Transforming in an Age of Disruptive Change

Part 1: Back to the Future, Zooming to the Present

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Almost 20 years ago, the Society for College and University Planning (SCUP) published *Transforming Higher Education: A Vision for Learning in the 21st Century* written by Michael G. Dolence and Donald M. Norris. *Transforming Higher Education* (THE) served as a manifesto for how the teaching, training, experiences, and perspectives offered by higher education needed to be realigned with the needs of society and then redesigned, redefined, and reengineered (Dolence and Norris 1995). The following iconic diagram portrayed the interconnected nature of the 4 R's of Transformation used by Dolence and Norris. The 4 R's served as a lens through which to explore the elements of transformative initiatives that would move beyond the incrementalism of typical attempts to improve institutional performance one issue at a time.

Figure 1 **The 4 R's of Transformation**

Today, higher education is pressured to transform broadly and rapidly, partially because we have failed to achieve significant and needed change. We are starting to face multiple combinations of challenges. In previous decades, these challenges occurred singly and independently. If the multiple-challenge trend continues, then higher education could face a new "perfect storm": declining authority, unfavorable economics, new competition, and reduced career opportunities for new graduates. This could translate into declining value propositions for stakeholders all around. Taken together, these factors are truly disruptive to business-as-usual approaches in higher education. They call for fundamentally different strategies, business models, and emerging practices to deal with the Age of Disruption that extends forward toward 2020 and beyond.

Our perspective is that all institutions will need to reinvent their legacy programs and experiences in the face of these and other disruptive forces. Even the top "medallion" institutions and leading research universities will need to reinvent their core processes and practices and seek new revenues to establish financial sustainability. Less distinguished institutions will face existential threats if they cannot convince a more discerning public of the real value they continue to provide in the face of fresh alternatives. Community colleges will need to invent and scale fresh practices to serve the tidal wave of cost-conscious, pragmatic learners beating paths to their doors. Greater openness, flexibility, and adaptability will be required by all as American higher education moves forward to 2020.

This article sets the stage for this conversation by

- Revisiting what the future looked like in 1995

- Tracking other voices from 1995 to the present

- Establishing 2013 as our new vantage point for the future

- Reinventing strategies, business models, and emerging practices

- Getting started, getting it done

This article will be followed in April by an additional article for *Planning for Higher Education* titled "Refocusing the 4 R's of Transformation on 2020." That article will describe a revised set of the 4 R's of Transformation that will position higher education for success in 2020.

REVISITING WHAT THE FUTURE LOOKED LIKE IN 1995

THE began with a simple thesis: that global society was undergoing a fundamental transformation from the Industrial Age to the Information Age. Moreover, this paradigm shift required a realignment of all enterprises—including higher education—to the imperatives of this New Age of Disruption. For higher education, this translated into using Information or Knowledge Age tools—pervasive information and communications technology—to meet the needs of the New Age: universal learning throughout life, personalized and suited to current needs.

Clearly, this would require evolving beyond the so-called "factory model" of education, which was lock-step, based on seat time, and insufficiently flexible to meet the needs of lifelong perpetual learning. Further, the factory model focused on the teacher, not the learner, and on throughputs and outputs rather than outcomes. Moreover, while the factory model yielded certain efficiencies, it was still too expensive to scale to meet the global level of demand for basic and continuing learning required by the emerging Information Age.

To portray the elements of this transformation to the Knowledge Age, Dolence and Norris (1995) deployed the metaphor of "jump shifts" as shown in the figure that follows. These elements describe the requisite performance leaps to achieve the transformation in perspectives, policies, and practices required to align with the Knowledge Age. These jump shifts called for learner-centric, perpetual, just-in-time, personalized, and unbundled learning experiences along with the seamless systems, processes, and services needed to facilitate them. These principles resonated with educators grappling with the demands and challenges posed by growing populations of adult learners.

There were also dissenters. At the time, most college and university leaders of traditional institutions thought that higher education *was* responding to the needs of the times. And quite aggressively, thank you very much. In the mid-1990s, many institutions *were* undertaking retrenchment, reorganization, restructuring, and reallocation activities in response to resource shortfalls and changing learner demands. They were also responding to the increasing opportunities to serve growing populations of adult learners, primarily by using expanded and extended versions of traditional approaches.

