

Barriers to Innovation and Change in Higher Education

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Executive Summary

The environment for American higher education is rapidly evolving in ways that present both large challenges to the status quo and growing opportunities for responses to these challenges. Change in higher education generally has been slow to occur, however, despite pressures to do so. Wide-ranging research on institutional obstacles to innovation and change explains some of the reasons why higher education has moved slowly to meet new challenges. A business model perspective helps to identify key aspects of higher education that heighten some of the universal obstacles to innovation and change. These include American higher education's worldwide reputation for excellence, which serves to reinforce the status quo—particularly among tenure line faculty who play a dual role by both producing the educational product and participating in institutional governance, thereby exerting unusual control over change. The business model lens also helps to identify ways in which these obstacles may eventually be lowered. The shifting composition of the faculty workforce to a dominant percentage of full-time non-tenure track faculty focused primarily on teaching, but with a growing voice in governance, is likely to result in less attachment to the status quo. And intensifying demands for outcomes measurement will shed more light on the surrogate measures for quality that dominate higher education today; should those surrogates be found to be of little value, many barriers to change would fall. External barriers, including the role of the member-organization accreditation system in shaping responses to the changing higher education environment are considered, as is the role of politics as manifested primarily through the actions of the U.S. Department of Education.

Key Take-Aways

- Individuals generally are wary of changes that challenge old assumptions and require new skills to succeed. Organizations are collections of individuals, and thus reflect individual concerns.
- People in very successful organizations often internalize key aspects of their business model as defining quality in their field; changes in these key aspects consequently imply lower quality. U.S. higher education has epitomized quality for more than a half century, leading to an exceptionally high level of internalization of business-model driven definitions of quality.
- Special characteristics of higher education that heighten the normal obstacles to change are the unusual dual roles of tenure line faculty as both managers and producers of the core educational product; the credence-good nature of higher education; and the multiple overlapping missions of learning, research, and social growth of students.
- The member-organization accreditation system naturally exhibits and supports the same obstacles to innovation and change as do its member organizations.



...the idea of the future being different from the present is so repugnant to our conventional modes of thought and behavior that we, most of us, offer a great resistance to acting on it in practice.

John Maynard Keynes 1937

The environment for American higher education is in flux. Two back-to-back recessions in this century have left the American economy in a significantly changed state. As a consequence, both family incomes and wealth have suffered greatly for the vast majority of Americans, and the ability of the public sector to support higher education has decreased. The result has been to put considerable financial pressure on many institutions of higher education, whose real costs historically have increased by 3 to 4 percent annually. At the same time, technology has moved ever more rapidly forward, facilitating connections around the world and automating many formerly “safe” job categories. The combination of a slowed economy and technological “productivity-increasing” advances have left many recent graduates either unemployed or underemployed, and increasing numbers of mature workers scrambling for additional education to update their skills.

Looking forward, the retirement of the baby boomers marks the departure of one of the most educated generations from the workforce, and projections of the number of people who need to be educated for the jobs of the future (which likely will be different from the jobs of the past and require greater education) exceed the capacity of the current system. Changing demographics of students approaching college age, including many groups that historically have had relatively lower college attendance, further complicate the picture. Meanwhile, higher education systems around the world are developing rapidly, providing new challenges to America’s claim on the best system of higher education in the world.

This changing environment has led to calls for significant change in higher education. Indeed, waves of educational innovations have spawned a new lexicon—MOOCs, prior learning assessment, competency based learning, badges, alternative credentialing, and flipped classrooms—all of which would seem to be just the things needed to enable significant change. But change, where it has occurred, has been rather glacial, and what the public most often sees is determined internal opposition to these innovations. This opposition leads many observers to the conclusion that higher education is singularly opposed to change, with the logical follow-on question, “What are the obstacles to change in higher education, and how can they be overcome?”

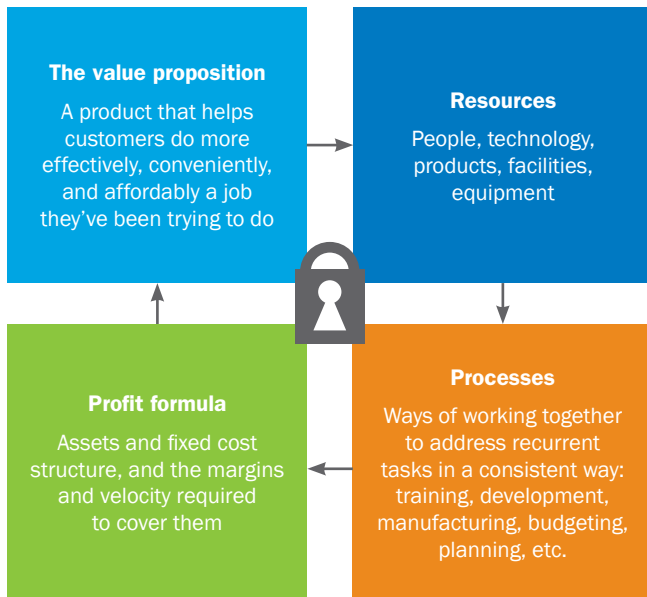
Regardless of one’s opinion about the willingness of higher education to accept change, the question of obstacles to change and how to remove them is critical for higher education. The goal of this paper is to try to understand those obstacles within a framework that draws on change research from other types of organizations.

