Innov High Educ (2012) 37:373–386
DOI 10.1007/s10755-012-9218-z

In Search of a New Paradigm for Higher Education

David Schejbal

Published online: 6 March 2012

Abstract In this essay I argue that online education, artificial intelligence, and market pressures are driving higher education to adopt the industrial model and to find a new paradigm for delivering education at low costs. In addition, there is tremendous pressure from the federal government to make universities more accountable while making higher education less expensive and more accessible. I argue that in the future faculty members will not be engaged with students in the ways in which they have historically been engaged and that the structure and operations of higher education institutions will be very different. New, potential paradigms are beginning to emerge.

Keywords Online education · Industrial model · Disruptive innovation · Paradigm shift

Background

Public education has been beaten up a lot lately. According to Rush Limbaugh, educators are "a bunch of people who feel entitled to be free-loaders" (Limbaugh 2011). Others have used even more derogatory terms. "Teachers in our public schools are looked upon as leaches, parasites, and bloodsuckers, getting paid all summer for doing nothing" (Tales from the old-timer 2011). Politicians have vilified K-12 teachers as lazy, incompetent, and dependent on the government dole; and higher education has not been spared the insults either. The rapidly rising costs of tuition and a general lack of understanding of the functioning of higher education have turned the public against colleges and universities. Although higher education is still seen as important, there is a sense that it is inefficient and should change: We should be able to educate better, faster, and cheaper just as we can make toasters, televisions, and information better, faster, and cheaper.

The relationship between higher education and the general public is historic, complicated, and strained. On the one hand, people recognize the importance of higher education and the positive impact it has on people's lives. According to a report prepared by Public Agenda, a

David Schejbal is Dean of Continuing Education, Outreach and E-Learning at the University of Wisconsin-Extension. He received his Ph.D. from the University of Connecticut; and his research interests include alternative models of higher education, online education, and the sustainability of higher education.

D. Schejbal (✉)
Continuing Education, Outreach and E-Learning, University of Wisconsin-Extension, 5602 Research Park Blvd., Madison, WI 53719-1245, USA
e-mail: david.schejbal@uwex.edu

public opinion research and engagement organization, there is "a steady increase in the percentage of people who stress that higher education is a career and social necessity. For many people, a college education is not just desirable but, in effect, the only path to a good job" (Immerwahr and Johnson 2007, p. 2). Federal Reserve Chairman Ben Bernanke (2007) expounded on this view:

> A substantial body of evidence demonstrates that more-highly-educated [sic] individuals are happier on average, make better personal financial decisions, suffer fewer spells of unemployment, and enjoy better health. Benefiting society as a whole, educated individuals are more likely to participate in civic affairs, volunteer their time to charities, and subscribe to personal values—such as tolerance, and an appreciation of cultural differences—that are crucial for the healthy functioning of our society. (pp. 1–2)

At the same time, the costs of higher education coupled with a widely shared view that higher education is overpriced, inefficient, elitist, and inaccessible has pitted the public against higher education and translated that tension into political squabbles and an increasing lack of public support.

It has not always been like this. The years from 1945–1970 are often referred to as the "golden age" of higher education, a time marked by prestige, prosperity, and popularity. That era ushered in rapid enrollment growth and broad public support. Prior to the Second World War, enrollments in colleges and universities were just under 1.5 million. By 1970, enrollments were 7.9 million.

> The fundamental historic change that set into motion the dramatic expansion of enrollments as well as numerous curricular innovations was that higher education had come to be a major focus of attention in the formulation of public policies at both the state and federal levels. This was in large measure a sign of recognition by government agencies and the American public that higher education had been effective and engaged. (Thelin 2004, pp. 260–1)

By the late 1970s, however, the mood of the public had begun to change; and in 1980 the Reagan era ushered in the Me Generation. Over the next three decades, our focus shifted from attention to the public good and meeting national goals to reducing taxes and maximizing individual wealth (Smith and Bender 2008).

> Beginning in the 1980s, [higher] education lost much of its intrinsic value; it was discussed more and more in terms of the market, as an individual investment in human capital. Increasingly higher education was treated as a private good, a product to be purchased for personal benefit, hence the notion of student loan programs, which amounts to a capital investment in oneself, in contrast to a scholarship signifying a collective investment in a public good. (p. 9)

As Ronald Reagan campaigned for the presidency of the United States, he declared the government to be the problem and not the solution; and the public happily agreed. Soon thereafter, many Americans grazed on credit, forgot about saving money, and lived large. Higher education stopped being about bettering the United States and the world and became focused on bettering *me*. The costs of higher education increased because expectations changed, and higher education wanted to live large too—bigger labs, bigger buildings, all the bells and whistles. As Thelin (2004) noted, higher education became commodified, and students became customers. As such they demanded swank accommodations and facilities.