However, these incremental changes were largely occurring at the margins. They did not redefine higher education's institution-centric approach or alter its fundamental business model.

Remember: Just because we are changing a great deal does not mean we are transforming.

Getting back to *THE's* basic thesis: To truly meet the needs of the Knowledge Age, it would be necessary to genuinely redefine, redesign, and realign higher education. That was why transformation, not tinkering, would ultimately be needed. Dolence and Norris made certain that a core element of *THE's* manifesto contained the admonition

It's as true in 2013 as it was in 1995. The difference now is that the colleges and universities of today are familiar with one form of academic transformation and should therefore find it easier to contemplate wider transformational change. The "canary in the mine" (indicator of change) is open (free) access to content. Examples of this include publishing in the Public Library of Science (PLOS) journals and creating or taking courses based on Open Educational Resources. Open access to knowledge could come next.

Figure 2 **Transformational Jump Shifts**

Source: Dolence and Norris 1995, p. 4.

TRACKING OTHER VOICES FROM 1995 TO THE PRESENT

At about the same time that *THE* was published, other voices were capturing the promise of the era. They called for fresh perspectives, new approaches, and organizational change. They triggered a series of movements and technologies that have continued and are growing in strength even today. These form a solid foundation for a revised examination of "Transformation in an Age of Disruption." The descriptions below present the nature of the suggested innovations in 1995 and how they have grown by 2013.

- **William Baumol and Sue Anne Blackman wrote "How to Think About Rising College Costs" in *Planning for Higher Education*,** which suggested that both higher education and health care needed to use technology to transform their practices and dramatically reduce costs—or risk becoming unaffordable for individuals and our nation (Baumol and Blackman 1995). Many applications of technology reinforce existing practices and actually increase costs rather than reduce them. Baumol's new book, *The Cost Disease,* explores why this continues to be a great problem today and into the future and what to do about it (Baumol 2012).

- **Carol Twigg and Robert Heterick founded the National Learning Infrastructure Initiative (NLII),** leading to pioneering work in leveraging technology to reinvent courses and change patterns of faculty-learner-mentor-peer interaction; this work grew through Pew Foundation funding into a widespread course redesign initiative by the National Center for Academic Transformation (NCAT) (see www.thencat.org). Hundreds of institutions have benefited. NLII lives on today as the EDUCAUSE Learning Initiative (ELI) and is focusing on the transformative potential of personalized learning environments and learning analytics.

- **The Sloan Consortium was formed in 1995 to advance the emerging practice of online and asynchronous learning.** Through the leadership of Frank Mayadas and his colleagues, this movement has grown over time to reach millions of learners worldwide and to raise the acceptability of well-crafted online learning experiences as "just as good as" face-to-face learning experiences (Mayadas 2009). Many institutional ventures into online learning started by digitizing existing learning practices and business models. However, later generation online learning efforts have taken more transformative approaches (Norris and Lefrere 2010). It is estimated that over five million students in the United States are today taking at least one online course.

- **In 1995 The Open University (OU) in the United Kingdom was recognized for having deployed a fresh strategy and business model for remote learning,** initially (since the 1970s) based on printed materials using a correspondence school approach combined with broadcasting and face-to-face tutorials, but later expanded online. The OU invested in high-quality learning materials developed by expert teams, which were sent out to remote learners who completed them with the support of mentors who were not subject matter experts and peer-to-peer interaction (see http://projects.kmi.open.ac.uk/osc/). In the 1990s, a variety of institutions serving adult learners were aligning their practices to the needs of the marketplace and to learners who wanted accelerated learning, schedules, and services more suited to adults. These institutions began to deploy variations on the OU strategy and over time introduced online learning and support services into the mix. Today, over a million learners in the United States engage in learning

through the revised business models offered by U.S. for-profit institutions and not-for-profits like UMUC and Regis University that deploy these techniques.

