Making Sense of Disruptive Technologies and Higher Education: A Theory of Change, the Growth of Online Programs, and the Next Generation of Delivery Models

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“Invent the next delivery model that might put our growing online educational programs out of business.” That is the charge to the Innovation Lab at Southern New Hampshire University (SNHU) and even as our College of Online and Continuing Education (COCE) experiences meteoric growth in offering conventional online programs, the Innovation Lab, essentially our Research and Development group, is working on the Pathways Project. Pathways means to harness competency-based learning models, social networking theories and methods, self-paced learning, open educational resources, and strong assessment to offer a radically new degree program—radical in terms of price (our target is $4,000 for a two-year associate’s degree), precision of learning outcomes, and assurance of quality and mastery. It is a model that would have been unthinkable just ten or maybe even five years ago.

Many colleges and universities are announcing new online offerings ranging from systemwide and conventional efforts such as the $50 million University of Texas Virtual Camps to MIT and Harvard’s joint venture into MOOCs (Massively Open Online Courses), the awkwardly named edX.1 Many are doing so as a rear guard attempt to fend off new online competitors or to reassure worried boards of trustees (think University of Virginia) that they are being responsive to the changes in higher education. Indeed, the recent and implicit blessings of online education by our nation’s most elite universities is a signal that large scale online learning has fully emerged, is here to stay, and will be increasingly accepted as a respectable pathway to a degree. It may even signal that online learning can no longer be considered a “disruptive innovation,” even if many institutions feel threatened by it and unprepared to compete for online students.2 What we now know with certainty is that well-designed online education provides improved learning, better service to students, greater access to programs and resources, and improved economics to the provider institutions (though often little savings to students).3 In that
sense, online learning improves, extends, and sustains existing models more than it actually disrupts them.

However, even as much of traditional higher education is catching up with online learning as a sustaining innovation, next generation models are poised to more fundamentally change and disrupt higher education as we have always known it. Our industry, critical to the nation’s health and future in so many ways, is moving into a phase of disruptive innovation not dissimilar to what happened in the world of print journalism and the music industry. Those industries, like education, are fundamentally about the creation, curating, and consumption of information. Technological innovations thoroughly reshaped delivery systems, business models, and economics in those industries in ways that are still underway and not fully worked out. Education, however, is a more complex endeavor that is highly regulated and subsidized, and its paradigm shift is likely to be slower. But it doesn’t feel that way to a world that has remained largely unchanged since the 1400s.

Online education, as it has largely taken hold, is an evolution that may be giving way to a revolution in the ways we think about education. What follows is an attempt to provide context and a theory of change, to share some insights into large scale online education, and to explore the next generation changes now gaining traction.

How Did We Get Here?

Higher education has become an “above the fold” topic of national discussion, debate, and hand wringing. We live in a time of innovation, entrepreneurship, and invention driven by:

- The emergence of new technologies;
- An access and cost crisis;
• Frustration over the sector’s slow response to its critics; and
• The growing influence of a large for-profit sector that encompasses massive corporations and entrepreneurial start-ups.

Reformers and educational insurgents often cite Clayton Christensen’s theory of disruptive innovation to provide a framing narrative and theory for the change underway. His recent co-authored book, *The Innovative University: Changing the DNA of Higher Education From the Inside Out*, has found a receptive and widespread audience, essentially arguing for using technology to better serve students through business model reengineering and abandoning the status-chasing impulse that afflicts most academic institutions. The opportunity to rethink the delivery of education especially lies in theories of *disaggregation*, the process by which mature industries begin to unbundle all the value-added activities that were once vertically integrated. Michael Staton has ably described how that might look within higher education and cited many of the new third party providers now on the educational landscape.

Disruptive innovation, and the associated business model reengineering it implies, is a powerful heuristic for change. More often ignored is Christensen’s thinking around “jobs to be done” theory, outlined in his 2002 *The Innovator’s Solution*. The theory invites us to be far more precise in identifying what jobs our customers (students in our world, of course) are trying to get done when they buy from us and then urges us to use technology and build business models that deliver those solutions in the most effective way possible, removing the “pain points” and being thoughtful about where we add value. The new wave of higher education insurgents often criticize higher education, but are imprecise about what higher education “job”
they think is not getting done. After all, American higher education gets a lot of different jobs done. Just a sampling:

- In its research functions it drives improvements, new knowledge, and breakthroughs across a wide variety of fields (no one really is asking to disrupt this area);
- Residential undergraduate education provides a safe “coming of age” space where students are provided a learning/living ecosystem in which they ostensibly grow up (and the demand for getting this job done remains robust, even as the ability or willingness to pay for it erodes);
- Plugging students into a value-added network of alumni and fellow graduates that probably reaches its highest expression in the blue-chip selective institutions and has its payoff mostly after graduation;
- Workforce development functions providing job and career opportunities for learners, feeding a talent pipeline to employers, and supporting economic well-being in local communities;
- Helping adult learners without a degree and increasingly cut off from meaningful and good paying work find a pathway to better earnings when they achieve that sought after credential;

There are other jobs that higher education gets done, but the real point here is that what we disaggregate and how we disaggregate has a lot to do with the problems we think need solving and what jobs need doing.