It is important to recognize, as the quote above from Keynes suggests, that change is something that most people—not just academics—do not willingly embrace. Eric Hoffer (Hoffer, 1963, 2003) described significant change as being an “ordeal” because we fear that the skills that served us well in the old situation will not serve us so well in the changed situation. As a consequence, significant change deskills us and causes a “crisis in self-esteem.” As Hoffer put it: “It needs inordinate self-confidence to face drastic change without inner trembling.” Institutions naturally reflect to some degree the concerns of the individuals who comprise them. Thus, it is not surprising to find that the vast majority of institutions in all fields also find it difficult to change in any significant way.

Considerable research has been conducted on how organizations change in response to evolving circumstances. Thus, one approach to understanding change in higher education is to look at how higher education responds similarly to the “universal” organizational responses, and in what ways the particular circumstances of higher education might lead to responses that differ from the norm. This is the approach followed here, because ideally it provides some predictive insight into how to overcome obstacles to innovation.

A General Business Model Framework

The *lingua franca* of much research on organizational change is the language of the business model. Any organization that produces something that potential users will value basically has four broad categories of concerns: 1) What are the attributes of the product that the customers will value?; 2) What resources are needed to produce that product?; 3) What procedures turn the resources into the product?; and 4) How can the costs of resources and procedures be managed so that the resulting revenues will cover the costs? These four elements comprise a basic business model, as illustrated in Figure 1. The lock in the illustration signifies the tight interconnectivity of the four elements. (Christensen, Horn, Caldera, & Soares, 2011, p. 32)



For higher education specifically, many Value Propositions are offered, ranging from that of the large research university with very broad course offerings and student exposure to research, to small liberal arts colleges that specialize in close faculty-student interactions, to online programs that meet the needs of working adults. Higher education's Resources typically are the faculty, staff, buildings, laboratories, technology, expenditures per student, etc. The Processes are familiar, such as lectures, seminars, semesters, grades, student recruitment, registration, promotion procedures for faculty and staff, fund-raising, etc. The Profit Formula works to integrate all of these within the constraints of revenues such as those provided by government funding of research and education, fundraising, endowment returns, and tuition receipts. Although each institution with its specific combination of Value Proposition, Resources, Processes and Profit Formula has its own distinct business model, the broad commonalities that exist enable us to think about "the" business model of higher education.

One benefit of the business model approach is that educational innovations such as those mentioned above can be identified as belonging to particular components in the business model for higher education. MOOCs, for example, are a new type of resource, and prior learning assessment is a new process. This categorization makes it easier to see what these new innovations will compete with or supplement, and to identify potential obstacles to their adoption.

Not surprisingly, it is extremely difficult to get the four elements of any business model to all work together consistently. Typically, the value proposition the organization originally wants to provide may cost more to produce with a set of resources and processes than the customer is willing to pay; the entire process must then be cycled through again,

modifying multiple components of the model in the quest to find a balance between value and cost. Once this difficult but critical balance is found, the various components tend to lock into their highly interdependent positions.

Research has demonstrated that when an innovation in resources or processes that could be used in making the product appears on the scene, it is likely to be adopted only if doing so won't change the business model; that is, it is highly unlikely to be adopted if doing so would unbalance and thus force a significant change in the business model. In Christensen's (Christensen, 1997) terminology, an innovation that is absorbed into an existing business model without causing a fundamental change is called *sustaining*, while an innovation that can lead to a major change in the existing business model is called *disruptive*. Sustaining innovation is typically required to remain competitive by improving the value proposition or lowering costs, and often implies trying to look more like the market leaders. It is worth noting that although a sustaining change may be absorbed easily into the organizational business model, it is likely to present some individuals in the organization with a deskilling experience, one that may lead to resistance on the individual level. Because most managers are unlikely to willingly deskill themselves, this suggests another limitation on the types of sustaining changes that will be welcomed.

One can imagine an infinite number of possible value propositions that could be offered to potential customers, arising from an unlimited number of business models that produce varied value propositions. While it is true that the number of possible business models is without limit, it is interesting to note that there are only three generic classes of business models (Christensen, Horn, Caldera, & Soares, 2011, p. 33) (Stabell & Fjeldstad, 1998):

- *Solution shops* describe organizations that focus on diagnosing and solving unstructured problems. Value depends on intuitive and analytic expertise of employees, and the revenue model is typically fee-for-service.
- *Value-adding process businesses* have as inputs things that are incomplete or broken, and change them into outputs of higher value, typically using rather repetitive processes. Because of the relatively repetitive nature of the model, value tends to be driven by process and equipment, and the revenue model typically is based on charges for an output rather than on the cost of inputs.
- *Facilitated user networks* facilitate the ability of participants to exchange things with each other. Value comes from linking participants and mediating the process. The revenue model in these networks is typically based on fees for membership or for use.

This simplifying categorization of generic business models will be of importance in understanding many aspects of higher education's business model.