- **A rising professor named Clayton Christensen published "Disruptive Technologies: Catching the Wave" in *Harvard Business Review*.** This seminal article introduced the notion that disruptive technologies are seldom pioneered by market leaders in an industry since they cannibalize current offerings (Bower and Christensen 1995). Typically, disruptive experiences are offered by new or marginal players who address unmet needs and then leverage their position as their offering becomes mainstream over time. Christensen refined these ideas in other books and eventually applied them to the higher education industry in *The Innovative University: Changing the DNA of Higher Education from the Inside Out*. He has recommended that higher education encourage online education as a technology-based enabler of disruptive innovation (Christensen and Eyring 2011) and that universities transform their business models to support the research/commercialization of innovation and community-based learning.

- **John Kotter's 1995 article in *Harvard Business Review*, "Leading Change: Why Transformation Efforts Fail," was followed in 1996 by his book simply titled *Leading Change*.** Kotter (1995, 1996) pointed out the need to lead and navigate change in ways that would overcome organizational inertia and the importance of building compelling coalitions to support change. Since that time, his work has become the gold standard for launching successful, large-scale organizational change. His most recent work, "Accelerate!," in *Harvard Business Review* calls for enterprises to dramatically extend and speed up these efforts in the face of disruptive forces and multiple challenges and opportunities (Kotter 2012).

- **The technology environment of 1995 has morphed in ways that continue to amaze.** The World Wide Web, developed in the early 1990s under the leadership of Sir Tim Berners-Lee, was made accessible to the masses with the introduction and evolution of the Mosaic Web browser developed by Marc Andreessen at the University of Illinois in 1993. The continuing evolution of the Internet and the World Wide Web has created a seamless, global ecology of online interactivity and a sharing of information and knowledge that has exceeded the imagination of even its founders. Over time, Web 1.0, Web 2.0, and even Web 3.0 applications have developed, spawning a tsunami of knowledge sharing, social media, social networking, crowd sourcing, and communities of practice whose latent potential is waiting to be tapped for learning, competence building, innovation, and success making.

- **In his book *The End of Work*, Jeremy Rifkin argued that society was potentially entering a new phase in which more sophisticated software technologies would dramatically reduce the need for workers, even skilled professionals** (Rifkin 1995). Since then, this theme has been embraced by leading economists like Michael Autor at MIT and authors like Martin Ford (2009) in *The Lights in the Tunnel* in describing the so-called "hollowing out" of advanced economies as middle-level jobs are eliminated through the leveraging of artificial intelligence, productivity tools, and reinvention of processes/practices.

We can listen to the voices of 1995—Baumol, Twigg, Heterick, Mayadas, Christensen, Kotter, Berners-Lee, Rifkin, and others—and hear the promises and perils of the future. The development and acceptance of their ideas since 1995

illustrates the rapid advance of initiatives designed to create a totally new service or experience that meets unmet needs. They also suggest how difficult it can be to change existing organizations, especially if the new offerings challenge sacred cows.

So, *THE* served as a manifesto for the potential of a technology-enabled, truly transformative approach to higher education and the lifelong development of skills, competence, and know-how. Over the intervening years, the world of learning and work has changed a great deal. The compounding effect of many of the movements cited here has produced substantial progress and proof of the power of transformed learning and talent development. However, the pressures for change and the pace of change are accelerating.

Organizational and cultural resistance to change in higher education was the greatest barrier to the implementation of the principles espoused in *THE*, and it remains formidable today. As with academic publishing, the advent of open content makes it more obvious that educational practices have not yet been broadly transformed, and new alternatives to today's business models are challenging the prevailing marketplace leaders. The time frame for responding to such challenges is shrinking.

The next section explores how the higher education enterprise has changed since *THE* and uses today's world of learning, work, and competence building as the new vantage point for describing the future through the lens of the 4 R's of Transformation.

2013 IS OUR NEW VANTAGE POINT FOR THE FUTURE

William Gibson, author of *Neuromancer* (Gibson 1984) and other forward-looking, near-science fiction, observed, "The future is already here, it is just not evenly distributed." So it is with educational transformation: it is here in many places and in many ways but neither broadly nor consistently distributed. Its green shoots can be seen in many places, but its roots are shallow.