One example that illustrates: three-year programs are a much discussed topic and they theoretically reduce the cost of an undergraduate degree by 25 percent, especially if the
curriculum is genuinely reengineered rather than simply adding more courses to a shorter time period and charging the same per-credit fee. However, despite the substantial savings, SNHU has struggled to attract more than seventy or eighty new students per year to its long-established three-year program. Then it dawned on us: the job we thought we were doing so well, saving a lot of money for families, is not the job our traditional age undergraduates wanted done. They had waited seventeen years and worked hard to get onto a campus. The job they wanted done was a combination of finding freedom, reinventing themselves, living with other young people, socializing, playing sports and joining organizations, and yes… getting an education. Our three-year program offered 25 percent less of what they mostly wanted, and while the savings are often appreciated by parents, students usually make the final purchase decision. It dawned upon us that we were essentially offering less value than the norm when viewed through the more precise lens of the jobs students wanted doing. We are now marketing the program differently, as a 3+1 that gives them all they want from campus life, but graduates them with a master’s degree in four years, not just a bachelor’s degree.

“Jobs to be done” theory is also helpful in imposing a kind of discipline on institutions. There has been a great deal of mission drift in higher education as institutions try to be more things to more people, often chasing status, Christensen would argue, and almost always adding expense. Does a community college need a gym and health clinic? Does a university focused on teaching need to decrease faculty course loads to support more scholarly activity? Does a four-year residential college that helps young people grow up need to launch an online program? Disaggregation opens the door to creating more specialized learning environments, with each attending to some more highly defined part of the overall learning landscape. New competency-
based providers like Western Governor’s University or our Pathways Program are explicitly
career and vocational-focused, for example.

Turning to large scale online learning, where most higher education innovation is taking
place, we should recognize that the job most adult learners want done is built around the Four
C’s:

- Convenience—can you provide it in a way that fits my busy life?
- Completion—how quickly can I get my degree?
- Cost—how affordable is the degree I seek?
- Credential—is it a degree or credential that will help me improve my life?

These are not exactly inspiring educational ideals, but they reflect the reality facing millions
of Americans. Life is finally telling these students to get a degree. Maybe because they work a
dead end job; maybe because they can progress no further in their workplace; maybe because
they want to do something different; maybe because it is a matter of personal pride. While there
are certainly some adult learners who enroll because they simply have a passion for history or
economics or as a long held point of pride, most seek a credential in order to get a better job. In
reality, with the erosion of the traditional liberal arts over the last decades, these adult learners
are not so very different than millions of their younger peers studying business, nursing, or
education.

In our increasingly have and have-not world, getting and keeping a good job has a
pronounced urgency, especially for poor and working Americans. In SNHU’s online programs,
66 percent of the students are Pell-eligible. The for-profit sector accounts for about 25 percent of
Pell Grant dollars. The point is that online education serves a disproportionate percentage of
poor Americans because those students have few other choices, illustrating another aspect of disruption theory. As Christensen points out, disruptive innovation often takes hold where the customer’s next best choice is nothing else. Poor Americans are least well-served by traditional higher education and so have increasingly turned to online education (though some unscrupulous for-profits have certainly sought them out as well). Because of one or more of the Four C’s (often all), the great majority of online students are not well-served by their local on-the-ground providers or have options that just don’t work very well for them. The ways in which they are not well-served has come to shape the way successful online programs think about disaggregation. Online providers get very focused on the jobs that need to be done, jobs not often well-addressed by traditional higher education. As online education has improved, more and more adult learners are flocking to it.

**Convenience.** In terms of convenience, non-traditional age students of the type just described have voted with their feet and moved from evening and weekend programs to online alternatives by the hundreds of thousands because we have essentially *decoupled learning and student service from place and time constraints*. As recently as five years ago, our site-based students would occasionally take online courses, but usually go back to their center for more of the traditionally delivered courses with which they began. Today, when students start at a center and then take an online class, they usually do not go back to the face-to-face format because of convenience. Our often romanticized notion of higher education (think long philosophical conversations over coffee and tweed) has not been the experience of most non-traditional learners who are more likely to race from work, rush to make a class, and then leave quickly for home to get ready for the workday. In an online program, the working adult no longer needs to
be at a given place at a given time. Because it can be decoupled from location or schedule, online education simply works better for busy learners juggling jobs, family, and soccer practices.

There is another dimension to convenience we too often neglect: comfort. We easily forget how intimidating the traditional campus can be for those not accustomed to it. Once we consider office hours that don’t align well with student needs, indecipherable acronyms, and a feeling of not fitting in, suddenly the campuses we love are often intimidating to this student demographic who are often unconfident learners. This notion of the unconfident learner extends to issues of preparedness and basic skills, as shown later, but it begins with the simple feeling of not fitting in. Couple ill-fit with poor or inadequate service levels and students can easily feel they do not matter and they will interpret that feeling as a reflection of their inadequacy, not our institutional shortcomings. Online education removes the hurdle of coming to campus and provides superior service (at least in the best cases) to create an easier on-ramp to learners. It is important to note that it can introduce the discomfort of using technology for some adults (being introduced to wikis, blogs, and tweets, for example), but adults choosing online learning tend to be self-selecting and good providers tend to offer 24/7 tech support and other easy to access guidance.