What the General Business Model Tells Us About Change

We have already identified one obstacle to significant change in the business model: that is, it is very difficult to find a new equilibrium if the model is knocked out of its original equilibrium. Thus, finding a new equilibrium requires a great deal of effort and trial-and-error variations. There are serious consequences of searching for a new equilibrium, since being out-of-equilibrium implies that few if any of the functions of the operation are optimized during the period of destabilization. As a consequence, both revenue streams and the value proposition are likely to suffer during the period of transition. No leader—for-profit or nonprofit—likes to take such a chance. Organizations typically also have invested significant sums of money into the infrastructure needed for their traditional model, infrastructure that probably would be of little or no use in a very different business model. Again, no leader is enthusiastic about simply writing off that expensive infrastructure and moving in a very different direction. Faced with these negatives outcomes of change, many leaders conclude that instead they can simply maintain a steady course, with a bit of sustaining innovation that enables them to raise prices for their best customers, simultaneously drop a few of their lower paying, subsidized customers, and come out better off than before. Continual dropping off of the lower-paying end of the customer base may not extrapolate well, but can help make one look like a hero for a time.

However, a far more fundamental problem comes into play as well, as recognized by John Maynard Keynes back in 1936 (Keynes, 1936, preface): “The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.”

When an organization has been successful for a considerable length of time, the people in that organization come to believe that their value proposition defines quality in their field, and that the resources and processes used are necessary for the production of that quality (this becomes of particular importance in higher education, as we shall see below). That is, the status quo of the entire business model comes to exemplify quality. Christensen found this problem to be a significant issue when established market leaders are faced with a disruptive competitor with a different business model: they can see the danger to their established model, but believe that a move to a new business model would be to

abandon well-defined and hard-fought-for quality. They lose sight of the fact that quality ultimately will be defined by the customer, not the producer.

This particular obstacle is especially important in higher education for two key reasons. First, American higher education has been widely considered to be the best in the world for over a half century, and many U.S. colleges and universities provide models of excellence for institution-building around the world. This is success writ large, much more pervasive on an industry-wide basis than that experienced in even the best corporate setting. Nearly everyone who works in these top institutions experiences a professional lifetime immersed in a system that defines excellence globally. Second, the vast majority of faculty at these institutions got their graduate education at one of the leading U.S. universities, and so were immersed in this ethos of excellence as part of their training too. Studies in corporate settings clearly indicate that most individuals with backgrounds such as those of faculty are likely to resist any changes that tinker with the current dominant definitions of excellence.

The Higher Education Business Model

Higher education's business model has several characteristics that heighten particular aspects of the general institutional resistance to change. Three of these characteristics are critical to understanding barriers to change in higher education:

Tenure

Tenure line faculty play a central and powerful role in the management of higher education as a consequence of their traditional role as the creators and presenters of the educational material that is the core of the students' experience. As the overall percentage of faculty who are tenured or tenure track has fallen steadily over the years, at many institutions full-time non-tenure line faculty have begun to share aspects of this management role.¹ Overall, oversight and control of educational quality by faculty is essentially a *sine qua non* of most sectors of higher education. And as mentioned above, the long immersion of faculty in the existing definitions of educational excellence is likely to result in an institutional mindset that equates significant changes in the business model with decreasing excellence.

Mix of Business Models

Higher education can be described as a mixture of multiple generic business models. It is often said that much of higher education has three missions—education, research, and

1. Faculty who are unionized generally are no longer technically part of “management,” but still play essentially the traditional role in presenting and overseeing the educational process.

social growth of students. Different institutions weight these factors differently, but increasingly all three are pursued. Comparing these missions to the descriptions of the three generic types of business models, it is obvious that there are direct match-ups: Teaching is a value-adding process in which faculty guide students through multiple defined processes (semesters, grades, degree requirements, exams, lectures, seminars, etc.) that increase the student's knowledge and skills. Most of the research done in colleges and universities closely follows the solution shop model. Student social growth is largely organized around facilitated peer interactions in residence halls, clubs, student government, athletics, etc.

The presence of simultaneous multiple generic business models in colleges and universities greatly complicates their operation. In fact, Christensen et al. (Christensen, Horn, Caldera, & Soares, 2011) argue that the high overall cost of higher education arises in significant degree from the high overhead created when multiple business models are working simultaneously. In addition, trying to optimize three business models within the constraints of one organization means that none of the models is truly optimized with respect to either costs or outcomes. Thus, not only are resulting costs higher than they need be, the outcomes are not as good as they could be. Finally, when multiple models are running simultaneously, considerable cost shifting and cost sharing typically occur, making it almost impossible to calculate the real cost of any activity, further hampering efforts of cost control.

Education as a Credence Good

Higher education's value proposition has many components. The actual effectiveness of the educational experience is of course a key component, but other aspects such as location and academic focus, emphasis on traditional students or adult learners, price, and breadth of student activities provide variations that appeal to different student demographics. While some of these aspects can be easily defined and evaluated (campus-based or online, for example), there are very few generally accepted measures of the effectiveness of the educational component of higher education. In fact, higher education has in general strongly opposed efforts to create such measures. As a consequence, the educational component of higher education is often used by economists as an example of a credence good—one whose utility impact is difficult to determine by the consumer in advance of consumption, and remains difficult to determine even after consumption.

Since there is little useful data on whether a credence good actually produces the promises made to customers, the value proposition of credence goods typically is based in large part on use of surrogates that are more easily measured. In the case in higher education, these more easily

measured attributes encompass many resources (e.g. number and tenure status of faculty, value and quality of facilities, communications infrastructure, residence halls) and processes (e.g. breadth of curriculum offered, student services, class size, acceptance and retention rates). Over time, a variety of narratives have been developed and endlessly repeated that argue that these surrogates relate to actual educational outcomes. In reality, however, these primarily are credence-based rather than data-based narratives.