To the eye of the long-time advocate of change, the world of 2013 is chock full of both disappointments and causes for celebration. Every turn in the road holds another set of contradictory revelations. Looking through the lens of hopeful expectations crafted by *THE* we see that:

- **Information and communications technology (ICT) has transformed the way in which many people live their lives; it has been deployed to enrich all academic and administrative processes and experiences, but it has not yet been leveraged to transform educational practices, broadly speaking.** The communications element of ICT has had the greatest relative transformative impact on behavior. Technology has transformed the patterns and cadences of social engagement and the way people manage and fuse their personal lives, schedules, finances, work, and leisure. It enables people to interact with one another using smart phones, iPads, PDAs, and other gizmos in extraordinary ways. Leading institutions are devising more open policies for allowing the use of mobile technologies and bring-your-own-device (BYOD) approaches in campus communications. Over the next few years this will expand substantially as privacy and safety concerns lessen.

Technology has revolutionized knowledge sharing in research and innovation. While the casual walk-in observer of many face-to-face classroom experiences would detect only relatively minor changes from past practice, what goes on in the spaces between classes has changed more dramatically. Learners can interact online with faculty, peers, and formal and informal troves of online resources. Course information at most institutions has been digitized, and many leading institutions offer rich combinations of e-learning (digitized resources), hybrid learning combining face-to-face and online experiences, and fully online learning. Many online providers have embedded analytics and competence-based learning into their offerings to detect at-risk behavior and intervene to improve student success. These techniques are spreading and are poised to scale.

At the front of technology-enabled course design, NCAT's proven practices of reinvention and the substitution of technology for labor have been deployed successfully in many institutions, leading to enhanced productivity and improved outcomes. Moreover, many successful examples of active and experiential learning are working their way into course experiences.

Despite these examples of success stories and best practices, however, most institutions have not deployed these techniques in a systemic and systematic way. They have not taken technology-enabled innovation to an enterprise level. They have supported successful innovations, but they have not scaled or purposefully innovated business models in ways that could reduce costs.

Put simply, institutions have layered technology over existing practices, tinkering with them but not transforming them. They have sponsored individual innovations, but have not yet used their ICT investment to innovate systemically or to purposefully reduce costs. Christensen calls these sustaining innovations—they actually sustain current practices, making them more expensive. Most other industries are using analytics and technology far more transformatively, and we have far to go to catch up. But at least we have other success stories from which to learn.

Remember: Just because we are changing a great deal does not mean we are transforming.

- **From an economic perspective, the cost of education has continued to grow at unsustainable rates.** The cost of learning has continued to rise at rates greater than the starting salary of new graduates or the consumer price index, as has the cost of health care. Education and health care have come to consume a larger share of the GDP, straining both public and private finances (as predicted long ago by Baumol). These conditions have been exacerbated by the Great Recession and the resulting declines in family wealth and the job prospects of recent graduates. This situation will likely worsen over time.

  The financial crisis in higher education is multifaceted, involving learners, families, institutions, and governments.

  - Put simply, many students and their families can no longer afford a traditional college degree—and more and more are coming to that realization.

- Parents are increasingly concerned about cost.

- Further, the state of institutional finance is in a shambles. Across the United States, institutions are facing a sea of red ink caused by declining state support, increasing investments in costly campus amenities (an amenities arms race), burdensome institutional debt (as reflected in declining Moody's bond ratings), unrealistic instructional costs, plateauing tuition revenues, and intense competition for adult learners. Some institutional leaders are calling for "right-sizing" institutions in the face of growing online learning. Others are still investing in costly amenities to attract learners.

- State governments have been reducing the public investment in higher education since the 1970s. Neither federal nor state governments will have the resources to dramatically increase investment in education, research, and other infrastructure in the coming years.

One result of these conditions is that students are becoming much more concerned and discerning about the *real value* of what they receive from their education. This concern about value is validated whenever one talks with students applying today to the wide spectrum of institutions, from community colleges to medallion universities. Each learner creates his or her own value proposition based on a combination of factors:

Figure 3

$$\text{Value} = \frac{\textbf{\textit{Outcomes}} \text{ (Learning, Development, Employment) x } \textbf{\textit{Experiences}} \text{ (Meaningful)}}{\textbf{\textit{Cost}}}$$

Learners and their families are becoming much more discerning and demanding in their consideration of learning and developmental opportunities. They scrutinize outcomes, experiences, and costs. The financial predicaments foretold by *THE*, Baumol, and others in 1995 have come to pass in 2013. Moreover, we are running out of time for discovering and deploying solutions.