The brick-and-mortar impact of the shift to online delivery is enormous. Consider that our online operation at SNHU serves 13,000 students, but has an annual facilities cost of just $1.076 million (lease costs, utilities, and operations) while our traditional main campus serving roughly 3,500 students will cost us $25.9 million in debt service and operations this year. We recently built a beautiful new dining hall at a cost of $16 million and it has not improved the quality of education one iota, but it has helped drive up our traditional admissions. Parents often
ask, “Is there a food court?” or “Can we see the fitness center?” or “How long before my son or
daughter gets into the newest dorm and has a single room?” and in the very next breath, “Why is
tuition so high?” Because online education does not seek to perform the “coming of age” job, it
is relieved of the facilities burden and the enormous attendant costs.

Completion. In terms of completion, the real question being asked is “How quickly can I get my
degree?” Large Scale Online Programs (LSOPs) have more aggressively accepted prior learning
credits, have more transfer credit friendly policies, and are more ready to accept ACE credits and
give credit for training. More importantly, they have moved to shorter term lengths—eight
weeks is common—speeding students to degree completion and improving their own cash flow
in the process (six term starts per year effectively doubles revenue flow over the traditional three
semester schedule).

Cost. In terms of cost, after the capital savings described above, most of the savings in
educational delivery come from significantly lower faculty costs made possible by
disaggregating the traditional role of the faculty member. Until recently, the act of creating a
course, building a syllabus, identifying and assembling necessary content, outlining learning
activities, delivering instruction, intervening when students struggle, assessing student learning,
and perhaps revising the course on occasion rested with one person: the faculty member.
Collections of faculty members essentially mirrored that set of actions at the program level,
bringing their courses together in a cohesive whole—in essence a vertical integration of
functions. It has, with little exception, always been thus since the cathedral schools of the
Middle Ages, precursors to the earliest universities.
A closer look is merited. Most online education is provided in the third generation delivery models refined by the for-profit sector over the last ten years (the first generation was closer to correspondence schools and based on mail and later television/video cassette recorders; the second generation was the short-lived video-based systems of the 1980s and 90s). Since for-profits first set the stage, LSOPs, for-profit and non-profit, are now disaggregating the delivery of instruction with a vengeance. Subject matter experts (accounting for one large dimension of a faculty member’s role) working with expert instructional designers are creating high quality courses that will be taught by other faculty members acting as facilitators, a model going back to the 1960s and Britain’s Open University. With a more top-down business model in terms of academic oversight, as opposed to traditional campuses with traditional governance, and a displacement of faculty roles as just described, most LSOPs operate with few full-time faculty members and rely on adjuncts to deliver courses. In turn, the key emotional ties between students and the institution are more likely to be through advisors than through faculty members. Advisors, taking on a role now disaggregated from those traditionally performed by faculty, are usually assigned scores of advisees (one advisor to 300 students is a widely accepted benchmark) and work from a call center-like environment. They are paid much less than traditional faculty members, but often deliver superior support to non-traditional students.

A table might help illustrate the comparison of the two models and make clear where most LSOPs disaggregate:
Table 1: Comparison Between Traditional and Third Generation Higher Education

<table>
<thead>
<tr>
<th>Traditional Higher Education</th>
<th>Third Generation Online</th>
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<tbody>
<tr>
<td>FT faculty creates courses and programs.</td>
<td>Subject matter experts are hired to create courses and programs.</td>
</tr>
<tr>
<td>FT faculty delivers most courses.</td>
<td>PT faculty delivers most courses.</td>
</tr>
<tr>
<td>FT faculty provides advising.</td>
<td>Advisors provide advising.</td>
</tr>
<tr>
<td>FT faculty and staff provide learning support.</td>
<td>Third party tutoring often employed.</td>
</tr>
<tr>
<td>Expensive campus facilities.</td>
<td>Office space—not a lot.</td>
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Consider the cost savings that accrue when moving from the traditional to the new model of delivery. One example: using an average FT faculty cost of $116,000 (salary and benefits across a seven course load per year), a course release to work on a new course—not unusual in supporting course development—costs approximately $16,571. In contrast, our online operation employs subject matter experts (SMEs) for approximately $3,000. While we pay another $10,000 to develop the actual course, when it comes to the delivery of the course, the standardized course design allows us to effectively use adjunct faculty at $2,500 to $3,500 per course versus a FT faculty cost of $16,571.

Credential. LSOPs do no better or worse in offering credentials to this student cohort with two notable exceptions. On the positive side, online learning often provides access to programs not available on the ground through traditional providers, effectively expanding choice. Early generation distance education was designed to serve the geographically isolated. On the negative side, unscrupulous for-profit providers have been accused of granting near useless certificates and degrees, spurring calls for “gainful employment” legislation to curb the abuses.

What about the quality of that credential? LSOPs have found a way to better deliver on the Four Cs—convenience, completion, cost, credential—while driving out a great deal of cost. That success automatically raises concerns about quality for many critics of online learning.
However, we have more mechanisms for quality improvement in online delivery than in traditionally delivered higher education and there is much research to reassure us about quality. For example, at SNHU we have built tools that monitor classes 24/7, we collect data even at the assignment level, and we re-invest in improving courses (spending over $2 million in course revisions, for example) and faculty performance. Consistent with Christensen’s disruptive innovation theory, ten years ago we asked ourselves how we might someday make the online class as effective as traditional face-to-face classes. Today, as his theory predicts, the question is reversed.