The interplay between a mix of business models and a credence good is nicely reflected in the relationship of brand and reputation in higher education, as defined by Ettenson and Knowles (Ettenson & Knowles, 2008):

Simply put, *brand* is a “customer centric” concept that focuses on what a product, service or company has promised to its customers and what that commitment means to them. Reputation is a “company centric” concept that focuses on the credibility and respect that an organization has among a broad set of constituencies, including employees, investors, regulators, journalists and local communities—as well as customers. In other words, brand is about relevancy and differentiation (with respect to the customer), and reputation is about legitimacy (of the organization with respect to a wide range of stakeholder groups, including but not limited to customers).

Clearly, some component of customer perception (brand) is influenced by the way the organization is viewed broadly (reputation), and vice-versa. Nevertheless, the two concepts reflect very different perspectives of an organization. It is also obvious that brand value may vary between different customer groups, and that reputational value can vary widely amongst different constituent groups.

For higher education, brand—the educational customer's view of the institution—is essentially the credence value of the education. Organizations such as U.S. News & World Report gather as many resource and process educational surrogates as they can, rank them in an arbitrary (and often changing) way, and produce their take on the brand value of institutions. Reputation in higher education, on the other hand, is substantially driven by institutions' success in their research missions. Research success has the benefit of being relatively easily quantified, and the metrics of success are accepted globally, thus potentially bringing global recognition. Examples of research metrics of excellence include government and corporate research funding levels, recognition of faculty by national and international professional societies, Nobel Prizes won by faculty, numbers of Ph.D.'s awarded, number of postdocs, etc. A somewhat

less significant driver of reputation is the perceived quality of graduates from professional programs—e.g., J.D., MBA, and M.D. programs. Perceived quality of graduates from undergraduate programs also contributes to reputation, but in a less significant way.

Thus, in higher education, success in the realm of research has a strong influence on overall institutional reputation, which then has a considerable impact on the brand value of the undergraduate education. This coupling provides impetus to institutions at all levels to increase their research activities. On the other hand, the coupling presents a major obstacle to decreasing research efforts even when such organizational change may be necessary.

What the Higher Education Business Model Tells Us About Change

Again, an innovation that is absorbed into an existing business model without causing a fundamental change is called *sustaining*, while an innovation that can lead to a major change in the existing business model is called *disruptive*. The framework of higher education's business model helps to explain obstacles to both types of innovations.

Sustaining Change

Faculty traditionally play a central and visible role in higher education, and as a consequence they are the key resource surrogate for quality that drives higher education's value proposition. A particular feature of the higher education business model is that this high value resource, the faculty, has an enormous role in another key element of the business model, i.e., in management of its processes. As noted above, it is natural that many managers will resist supporting changes that risk deskilling themselves. Thus, this dual role of the faculty potentially restricts the adoption of types of sustaining change that otherwise might easily be worked into the model. For example, it perhaps should be no surprise that almost all sustaining change in higher education is in non-faculty-deskilling areas such as nicer residence halls, better classrooms, and increased focus on faculty research. One would be hard put however, to name institutions where sustaining changes have included embracing widespread adoption of new approaches to teaching and learning that experimentally have been shown to lead to greatly increased student learning. (See Wieman, June 10, 2014 for a discussion of teaching STEM subjects).

Faculty have created over time (sometimes centuries) rather common processes that are used to transmit information and learning to students. Among these are lectures and seminars, semesters, final exams, letter grades, and typically

four-year curricula required to produce educated graduates. As previously noted, it is common across different types of organizations that those within successful organizations come to believe that quality and the entire business model are one and the same. In the case of higher education, where the primarily credence-based value is largely defined by surrogates within its resources and processes, this linking of quality to the entire business model is particularly strong. Thus any changes in key resources and processes, no matter how small, is likely to be viewed with concern as potentially decreasing quality.

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In organizations where the value proposition is determined by more easily measured factors, it is relatively easy to determine if small changes in some other component of the business model have an impact (either positive or negative) on quality. For a credence good, however, where value comes from belief, no such easy tests are possible and so change of any magnitude is that much more risky. Therefore, increasing the use of outcomes measures likely will decrease one important obstacle to change in higher education.

Another key component of higher education's value proposition is institutional reputation, which often is heavily dependent on research activities. As noted above, this stimulates sustaining innovations that lead to increased research activity. And since the same faculty generally are involved in both the educational and research functions, increased emphasis on research almost always is balanced out with decreased emphasis on teaching, as reflected in reward systems for the faculty. As the emphasis on research grows, there is likely to be less willingness among the faculty to change and gain new teaching skills that would divert their focus from research. The fact is that it is nearly impossible to optimize the effectiveness of either the research or teaching functions when they are as closely intertwined as they are in higher education today.

While faculty may be uncomfortable with, or opposed to, many types of sustaining change, increasing emphasis on research is generally viewed quite favorably². This is understandable on at least two grounds. First, most faculty come from a pre-selected group of individuals who like research and discovery, and thus chose to pursue a Ph.D. It is natural that most faculty would want to continue to follow

2 For example, a study that looked at attitudes of California State University faculty found that 55 percent wanted to do less teaching, and 85 percent wanted to do more research. (Social and Behavioural Research Institute, California State University San Marcos, February 2002, p. 23)

those early interests in their work. Second, research provides external visibility for individuals that teaching does not, and external visibility has many potential benefits.