- **Fortunately, individual institutions and other learning enterprises have developed economical learning/developmental solutions, and these are poised to be taken to scale.** These prototype efforts take a variety of forms.

First, a number of institutions have created low-cost, accelerated, competence-based models for baccalaureate degrees. These institutions have changed both their strategies and business models to achieve these solutions. Much attention has focused on a variety of examples:

- Western Governor's University (unbundled resources, learning, assessment, and mentoring, $15,000 degree, 2.5 years);

- Southern New Hampshire University (competence-based, accelerated degrees);

- So-called $10,000 degree programs being developed by a variety of state institutions (Texas, Florida, Wisconsin); and

- Online programs offered by community colleges and other providers at market-competitive prices.

Second, many other institutions are using bridge programs, concurrent enrollments, and credit for prior learning arrangements to enable accelerated completion of baccalaureate degrees. Some are achieving a three-year baccalaureate in selected disciplines.

Third, many institutions, both public and private, are beginning to control costs by limiting tuition increases and introducing operational efficiencies. Enhanced articulation and awarding of credit to the growing number of transfer students will also help. In addition, some institutions are moving to needs-based financial aid, and some highly selective, well-endowed private universities are moving to free tuition for learners from low-SES families. Students are receiving better counseling on the true cost of college completion, and the demand for this will grow. Many states have implemented or are considering performance-based funding, paying institutions for successful completion, not enrollment, in an effort to improve success and reduce costs.

Fourth, community colleges are redoubling their efforts to serve mushrooming numbers of learners and improve student success through a variety of means:

- Improving remedial education and gateway courses using proven self-paced, personalized learning techniques;

- Enhancing advising, degree planning, learner relationship management systems, and the use of analytics to optimize student success; and

- Providing targeted collections of courses that shorten time to employment, enabling learners to achieve their associate degrees after they are employed.

Fifth, new learning and development providers are emerging to provide credits that can be transferred and cobbled together to reduce the time and cost of completion. These include course aggregators that aggregate course offerings from a variety of sources; providers such as StraighterLine that offer low-cost, transferrable courses; organizations like LearningCounts, which evaluates and awards credit for prior learning; and a variety of advising, career counseling, and success-making services being marketed by existing or new providers.

Sixth, some disciplines are limiting time-to-completion for graduate degrees, especially doctoral study. This initiative is likely to gain even greater strength in the near future.

These efforts are poised to grow considerably as families become more concerned about affordability. The best practices in this area can be rolled out to scale by institutions nationally.

- **Personalized learning is on the cusp of becoming a major, transformative movement; it is coupled with a greater interest in competency-based learning and the measurement of developmental outcomes. Moreover, analytics and performance measurement and enhancement have captured the attention of institutional leaders and are poised to receive even greater attention and investment.** Personalized learning environments with embedded learning analytics are being prototyped by many institutions. Substantial funding from the Bill and Melinda Gates Foundation and other sources is focusing on techniques and analytics to support the optimization of student success and to develop the interoperable technologies necessary to support open, transferrable learning and competence building that crosses the boundaries between institutions, other learning providers, and free-range, DIY learning. *The NMC Horizon Report* suggests that the combination of personalized learning and learning analytics will become a highly significant force within higher education within the next few years (New Media Consortium, forthcoming).

Personalized learning systems will require fundamental changes in the way we view teaching and learning. Tools will soon enable students, teachers, and advisors to know the learning profile of an individual learner, including past experiences, competencies, and test scores. This information can align with where the student needs to go in a personalized learning path that leads to successful course taking, one that is competencies- and mastery-based and mapped to the student's individual progression and pace.

These developments will impact all of education, K–20, but are being taken more seriously by K–12. At a recent conference, the American Society for Curriculum Development and the Council of Chief State School Officers met with the Software & Information Industry Association, SIIA (see http://www.siia.net/PLI/presentations.asp#summaries). Participants determined that we will need to redesign, redefine, and reengineer in five key policy-related areas:

1. Use of time (Carnegie unit/calendar)

2. Performance-based, time-flexible assessment

3. Equity in access to technology infrastructure

4. Funding models that incentivize completion

5. P–20 continuum and non-age/grade band system

Of the educational leaders at the conference, 91 percent very strongly or strongly agreed that "We cannot meet the personalized learning needs of students within our traditional system—tweaking the teacher/classroom-centered model is not enough, and systemic redesign is needed."