There are other ways disaggregation is shaping online learning. LSOPs often turn to third party providers for tutoring support, 24/7 technical support, call center services for inquiry management, and, increasingly, IT infrastructure. Disaggregation theory posits not only the opportunity to use third party entities for those functions previously integrated, but also that those third party entities are usually more expert or effective in their respective functional areas. Well-defined service metrics and reporting can ensure that service to students is maintained at a high level while at a cost lower than the institution can achieve. There are some signs of a trend to tie compensation to eventual student performance on assessments, the real test of vendor efficacy. Traditional ground-based institutions can similarly outsource, but the online providers have tended to do so more aggressively.

Now it is important to remember what jobs LSOPs tend not to do well. For now anyway, they do not address the research job, the coming-of-age job, or the value-added network job. More importantly, they also do not address the cost job as well as they might. Many for-profits charge as much or more than their more traditional peers on a cost-per-credit basis and most non-profits use the surpluses of their online operations (typically running anywhere between 25 and
35 percent even after the assignment of indirect costs) to provide a cross-subsidy to their traditional operations. At SNHU, our online program provides a hefty surplus that in FY11 covered the near $4 million operational deficit on the traditional campus, provided substantial increases in grant aid to our traditional age students (a 50 percent increase from 2009 to 2011), allowed for a revision of 211 existing courses, and added to our small endowment. We could have offered the online programs at even lower price points, but chose to instead create a subsidy to be used in the ways just described.

We would also argue that online programs have not done a good enough job solving the unconfident learner challenge, a fact reflected in dismal retention rates for much of the sector and especially many of the large for-profits (though not much worse than many of the community colleges that serve the same students). All of that said, LSOPs by and large address the needs of non-traditional age learners better than traditional programs and have used disaggregation to create new business models that improve quality while cutting cost.

Even if we wanted to build more traditional campuses, we can’t, as a society, afford to do so (we’ve underfund the ones we have as it is); families can’t afford the cost of attending; and as we have seen, traditional campuses are designed to do certain jobs well, but not the job of serving adult learners and marginalized populations. Online learning is here to stay because it works.

The Next Generation of Educational Delivery Models

While many non-profit institutions see large scale online programs as a new paradigm for serving non-traditional age students, they are in fact now well established, well understood, and the
challenge for most non-profits will not be technical or structural. It will be a combination of hurdles that include:

- Culture change—some combination of governance, urgency, a passion for service, and accountability;
- Talent—success depends on skill sets that are largely absent in most non-profits; and
- Capital—it simply costs a LOT more to enter the online educational market.

If not pressed by cuts in state funding, loss of enrollments, and/or downward pressure on tuition increases (and upward pressure on discount rates) many if not most non-profits would happily ignore online learning. That said, delivering high quality online programs with excellent service to students is not truly innovative any longer, though it is disruptive in the sense that students have decided it gets the job done for them in more effective ways, and online programs will continue to grow and displace longstanding programs using more conventional delivery methods.

The next wave of truly disruptive innovation is emerging through an even more aggressive disaggregation of the business model than the one just described with LSOPs. Western Governors University (WGU) has moved emphatically in this direction with its self-paced, $6,000-per-year online delivery model. WGU has unpacked the traditional faculty role with sets of faculty operating in more highly specialized and functional silos—advising/mentoring; providing academic expertise to courses; conducting assessments—and with little of the shared governance work of traditional institutions. It turns to scores of third party content providers instead of creating its own. It also takes an emphatic step towards decoupling learning from time, allowing students to demonstrate mastery as quickly as they can and to move onto their
next course (financial aid rules around satisfactory academic progress make it harder to extend coursework indefinitely). While WGU foregrounds competencies more fully and takes pains to align them to employer needs, learning is still defined by courses (at least in practice) offered in a prescribed progression within each program. For the non-traditional student, WGU addresses the Four C’s exceedingly well, combining the convenience of most online programs with the ability to speed to completion, genuinely lower cost to students, and offer credentials well mapped to employer needs.

A wave of new educational start-ups is opening up new avenues for thinking about all or parts of the teaching and learning enterprise. A few examples:

- New companies like StraighterLine and New Charter University (NCU) are now offering self-paced courses and programs in the “all you can eat” pricing models. For example, StraighterLine offers its courses at $399 per course or $99 per month no matter how many courses one takes.

- Others are substituting peer-to-peer learning for the traditional role of the faculty in either delivering instruction or helping students struggling with a concept or task. For example, OpenStudy offers a free peer-to-peer environment of over 100,000 users helping each other across a range of topics, with questions typically answered in less than five minutes and the wisdom of the crowd correcting misguided counsel.8

- Alternative credentialing systems are starting to replace courses with competencies as units of knowledge. The “badges” movement is perhaps the best known, but elite MOOC providers are offering courses with “certificates” that are less than credit worthy, but still a signal of successful completion.
• More streamlined, online PLA services like CAEL’s LearningCounts are helping students get credit for what they already know.

• The open education resources movement is aggressively making content available for free, as are the MOOCs provided by elite universities (though there is every chance that these will be monetized in some way).

By combining these innovations, most made possible by technology, new delivery and business models will emerge that stand to more dramatically disaggregate and disrupt the traditional delivery models.