Disruptive Change

Many of the most widely-discussed disruptive changes in higher education that would result in new business models are aimed at simplifying the current paradigm of interacting and overlapping generic business models, with the goal of minimizing costs and maximizing outcomes in each of them. Thus, for example, many proposed disruptive models completely do away with the research function, or both the research and socialization functions, in order to focus on and optimize learning. Others suggest keeping these functions, but having different categories of faculty who specialize in research or learning in order to better optimize those two functions. Finally, almost all disruptive proposals enthusiastically embrace new learning innovations, and optimize their new business models around one or more such innovations.

As discussed by Christensen, a new innovation is most likely to be used in a sustaining way by an existing organization, but in a disruptive way by a new organization. An example of this is online courses such as MOOCs. Within existing colleges, MOOCs are most likely to be used as 21st century textbooks, that is, as supplements to classroom discussions that are not greatly different from what one encounters today. In this case, MOOCs simply supplement a current process in a useful way. But for many of the new business models for higher education, MOOCs become a key resource, replacing traditional faculty or calling for a faculty with very different characteristics than those that prevail today.

In general, the proposals for disruptive change in higher education call for major changes in traditional faculty roles. But because of the key position that faculty hold in the management of higher education, it is understandably enormously difficult to get the buy-in necessary to bring about a disruptive change in existing educational institutions. In fact, the faculty's multiple roles in higher education's business model suggest that bringing disruptive change to an existing educational institution will be even more difficult than bringing such change to a typical corporation—where it is almost impossible.

Typically, the relatively few corporations that are successful in “disrupting themselves” do so by setting up some type of quasi-autonomous division that operates outside of the typical rules and constraints of the main company. Characteristics of such an approach can be found in Christensen (Christensen, 1997), Christensen and Raynor (Christensen & Raynor, 2003) and Govindarajan and

Trimble (Govindarajan & Trimble, 2010). Although similar experiments do not abound in higher education, two examples give an indication of possible approaches.

Southern New Hampshire University

Southern New Hampshire University (SNHU) in 2008 was typical of many struggling small colleges. Enrollment on the traditional campus was dropping and budget pressures were growing. In 2009, a decision was made to build up the small existing online program, SNHU Online, as an essentially free-standing entity that could seek to grow rapidly without many of the constraints typical to a university. Teams were built primarily with seasoned for-profit online experts, and everything possible in the process was measured and analyzed to produce continuous improvement. SNHU Online grew rapidly, and now has about 30,000 students and produces a hefty annual profit (around \$30M). Most of the profit is plowed back into improvements in the traditional campus, where facilities have been expanded and improved and enrollments are slowly growing. This institutional focus on innovation was formalized through creation of the SNHU Innovation Lab, whose latest creation is College for America, a fast-growing unit that provides competency based degrees to working adults, and partners with employers for workforce development. Thus SNHU has established disruptive enterprises that are essentially independent of its traditional business model, with the proceeds of the disruptive activities supporting the traditional activity and business model. Whether this separation will continue over time, or whether the disruptive lessons of the external elements eventually will be brought into the on-campus program to create a fundamental business model change, remains to be seen.

Massachusetts Institute of Technology

The Massachusetts Institute of Technology (MIT) and its offshoot MITx present a very different approach than SNHU. We are still a long way from knowing how it will work out, but it is nevertheless informative to consider. When MIT established MITx in 2011, its leadership was quite clear that one of its key goals was to use the lessons learned from MITx to bring transformative change to the traditional campus-based core of MIT undergraduate education.³ The university's emphasis on its campus-based program would not change, but the processes for providing that education could be radically different. Many faculty have been involved in MITx, and most faculty were involved at some level in MIT's earlier, and still continuing, online effort, OpenCourseWare, begun in 2002. Meeting the challenges of these two projects has led numerous faculty to think about residential education in non-traditional ways, as evidenced by the Preliminary and Final reports of MIT's Institute-wide Task Force on the Future

3 MIT and Harvard created edX in 2012 to offer online courses from their institutions, and began to bring in other institutions in 2013. MITx courses now are offered through edX, and MIT benefits from the “big data” learning research that is made possible by the increased reach of edX.

of MIT Undergraduate Education, published in Nov. 2013 and July 2014, respectively.

The Preliminary Report discusses breaking courses into various types of modules, enabling a disaggregation of the functions and processes of education, to be reassembled in multiple pathways and various temporal orderings. Gone are expectations of the “right” time-to-degree or the necessity of four years on campus. Terms such as “competency based assessment” fit naturally into the disaggregation discussions. While the Final Report is both more directed and less radical in some of its conclusions, its first recommendation moves in the direction of institutionalizing the kind of out-of-the-box thinking that permeated the Preliminary Report: “The Task Force recommends that MIT establish an Initiative for Educational Innovation to build on the momentum of the Task Force, enable bold experimentation, and realize the future the Task Force has imagined for education on campus and beyond.”

