystem, value is king, and any approach to accreditation that does not draw a straight line from assessment to value on a certificate or diploma is doomed.

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