A further word on MOOCs is merited. At the time of this writing, MOOCs are very much in the news, especially with elite universities involved in new ventures like Coursera (Princeton, Stanford, Michigan, and Penn) and edX (MIT and Harvard), or spin offs like Udacity (founded by former Stanford superstar professor Sebastian Thrun). They are intriguing even in this very early stage because hundreds of thousands of students can take courses, often offered by (not really “with”) esteemed faculty, for free. Adding peer-to-peer forums, user groups, and other forms of interaction for students will enrich MOOC learning environments. Computer grading such as that used by Udacity may work just fine in many courses. Yet there are four issues with MOOCS:

1. Fundamentally, MOOCs seem to confuse delivery of content with education and learning and all the human complexity involved (the social aspects, motivation, the need for structure, the need for creativity and openness, the need for support along the way);

2. No MOOC provider has outlined a persuasive business model. They were started with massive infusions of capital from either large corporations or wealthy universities;
3. They seem to confuse brand value with actual credentialing. The former matters if you actually got into Harvard or Stanford and then gained a) the validation that you are worthy and b) the value-added network that those institutions provide. As for the latter, a transcript says you were smart enough in a course or collection of courses, but it doesn’t actually indicate what you can do. Think of the three core questions of hiring: Can you do it? Will you do it? Will we like working with you while you do it? A MOOC credential may only answer the first. MOOCs don’t offer much brand value and provide a lesser version of the degree.

4. They seem very unclear about who they serve and what job they think they are doing.

If MOOC providers can work through those four challenges, they might emerge as a new force in higher education, but they are far from there now.

The Pathways Project: SNHU’s Next Generation Learning Model

Our Pathways Project is an attempt to create a new, very low cost, high quality educational model; the pilot is slated for a January 2013 rollout. In May 2012 it was selected as an EDUCAUSE/Gates Foundation Next Generation Learning Challenge Wave III grant recipient. Pathways offers a two-year associate’s degree (assuming the equivalent of full-time enrollment) for just $2,000 per year and uses a very different educational model. Its key components include:

- Replacing courses with competencies as units of learning and the curriculum with the Knowledge Map, nintey competencies across five domains and at three levels;
• Giving students smaller, more easily mastered competencies at the outset to build skills and confidence;

• Assigning badges to each competency, certificates to the first two levels, and an associate’s degree at the completion of the third and final level (plans are to expand to a full four-year degree);

• Self-paced learning that takes faculty almost entirely out of the learning experience, relying instead on “learning guides” (mentors in the workplace or day-to-day lives of students) and peer-to-peer environments;

• More radically breaking the seat time/learning outcomes relationship allowing students to go as fast as they like, ala WGU, but also take as long as they need to master a competency.

• An insistence on open source materials and no textbook costs;

• A strong focus on evidence of mastery including clear rubrics for evaluation, third party assessments (we are partnering with ETS), and a portfolio to hold evidence of mastery.

Pathways disaggregates the traditional delivery model and moves a number of responsibilities to the learner, essentially a kind of “cost shifting” that allows a dramatically lower price. Whereas we previously provided physical learning spaces, those are now virtual spaces supplemented by the student’s workplace, home, or community center. Where we once shared the burden of mastery between teacher and student, now the learning is fully in the hands of the student and assistance comes from mentors and peers, not an expensively trained faculty member. The university “curates” the educational model, but once done it is infinitely scalable. We add value in designing and organizing the learning model (the aforementioned curating role),
providing the platform and tools, overseeing the assessments, and providing the accredited degree. We can do all that for $2,000 per student per year and be self-sustaining—at least we think so.

Returning to the “jobs to be done” heuristic, Pathways tries to better address two jobs that most LSOPs don’t do well (in addition to lowering the price of a degree program). The program wants:

1. To better support unconfident learners by bringing education more fully to where they work and live through the use of corporate and community partners, by leveraging social networking theory and tools, and giving students early small “victories” to build confidence;

2. To provide employers with greater reassurance about students’ genuine mastery of competencies at a time when a degree is no longer an accepted proxy for even basic skills like communication, quantitative reasoning, or basic computer use.

These are important jobs and they receive too little attention in our national debates about access, completion, and quality. While we know that tens of millions of Americans need a postsecondary degree, we often forget that many are unconfident learners with a hundred good reasons not to enroll and two hundred to drop out once they start to struggle. They are not breaking down the door to attend and they often bail out once enrolled. Yet self-paced models require drive and discipline that may elude many learners, and online learning can feel isolating; both contribute greatly to the often poor persistence rates of LSOPs.

The new models of delivery have to be much better at addressing the challenge of the unconfident learner. Disaggregation can lower cost and improve quality, as outlined earlier, but
most of the disaggregated delivery models have thus far ignored the support that their students require. Not academic support so much—that has been accounted for in many ways—but the emotional and psychological support that is often needed, as well as the simplest coping and learning strategies that the most marginalized students often lack. Pathways moves to more emphatically explore the ways self-paced learning models can drive persistence through the use of social capital and social network theories. Online learning is not the answer to our higher education challenge if it merely succeeds in enrolling students but then not graduating them.