MIT has been moving along an interesting pathway for many years, at each step involving a large number of faculty in quasi-independent projects that increased their understanding of and appreciation for potential directions of change. This laid the groundwork for “bold experimentation,” potentially leading to a radically different model of campus-based education, one whose business model could replace (disrupt) the old traditional model.

New Entrants

A very different set of obstacles face new entrants attempting to bring entirely new business models into higher education. One of the primary obstacles is presented by accreditation, as discussed in the next section. Another obstacle is presented by the wide acceptance by the public of higher education’s current value proposition. As noted above, the excellent worldwide reputation of the American system of higher education has validated the status quo of its value proposition in the minds of most potential customers. Newer entrants are offering somewhat different value propositions, which must be explained and sold to some potential constituency. These new entrants usually seek to meet specific student needs in some way different from, or better than, that typically offered in the traditional value proposition, e.g. lower cost, greater convenience and flexibility, a just-in-time approach, or greater focus on specific career goals. They employ business models optimized around some new innovation, and consequently generally do not use many of the resources and procedures that are the well-entrenched surrogates for quality in the traditional model. Thus, quality in the new value proposition is the apple to the orange of quality in the traditional value proposition—that is, comparisons are difficult, especially if the customer is used to oranges. However, it is quite possible that further outcomes research will show that many of these oft-used

surrogates actually are uncorrelated (or even anti-correlated) with the most effective student learning. See, for example, Figlio, Schapiro, and Soter on the role of tenured versus full-time adjunct faculty in student learning (Figlio, Schapiro, & Soter, September 2013). If a lack of correlation between the surrogates and positive student outcomes were to be demonstrated, the barriers to entry posed by the traditional value proposition will be greatly lowered.

External Barriers to Change

Two different but interlocking “external” institutions influence change in higher education: government and accreditation. Accreditation began to appear in the United States in the late 19th century as a component of primarily regional voluntary efforts to define what colleges should be about. The first of these regional accreditors, The New England Association of Colleges and Secondary Schools, was founded in 1885. The regional accreditation concept gradually spread westward, and when the Western Association was founded in 1923 the country was fully covered by six regional accreditors. These accreditors (and other similar professional-school accreditors) are membership organizations, comprised of the schools that they accredit. Thus, the schools are the “owners” of the organization that accredits them.

The federal government maintained a fairly *laissez faire* attitude toward higher education until the end of World War II, when the GI Bill sent millions of new students into higher education at government expense. Vannevar Bush’s enormously influential report *Science: The Endless Frontier* (Bush, 1945) released at the time emphasized the role of education in creating “scientific capital” and argued that the government had an obligation to fund major research programs at universities. Increasing federal funds brought on increasing federal oversight: Upon passage of the Korean GI Bill in 1952, Congress decided to “outsource” educational quality control to the accreditors. Accreditors’ role in determining eligibility for federal educational funds was further strengthened by the Higher Education Act of 1965 and its subsequent reauthorizations. By then accreditation had shifted far from a voluntary process, since most institutions would have trouble surviving without federal educational funds. The Department of Education is responsible for “accrediting the accreditors,” that is, for determining which accreditors are reliable partners in maintaining educational quality. More on this in the discussion of government as a barrier to change below.

Accreditation

Since accreditors are membership organizations, it should come as no surprise that their accrediting standards and policies focus on maintaining and increasing excellence in higher education as it is understood by those members. As we have seen, definitions of excellence for higher education

include not only the value proposition but also the resources and processes used to deliver that value. Likewise, it is not surprising that accreditation pays great attention to resources and processes. Further, the members are, for the most part, deeply invested in understandings of excellence that reflect the status quo. The institutions themselves are most likely to incorporate innovations that sustain the current model, and reject innovations that would require significant change. Again, accreditors share the same perspective as their members.

Since accreditors are membership organizations, it should come as no surprise that their accrediting standards and policies focus on maintaining and increasing excellence in higher education as it is understood by those members.

The traditional role of faculty in overseeing educational excellence is either implicitly or explicitly factored into current accreditation standards. As a result, innovations that decrease the key role of traditional faculty tend to find little acceptance. For example, StraighterLine, a company that uses off-the-shelf online courses to replace faculty as a resource, is not eligible for accreditation. As noted above, most of the potentially disruptive changes currently being developed involve significant changes in faculty roles, and thus are highly likely to be viewed with little enthusiasm by most accreditors.

As a result, accreditation as currently carried out by its members is structured reasonably effectively to encourage and manage sustaining innovations, and to exclude disruptive innovations. Real disruptive change in higher education will probably have to wait for an alternative system of accreditation, one that is focused on evaluating new models using standards of quality that appropriately reflect the different value propositions they offer. But that won't happen without the approval and encouragement of the federal government.

Government

The first thing to remember about government is that it is all about politics and power. These attributes tend not to be favorable to innovation.

Determining institutional eligibility for federal funds is actually the responsibility of an interacting triad of players: the states, the Department of Education, and the accreditors. States have bureaucracies set up to approve various aspects of higher education within their domain, including giving authorization to issue degrees. State authorization historically applied to institutions physically located within

the state, but in many states has come to extend to online degrees originating outside of the state as well. The issue of state authorization came to the fore in 2010 when the Department of Education issued "Program Integrity Rules" (Department of Education, Oct. 29, 2010) that included sections on the role of states in assuring program integrity required for eligibility for Title IV funds (federal financial aid, Pell grants, and subsidized loans). There have been yearly "clarifications" of these rules, but they still remain in somewhat a fog, in part because of various court rulings.