The application of analytics, predictive modeling, "big data," and the tools of continuous performance improvement in higher education is finally providing institutions with the ability to understand and optimize

learner performance. These offerings will enable institutions to enhance their investment in measuring, understanding, and improving the performance of individuals, departments, and the institution itself.

- **Most institutions lack the agility and resilience to transform their operations to align with the needs of the Knowledge Age.** Nothing in the training and long-term experience of our institutional leaders or the prevailing shared governance culture prepares institutions for rapid, enterprise-wide adaptation to truly disruptive changes.

In his essay "The Challenge to Deep Change: A Brief Cultural History of Higher Education," Sanford Shugart (2012) points out that "culture trumps strategy" (p. 2) and that culture-changing leadership must take seriously the deep roots of the attitudes and behavior of faculty and those institutional leaders who have come up through the faculty. It is not surprising that past successful efforts to change strategies, business models, and best practices have either created new institutions ("skunk works") where new approaches could be developed or have focused on new offerings that were not seen as substitutes for core institutional programs. Nor is it a surprise that most of the disruptive applications of the principles espoused by *THE* have occurred in a collection of new institutions, for-profit providers, and other new enterprises providing learning and development services.

This being said, the current disruptive forces and the existence of scalable prototypes suggest that we can hope for—even expect—better results from higher education in the future. Moreover, a cadre of existing institutions has demonstrated that traditional institutions can both create transformed business models and maintain their traditional offerings. For example, the Chapman University System was established in 2009 to build on Chapman University, a 150-year-old, fully accredited private university in Orange, California, by creating Brandman University, a separate, fully accredited institution dedicated to extending the Chapman education to working adult students online and through a network of 26 campuses in California and Washington.

While the literature emphasizes the threats that disruptions pose, it also talks about the opportunities they present. In a recent *Harvard Business Review* article, "Two Routes to Resilience," Clark Gilbert, Matthew Eyring, and Richard N. Foster argue that to reinvent themselves in a world increasingly characterized by disruptive change, organizations in all sectors should craft a two-track approach to transformation as the best path to organizational resiliency (Gilbert, Eyring, and Foster 2012):

- Transformation Track A (Reshape/Reinvent the Core Model) should reposition the core business of the enterprise, adapting the current (or legacy) business model to the altered marketplace. For higher education this means adapting existing programs, experiences, and outcomes to be competitive with emerging alternatives.

- Transformation Track B (Discover Future Business Model) should create a separate disruptive business to develop innovations that will become the source of future growth. For higher education this means discovering offerings to address new or unmet value propositions that were not possible in the past but that are now possible in the Web 3.0 world of the 21st-century Knowledge Age.

The demand for significant change in American higher education will require most, if not all, institutions to adopt variations of the two-track model to thrive in the years ahead. At the very least, institutions will need to take seriously the adaptations required by Track A in order for their legacy programs and experiences to remain competitive.

• **A deep gap exists between the sense of urgency felt by institutional leaders and that felt by the campus community—especially faculty.** Most institutional presidents and members of the cabinet are acutely aware of the urgent state of institutional finance and the difficult imperative of achieving financial sustainability in these times. Most executive officers also appreciate the challenges facing learner and family finances and the need for greater efficiency and effectiveness in their institution's instructional programs.

But on most campuses, the rest of the campus community—especially faculty—does not feel a comparable sense of urgency. After the initial rounds of budget rescissions and furloughs, many institutions have weathered the recession with enrollments at comfortable levels, even if the financial picture of the institution is not rosy. So why must we contemplate change that will take us way past our comfort zone?

Boards of Trustees are coming to the conclusion that the institutions under their stewardship may not be positioned to weather the Age of Disruption. While last summer's brouhaha between the University of Virginia's Board of Visitors and President Sullivan may have been a case study in how not to express a board's emerging belief that the times require greater dynamism and aggressive action, this incident mirrored similar conversations between boards and presidents across the nation—and globally.