Higher education is facing discomforting questions about how much students actually learn, most recently in Richard Arum and Josipa Roksa’s much-discussed study * Academically Adrift.*\(^{10}\) The book suggests that far too little learning actually takes place on American campuses. This unsettling notion confirms what many have come to believe: that a college degree can no longer be trusted as a proxy for a range of knowledge and skills—writing, critical thinking, quantitative reasoning—and too many students who graduate from college remain poorly prepared for the workplace no matter what their transcripts suggest (a longstanding and growing employer complaint about much of higher education). With Pathways, employers get a detailed map of the student’s competencies, excellent third party assessments, and the ability to go into a portfolio and see for themselves the evidence of mastery. The great bulk of college transcripts cannot touch this level of transparency and reassurance. Pathways is still in development and has yet to be tested, but if we have it right we will be able to better serve non-traditional learners, dramatically lower cost, and demonstrate genuine mastery of competencies that matter. Early reaction to the model from employers, state officials, and others has been enthusiastic and eager.
The Challenges Ahead

The for-profit sector has led the way in online education and a handful of non-profits are getting to scale, but we are still early in the process of change. While most American universities and colleges are doing online courses and programs, few have yet developed large scale online operations. Many are still grappling with online education as it has matured and not yet with the new emerging models. A number of formidable challenges face us as an industry.

*What happens when online technology creeps onto traditional campuses?* This analysis has thus far focused on non-traditional age learners and the jobs they need to have done, showing how disaggregation of the traditional delivery model, mostly enabled by technology, is dramatically reinventing educational delivery for this cohort. But innovation for one class of customers often makes its way to other cohorts. In Christensen’s model of disruptive innovation, the new disruptive service or product improves in quality at a faster rate than the incumbent service or product so that the innovation starts to climb up market, displacing the incumbents at each successive level.\(^{11}\) Consider that notion in the context of traditional age students and new possibilities for reconfiguring the business model start to emerge. For example, one might imagine intentional student communities decoupled from learning. Those communities could be where the coming of age job gets done, while the mastery of knowledge and competencies (the learning job) is provided online or through experiential learning models like our new College Unbound Program (where students do project-based learning in the workplace and the classroom is an as-needed supplement to their learning). BYU-Idaho has re-imagined its residential campus experience and disaggregated the traditional faculty role, allowing it to redefine classroom time, use peer-to-peer learning, and focus faculty on learning “interventions.” One can imagine more
radical attempts at the exercise. Traditional campuses may very well be forced down that path by the new generation of students who have only ever known and navigated a world shaped by online technology.

**What happens to the traditional full-time faculty?** The new emergent models greatly displace the traditional role of the faculty. WGU creates subsets of faculty. BYU-Idaho removes the generative scholarship role. Pathways shifts the role to a curatorial or learning design function. Peer-to-peer learning removes the faculty altogether. Every industry that has seen the large scale deployment of technology has also seen a displacement of specialized labor. Higher education has seen a pre-technology wave of lower cost labor (teaching assistants and increasing reliance on adjuncts), but the new disruptive models stand to dramatically shift the faculty’s role to where their greatest value-add is realized: the *design* of learning, *evaluation* of content, and *creation* of new knowledge in research contexts. Increasingly absent will be teaching (at least at the first and second levels, while perhaps being available for the difficult learning interventions), assessment, and governance. Teaching at the highest levels within disciplines, at the doctoral level for example, may very well continue as presently constituted. There will continue to be traditional residential campuses where faculty members play traditional roles—SNHU’s main campus, what we call University College, is investing to further reify that model—but for the great bulk of higher education, the traditional model just doesn’t get the job done at scale and acceptable cost. This is, in many ways, an existential threat to the traditional role of the faculty member.
**How do we innovate in this regulatory environment?** While technology is making possible all kinds of innovative practices and the cost/access/quality crisis calls for change, higher education remains a highly regulated industry with deeply entrenched stakeholders fueled by their own powerful myths and narratives. Title IV funding can be made to better support alternative delivery models. The Department of Education (ED) is starting to think more openly about competency-based learning and alternatives to Carnegie Units as the sole measure of learning. The idea that taxpayers pay for seat time, but not learning, is antiquated. Financial aid rules around artifacts like last date of attendance, satisfactory academic progress, and “learning activity” need to be broadened. Add to ED’s focus on compliance the crazy quilt of state regulations regarding online learning and we hardly have a government environment conducive to innovation.

Finally, if we want traditional higher education to be part of the solution, we have to give it room to experiment and operate differently. Yet regional accreditation tends to reaffirm vertical integration and traditional models. For example, in our 2012 ten-year reaccreditation, our innovation and success was praised, but the bias of the report was to have us more fully re-integrate, failing to recognize that it was by disaggregating our business units that we were successful. Regional accreditation is fundamentally a reaffirmation of the status quo by incumbents. Both ED and the regional accreditors assert their support of innovation, but almost always within the rules as currently prescribed and genuine innovation cannot take hold under those conditions.

**How to balance the need for lower costs to students with the cross-subsidy pressure?** As has been outlined, LSOPs can deliver high quality education at a much lower cost, but those cost
savings have not usually been passed onto students. Though in our case, the surpluses in online revenue allowed us to increase institutional aid by 50 percent, adding more than $7 million to the annual scholarship budget (still a cross-subsidy, admittedly, but one that lowered costs for students instead of building our endowment). In the non-profit sector, the public institutions use the healthy surpluses generated by online divisions to offset cuts in state support while the tuition-dependent privates (that’s most of them) use them to offset declining net student revenues from traditional age campus-based students. The for-profits, by their nature, seek to maximize profit and shareholder value. So while most of them have no cross-subsidy pressure, they seek to keep profits as high as the market will bear. As a result, LSOPs have not yet resulted in substantially lower costs for online students.