Briefly, the integrity rules have two basic components. The first is the on-ground-rule: i.e., any institution that has an on-ground degree program in a state must be authorized by that state (authorized as defined by the Department of Education, and therein lies much confusion) to offer degrees. The second basic component is the distance education rule: i.e., any institution offering an online program in a state has to have the necessary approval of that state to do so. Together, these rules assure that it is complicated and expensive to try to operate either on-ground or on the internet in multiple states. Since much of innovation in higher education has to do with increasing enrollment over a large geographic area, the cost and complexity of getting approval state-by-state is a major barrier for start-up enterprises—and for existing institutions that want to expand their online offerings. WCET (WICHE Cooperative for Educational Technologies, where WICHE is the Western Interstate Commission for Higher Education) has created a State Authorization Network (SAN) to help participating institutions navigate through this morass, which lowers the barrier somewhat but does not remove it.

Another typical key role for state regulators is to oversee "noncompete" issues within the state, in which one institution, or type of institution, effectively owns some aspect of education. In such cases, other institutions that might offer an innovative approach or a better deal to potential customers may be prohibited from doing so. For example, in 2009 the Maryland Higher Education Commission vetoed a proposal by the University of Maryland University College to create an online graduate program for community college administrators because Morgan State University, also in Maryland, had a similar on-campus program.

Not unexpectedly, the role of politics in higher education becomes central at the federal level. Of course, Congress votes on levels of federal financial aid, and legislates additional criteria for receiving that aid, such as standards for institutional financial responsibility, bans on financial incentives for recruiters, and more recently, maximum cohort loan default rates. This process tends to be politicized because a large fraction of the typical legislator's constituents has experience with higher education, either directly or through a family member, and so they have some

sense of what it costs, what they think its value is, and how it should be done. Thus, higher education has a high-enough profile among constituents that it frequently is used by politicians—through support or criticism—in their ongoing campaigns for election or reelection.

An explicit indicator of the interest that Congress has in higher education is the make-up of the National Advisory Committee on Institutional Quality and Integrity (NACIQI), which advises the Secretary of Education on criteria by which to accredit accreditors, and on which accreditors meet these criteria. The membership of NACIQI is, by charter, chosen thusly: The Speaker of the House of Representatives names six members, three on the recommendation of the majority leader, and three on the recommendation of the minority leader; the President pro tempore of the Senate names six members, three on the recommendation of the majority leader, and three on the recommendation of the minority leader; and the Secretary of Education names six members. A stark reminder that politics is never very far removed from the accreditation process!

Given this political close-coupling, the underlying goals of the Department of Education regarding change in higher education are often unclear. For example, the same 2010 Program Integrity Rules mentioned above also contained a specific definition of a credit hour to be used as the basis of calculations for federal financial aid, that is, a credit hour is:

one hour of classroom or direct faculty instruction and a minimum of two hours out of class student work each week for approximately 15 weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time.

Since many of the new approaches in higher education don't directly involve seat time or semesters or trimesters, this definition was a clear defense of the status quo (or perhaps was already a bit behind the actual status quo in many instances). In any case, it made it very difficult to offer an education that was competency based, rather than seat-time based. Western Governors University (WGU) has offered an accredited degree since 2003 that functionally looks as if it is competency based, but that goes to great lengths to demonstrate to the Department of Education the "equivalent amount of work" in the credit hour definition. In 2013, in what appeared to be an important breakthrough, Southern New Hampshire University received the first approval from the Department of Education to offer a degree based specifically on outcomes through its College for America, without reference to equivalent credit hours.

The department subsequently encouraged other institutions to try this experiment, but made it clear that it will be very cautious in granting Title IV eligibility. Thus far, it has approved only one additional institution, Capella, to offer a truly competency based program. Unfortunately, the entire slow-moving process recently seems to have ground to a halt with the release of a Sept. 30, 2014 letter from the Inspector General (IG) of the Department of Education to Ted Mitchell, the Undersecretary of the Department. The IG reiterated the need to base accreditation on rigorous determination of credit hour equivalencies to learning outcomes. Back to the WGU situation of 2003!

The IG's report and numerous public comments from present and recent officials in the Department of Education seem to indicate that much of their caution in approving new approaches has to do with the potential of for-profits to exploit such approaches. Such caution could understandably arise because of the coupling of the Department of Education to the Congress, where a vocal component does not believe that for-profit higher education should exist. Whatever the validity of that belief, as we have seen above, innovations that potentially could disrupt the current higher education business model are most likely to be picked up by for-profit institutions because such institutions are designed around disruption. Unfortunately, by not approving approaches that are likely to be adopted by the for-profits, the department is denying the nonprofits that are being forced by difficult economic conditions to seek to disrupt themselves some of the very tools they need to succeed. It is also denying other institutions the ability to try new approaches that might be used effectively in sustaining ways. A better solution has been proposed by Horn (Horn, 2011): that is, to define what society would like to gain from the for-profit higher education sector, and then incentivize the sector to accomplish that. By doing so, the department could more confidently approve a much broader spectrum of innovations. In any case, it appears at this time that the Department of Education itself is one of the key governmental obstacles to major innovation in higher education.