On most campuses, undertaking a Track A and B reinvention program will require a commitment between the board and the president to push the campus community beyond its comfort zone, risking the slings and arrows of campus pushback in order to fulfill the responsibility of stewardship for the future of the institution in the Age of Disruption.

Leaders need to focus attention on making their institutions more *responsive and resilient*. Careful assessments over the past several decades of why enterprises fail have pointed to *strategic blunders* as the cause of over 80 percent of these failures. Being caught flat-footed by a major industry shift is the first category of such blunders (Dann, Le Merle, and Pencavel 2012). Institutional leaders should not dismiss the possibility of shifts in the education and knowledge industry.

Higher education institutions have weathered wars, depressions, and other calamities over the centuries. Some universities are among our most long-lived organizations (Keller 1983). But they have never been confronted by the "perfect storm" (Popenici 2012) of external factors that is affecting the decision calculus of learners and their families today and that may increase in intensity in the future: (1) increasing unaffordability of traditional higher education, (2) growing unemployability and marginalization of recent graduates, (3) continuing changes in marketplace conditions and the possible hollowing out of the economy in the long term, (4) emerging alternatives that can displace parts of traditional higher education, and (5) increasing desire of learners for a blend of real-world, practical, innovation- and entrepreneurship-rich experiences that many institutions may not be able to provide.

- **Why transformation? Why not cautious incremental improvement?** Terry Brown's essay in *Inside Higher Ed,* "In Defense of Incrementalism," sounds a cautionary note. Quoting a college administrator on change, "we don't do nimble," Brown (2012) calls for more thoughtful, less ready/fire/aim-style leaders and less rapid, sweeping action. The challenges may be great, but ill-considered, throw-the-spaghetti-against-the-wall approaches have sent people scrambling in different directions. The result has been institutional Brownian Movement, with different change efforts moving erratically, leaving everyone exhausted and frustrated.

Brown is right in several ways. Many institutions have responded reflexively and unwisely to the change imperative and future opportunities. The examples are legion. The first wave of online learning ventures launched by major medallion universities failed miserably—remember Fathom, Universitas 21, and e-University in the United Kingdom? They shot into the future like a laser—and missed. Moreover, other institutional efforts at change have taken a thousand-points-of-light approach and then failed to reward successful innovations and scale them to departmental and college levels, let alone enterprise-wide.

But our view departs from Brown's in two important ways. First, we differ in our understanding of the methods needed to build organizational capacity and successful offerings in disruptive times. Since the competitive environment does not contain ultra-agile organizations with dramatically superior cost structures, no laser shots into the future need apply; instead, there is time to create sound, well-understood strategies that can be followed and adjusted as necessary over five to seven years. These are created through expeditionary initiatives that are launched rapidly and continuously refined, attracting users and discovering how to fulfill changing learner value propositions. Rather than lengthy planning to launch programs that are expected to be immediately successful, a more proven approach is to rapidly launch prototypes that through five years of continuous adjustment uncover how to meet emerging expectations in ways that could not be foretold five years earlier. The current evolution of massive online open courses (MOOCs) is following this path.

Second, we differ in our comprehension of the strategic intent and scale of innovations. Most of higher education's innovations have been what Christensen calls sustaining innovations. They are layered atop existing processes, creating improvements but typically raising costs and failing to reinvent the core business model. The strategic intent of expeditionary innovations should be to reinvent the three types of business models (Christensen and Eyring 2011) found in higher education:

- Value-added processes (remedial, core, and foundational learning);

- Facilitated user networks (student services, co-curricular activities, and learning communities); and

- Problem-solving/solution shops (research, extension, community-problem solving, and entrepreneurship/innovation/commercialization of ideas).

Unbundled, redesigned online learning has been used to reinvent the business model for undergraduate learning; this has scaled to the entire institution in some settings. Facilitated communities of learning and

practice are being deployed to enable lifelong, continuing professional development at reasonable prices. New approaches to innovation, entrepreneurship, and commercialization are being prototyped to greatly expand the participation of students, faculty, researchers, and alumni, changing the business model and liberating entrepreneurial experiences associated with universities. Tremendous opportunities exist to leverage business model reinvention over time in many settings.

Part two of this Planning for Higher Education *article will be published on Friday, February 22: "Transforming in an Age of Disruptive Change Part 2: Getting Started, Getting it Done."*

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