That may change. How so?

- Next generation learning models are coming into the market at markedly lower price points. It is not yet clear that any of them have a sustainable business model and almost all of them require a dramatic reinventing of the delivery model—none of them quite proven—and volume enrollments. If these models gain traction, there will be downward pressure on price to students.

- Competition in online education will also work its magic. With more and more non-profits finally entering the online market and learning how to compete head-to-head with the for-profit giants, the latter will feel increasing pressure to compete on price. Fair or not, regulatory pressure and a harsh media spotlight have put the big for-profits back on their heels and have opened the window for savvy non-profits to grow. For example, in June 2012, Apollo Group (owners of Phoenix University) reported an 8 to 10 percent decline in enrollments for the fiscal year while SNHU saw a 125 percent increase in its
enrollment for the same period (and grew from 6,975 to 13,700 students in just two years).\textsuperscript{12}

- The emergence of MOOCs may presage an era when instruction and content are wholly free and students pay for other “add-ons” including credentialing, tutoring, advising, and so on.

None of these scenarios is certain. The new models are still struggling to establish themselves. The non-profits have a host of institutional hurdles and cultural back pull, and MOOC providers struggle to develop a workable business model. In turn, many of the for-profit incumbents remain highly profitable, have expansive cash reserves, and are both smart and agile.

\textit{Can the incumbent model disrupt itself?} In many ways, this was the startling question explored in Christensen’s original work. What he found in industry after industry was that the incumbent players were smart and well aware of the changes happening around and to them, but that their combination of business model, organizational structures, economic realities, and culture did not allow them to fend off the disrupting innovations that came to displace them. They weren’t dumb—they were trapped. The best they tended to do was employ the innovations late in an effort to preserve their place, not advance it or lead. This may be where traditional higher education finds itself today. It seems unimaginable, but think about those amazingly smart and seemingly unassailable companies that were upended by disruptive technologies: Kodak and Polaroid by digital photography; Digital Equipment Corporation and Wang by low cost desktop technology; myriad music store chains by iTunes; Borders and Barnes & Noble by Amazon, and the list goes on.
Higher education is admittedly more complex, as mentioned before. But aside from the elite institutions and flagship research universities (and really, Stanford, Harvard, MIT, and the University of Virginia do not have to spend a moment worrying about online education as a threat, no matter the pronouncements of their leaders), the great majority of colleges and universities stand to be disrupted. As Christensen found in other industries, the leaders of these colleges and universities know it and feel similarly trapped or at least challenged. In meeting after meeting I hear my colleague presidents grappling with the dramatically changing environment, some seeing online education as a life raft while the fiscal floodwaters rise about them, some grudgingly accepting it to hold onto market, and many genuinely enthusiastic about the possibilities for improved teaching and learning and access. Yet they face the incumbent challenge.

The strategy is straightforward in many ways and essentially outlined by Christensen (who incidentally sits on the SNHU Board):

- Create a new business unit or separate the one you hope to leverage and give it the “breathing space” to grow and compete within the new paradigm. Breathing space for most institutions means more flexible governance (minimally), policies and processes that make sense for it, and license to rethink the business model;
- Be unequivocally clear about whom you serve and what jobs they need done and build the business model to do those jobs;
- Hire the right talent, clear roadblocks, and get them resources;
- Serve the underserved markets first, ideally those for whom the next best option is nothing at all.
It is easier to do those things during healthy fiscal times, but then the pressure to innovate is not so keenly felt; when financial pressures do mount, there are fewer resources to divert to the new venture and a lot of resistance from stakeholders already feeling financially squeezed. It is easier if the institution is lower down the status ladder. Institutions that enjoy high status within the industry (or in their own minds) tend to resist innovations that are admittedly inferior at their start (as was early online education), fail to accept the improvements, and overestimate the security of their position. Faculty members, correctly recognizing their displaced roles in the new online business models, tend to resist the change or burden it with demands that prevent it from being successful.

SNHU has become an increasingly prominent player in online education because at least some of our ostensible weaknesses became strategic strengths. As a non-selective institution that had seen hard financial times and learned to be scrappy, there was less of the aforementioned status consciousness to get in the way. While the 2009 recession hit us hard, it also created a greater sense of urgency and we actually doubled our investment in growing online programs even as we made cuts elsewhere. We also had some strengths. We had been early developers of both continuing and online education and while those programs were modest in size, they gave us experience and a commitment to adult learners alongside our traditional campus programs. Many of our full-time faculty had taught in those programs and became supporters and participants. Timing helped. We started to grow just as the for-profits came under fire and the recession drove people back to school for retooling. We also worked hard to educate the campus, garner board support, share the gains (we have an award-winning benefits plan, have healthy raises year after year, and have re-invested in the traditional campus). We were willing to hire great talent, pay more for it, and shamelessly borrow best operational practices from the
for-profits (working with students at their preferred times, use of data, quick turnaround times, and active monitoring of classes) while eschewing those that earned that sector considerable and well-earned criticism.