Interestingly enough, one area where there is possibly political common ground for change is accreditation. In the *President's Plan for a Strong Middle Class and a Strong America* (Obama, 2013, p. 5), President Obama cites the potential desirability of "establishing a new, alternative system of accreditation that would provide pathways for higher education models and colleges to receive federal student aid based on performance and results." Similarly, Congressman Paul Ryan in *Expanding Opportunity in America: A Discussion Draft from the House Budget Committee* (Ryan, 2014, p. 49) writes that it is important to "make it easier for new accreditors to gain recognition from the Department of Education" with the goal of "disrupting the

accreditation status quo.” Numerous additional prominent politicians (primarily on the Republican side) have expressed similar sentiments. However, the Department of Education’s recent actions suggest that its ability to judge the validity of a new approach to accreditation would be limited by its narrow view of acceptable change in higher education. Thus, if the politicians really want substantial change in higher education, they probably need to start with one of their own agencies.

Conclusions

The resistance to change seen in higher education is, in general, quite similar to that seen in most organizations. Major disruptive change that leads to new business models typically produces new definitions of value and quality that most successful traditional organizations are unwilling to embrace as valid, even when they can see that customers increasingly prefer the new value offerings. Financial considerations also make most organizations resistant to major change, since in the short-term more success can generally be found by sustaining improvements rather than through fundamental change. Yet even minor changes to an existing business model can still meet with internal obstacles if powerful constituencies within the organization fear they will be disadvantaged by these changes. Overall, this universal resistance to change is simply a reflection of normal human behavior and simple laws of economics.

Critical aspects of higher education can make change significantly more difficult than in some other types of organizations, however. One such feature is that American higher education is viewed globally as defining excellence, leading to a mindset on the part of most within American higher education, and many of its customers, that the optimal model already has been achieved. This mindset carries over to the external gatekeepers, i.e., accreditation agencies and the U.S. Department of Education. Another aspect of higher education that makes change difficult is the complicated role of higher education’s chief resource, the faculty, which enables them to exert unusual control over change. In particular, the role of faculty in institutional management means that change cannot be mandated by an individual or governing board. Rather, it must be arrived at by a “collegial” process involving multiple constituencies—a process that in fact often is not collegial at all.

Several factors point to a potential lowering of barriers to change in higher education over time. One is the steadily increasing percentage of faculty who are not on a tenure line. Non-tenure track faculty typically have been hired to fill a particular role (generally either research or teaching), and are rewarded for demonstrated effectiveness in that role.

This represents an important breakdown of the expensive and inefficient coupling of solution shop (research) and value added (teaching) components of the traditional higher education business model. More important, non-tenure track faculty generally have far less attachment to the status quo than tenure track faculty, and are likely to be open to different priorities than those embodied in the status quo. As this group grows in size (particularly if a greater percentage of non-tenure track faculty are full-time) and influence over the educational function, it will create greater flexibility for innovation and changes both large and small.

Another factor in lowering the barriers to innovation is the movement toward outcomes measurement, whether through indirect measures, e.g. employment success and loan repayment rates, such as have been proposed by the President and the Department of Education, or through direct measures such as competency based learning. These measures will probe the value of higher education’s surrogates for quality, i.e., institutional resources and processes, in measuring the effectiveness of the educational process; should these surrogates be found to be of little value, many barriers to change would fall.

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Research shows that most organizational change in any sector flows not from pressure within, but from pressure without. Competitors typically provide much of the external pressure for change. The first generation of for-profit higher education organizations were on a typically disruptive path that could have led to considerable external pressure, but ran into a wall built in part by an ill-advised government emphasis on student enrollment rather than performance and outcomes. This often led to overly aggressive recruiting practices, with little concern for the ability of the recruits to successfully complete their studies. A new generation of both for- and nonprofit educational innovators is beginning to rise, focused on lowering costs and increasing student performance and outcomes. The rapid pace of technological innovation is driving continuing improvements in their products. With support from new accreditors, these innovators could begin to put pressure on many segments of traditional higher education.

American higher education underwent significant change in response to external pressures at the end of WWII, when a flood of new students—many from social, economic and demographic groups that previously had not participated in great numbers in higher education—entered the system. Simultaneously, federal research dollars began to flow to university researchers. Higher education's business model was redefined to respond to these pressures and trends, and in the process became far more complex. It has remained relatively static since then, as there was not much external

pressure for significant change over the ensuing half century. However, many current events and trends in the United States and worldwide are exerting considerable external pressures for change today. Most of these pressures will only grow with time, and many of them will be increasingly visible both politically and socially. Change is on the horizon, and the obstacles to innovation in higher education will be overcome one way or another.

About the Author

Lloyd Armstrong is Provost Emeritus and University Professor Emeritus at the University of Southern California, where he also was a professor of physics. He was Provost and Senior Vice President for Academic Affairs at USC from 1994 until 2005, a period in which the university greatly improved its academic reputation and financial strength. After leaving the provost's office, he joined USC's Pullias Center for Higher Education, where his research focused on the changes taking place in higher education. Prior to joining USC, Armstrong was dean of the School of Arts and Sciences at The Johns Hopkins University. In his retirement, he continues his higher education research and consults on higher education issues with a wide variety of corporate and university clients. Armstrong maintains a blog, Changing Higher Education, at <http://www.changinghighereducation.com>.

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