The process was not without its tensions and there are still some skeptics on campus, but our traditional campus has benefited greatly from the success of our online program, and our online program has benefited from leveraging the assets of the traditional program. Keeping the two separate allows each to flourish in the ways they need to in order to serve their distinct student markets. While we would eagerly compare our quality controls and efforts to any of our peers, we still hear the “SNHU is becoming like Phoenix” barbs from some of our more traditional competitors. There is the occasionally voiced, “Is the tail wagging the dog?” concern, but in truth, any objective analysis would show considerable investments in a traditional campus that in many ways is becoming more traditional, not less. Of course, that then raises the question of “Are we making that traditional model even less sustainable and more dependent on online’s cross-subsidy?”

In reality, the operational prowess of our online group, much borrowed from the for-profits, is influencing operations on the main campus and making it more efficient, service-oriented, and able to support more students with scalable systems. The online program’s large marketing footprint has raised overall SNHU brand awareness and has had a “halo effect,” with record numbers of applicants to the traditional campus-based program. While there will likely be an ongoing cross-subsidy, we are nearing the point where it is established as a set amount and the traditional campus works to a greater level of self-sustenance within that budget discipline.
Seven Questions Institutions Must Ask Themselves About Online Delivery

Every institution is different (it is tempting here to paraphrase the opening line of Anna Karenina), so will forge their own answers to a set of somewhat vexing questions:

1. **How much savings will you pass on?** Online learning is undoubtedly less costly to offer and with *scale* there can be considerable margins. At SNHU we do a number of things. We provide a subsidy to the traditional campus. We reinvest in growing and improving the online operation (largely to the benefit of students). We build the endowment. We also address cost to students, providing millions more in scholarship aid and holding down tuition increases to CPI or less.

2. **How will you enter the online market?** The word “scale” is highlighted in the prior paragraph for a reason. Not so long ago an institution could enter the market with modest programs and small enrollment goals. However, the cost of offering online programs has risen for a number of reasons including:
   a. Higher service levels that have become the industry norm (for example: like many others we pay the $10 transcript request fee for our prospective students and chase down their transcripts, removing for them that hurdle to entry—but it requires money and staff);
   b. The cost of compliance is climbing as ED has invoked state registration rules, adding hundreds of thousands of dollars in fees as the market expands to more states, as well as legal fees (we have hired a general counsel and a full-time assistant to simply administer the processes, each wildly different from one another);
c. Cost of student acquisition remains high and is likely to climb as more competitors vie for leads. Student acquisition costs often hover around $3,000 when the full cost of marketing is accounted for and includes the advertising now required to break through the “noise.”

d. Talent is more expensive if you intend to compete with the for-profits. There’s more, but it comes down to capital and the ability to make the necessary investment. SNHU was lucky in terms of timing, entering the market when it could still do so at more modest levels of spending and then using growth to self-fund expansion. The cost and complexity of entry is now much higher.

3. Will you launch your online program within the institution’s organizational structure or as a largely separate business unit? It is no surprise that many of the most successful online non-profits have been launched as stand-alone or separate entities. Think about WGU or University College of the University of Maryland or SNHU. Yet governance, the desire to leverage existing resources (separation does mean some duplication of expense), and politics often steer institutions to integrated models.

Maybe most challenging are the four questions that are situated in the messiness of human nature and culture:

4. Do we know what we do not know?

5. Do we have the people we need to lead and deliver on the initiative?

6. Do we have a culture of accountability, urgency, data (most higher education institutions do not) and a true passion for student success?

7. Is it consistent with our mission, what we see as the institutional job we are trying to do?
The first three questions can be answered with money and business planning, but what we know about organizational change is that human nature, culture in the collective, is the most complicated and daunting of factors. The final four questions map out some of that murkier landscape.

All of the above begs the central question for any institution: Why should we offer online programs? If it is to learn more about the possibilities that come with new technologies, to improve teaching and learning, or to offer some additional choices for existing students, then even a modest online program can prove useful and possible. If it is to protect or gain market share and provide substantially new revenue streams to the institution, then the task is not an easy one any longer. And finally, again: Who are you trying to serve? Online learning is a long way from disrupting traditional campuses serving 18-year-olds (it doesn’t do that job very well) and if that’s the job you do, relax. If you educate adults, then you need to get busy.

Finally, why have we chosen to work on Pathways even as our online program grows nationally and allows us to dramatically improve the institution as a whole? Because the lesson in Christensen’s work and the one currently being played out across much of higher education is that at some point new disruptive innovations will come about. We think LSOPs have years of growth ahead of them given the enormous need for higher education and the comfort most people feel with a delivery model that largely mimics traditional education, albeit in a virtual space. That said, we want SNHU to be part of the next disruptive wave when the time comes. That means finding resources to support what is essentially our R&D effort, serving new markets not well-served by LSOPs, and giving the new business unit license to rethink not only what the traditional campus does, but also what our successful online operation does. In that sense, the Innovation Lab’s charge is to disrupt the disruptor. As Bill Gates suggested once, the changes
we will come to see in the next two years will probably be far less than the enthusiastic national discussion presumes, but in ten years we are likely to see higher education redefined, expanded, and improved in ways that are almost unimaginable.13 Traditional higher education providers have an opportunity to shape that future, but must remember the most basic rule about the flying trapeze: to get to the other side of the circus tent you have to let go of the handle that got you half way there, even as you reach for the one coming your way.
8 Alexia Tsotsis, “OpenStudy wants to turn the world into “one big study group,” *TechCrunch*, June 8, 2011.
11 Christensen, *The Innovator’s Dilemma*.