> Dank, sweaty gymnasia were replaced by state-of-the-art health and fitness centers that rivaled Club Med. The Spartan dormitory, characterized by cinder-block walls, a

> pay phone in the corridor, and public bathrooms was replaced by apartment suites complete with kitchens, lounges, and ample wiring for stereo systems and, later, computers. (p. 327)

The rankings organizations fueled the fire. The schools that generated the most applications and turned the most students away won the game. All of this happened while public support for government eroded, and support for public higher education also eroded. Still, the bills had to be paid; and, because higher education had become a personal investment, it only seemed right that students should pay.

We are now four years into the Great Recession, the jobless recovery, and the edge of the double dip; and many Americans cannot afford to go to college any more.

> Today concerns are at their highest point since the recession of the early '90s, when many Americans feared that college was out of reach.... The research suggests that many people feel personally vulnerable to rising costs of higher education. A majority believe that the middle class is hardest hit when it comes to college expenses, which is particularly noteworthy because most people classify themselves as roughly middle class. (Immerwahr and Johnson 2007, p. 14)

As the economist Paul Krugman (2009) pointed out, the 1999–2009 decade was a decade of "zero." During this decade there were virtually no economic gains: The stock market was more or less at the same level in 2009 as it had been in 1999; job creation was flat, and private sector employment declined for the first time on record. Home prices at the end of the decade were about where they were in 1999 (p.27). We borrowed to make up the difference and believed that we could borrow forever because our equity would forever grow. We were wrong.

Today people are scared, and their fear translates into anger because anger feels more empowering than fear. Specifically, 71% are scared, according to a CNN poll; and 72% are angry (Hallett 2011, p. 5). We cannot go back to focusing on the public good because as individuals we refuse to take responsibility for our collective actions. CBS, NBC, ABC, CNN, and a number of newspapers, periodicals, and other media outlets have reported stories and recounted interviews that have the following common refrains. "It's not my fault that my house is under water. It's not my fault that I don't have any savings. It's not my fault that I can't send my kids to college. The banks lied to me; the government screwed me; the universities dissed me. I now want to stick it to them, so I'm going to vote for anyone who pledges to keep more money in my pocket by reducing my taxes. Never mind that my actions undermine any hopes of strengthening the public good. It's about *me*, and I'm mad as hell, and I'm not going to take it anymore...."

Those of us who work in higher education are not blameless. We bellied-up to the trough like everyone else, and we ate whatever we could stomach. As a result, we grew fat and complacent, and our stomachs expanded. We are now constantly hungry and begging for more food. Is there a solution?

It seems like there should be. We should be able to engineer our way out of this mess, just as we have engineered our way out of other messes in our past.

The Impact of Industrialization

We have come to expect the means of production to become increasingly more efficient because that is the success story of capitalism and the industrial process. Simply put, the industrial process turns what would be an expensive item when made as a traditional craft

into a cheap commodity by mechanizing the means of production. In other words, the industrial process allows us to manufacture things much more quickly and cheaply than the traditional process whereby craftsmen built things individually. It is mass production for mass consumption. Today, nearly everything we consume is made by some version of the industrial process.

The industrial process is not new. We have had more than two centuries to get used to it, perfect it, and come to rely on it; and it is not a process that exists in isolation. It is part of a holistic economic and social transformation that took place over a long period of time. It began during the Industrial Revolution and over the years has become an inseparable part of daily life. We experience the world today through an industrial process lens; it is an essential part of our worldview.

We have fully accepted the industrial process because it is extremely efficient and effective. For instance, the standard of living of people in the U.S. has increased exponentially over the last two centuries. The GDP from 1820 to 1997 increased more than 21-fold, and life expectancy more than doubled (Steckel 2010, pp. 1–2). Much of that is due to new, machinery-assisted ways to produce food that have made the price of food relative to income drop dramatically. In 1900, the average American family spent 50% of its income on food, and more than half of the American workforce was engaged in farming. By 1930, food costs dropped to 24% of family income. Today, food accounts for just 8% of household income and only 2% of the labor force (Gawande 2009, p. 4). The reductions in the relative prices of food allowed people to buy other goods, and that put more fuel in the economy. This cycle continues today with all kinds of commodities, including household goods, automobiles, and even houses. Of course, the cycle also includes labor; and through mechanization much more can be produced with far fewer workers, thus further increasing productivity while reducing the costs of production. This has had and continues to have highly disruptive social consequences, but it is part of the industrial process and the logical basis of a capitalist economy.

Increasingly, we have come to use the industrial process and its related offshoots as a monocle though which we evaluate and judge all aspects of our society. Better, faster, cheaper is the motto; and the better, faster, and cheaper we produce goods, the more we want to increase those variables in all aspects of our lives. We have come to expect that tomorrow *life* will be better, faster, and cheaper than it is today. Industrialization has become the *Zeitgeist* of our time.

Technology supports these expectations. We have incredibly simple and fast access to information, our health has improved due to technological innovations, and even our financial systems have been augmented to use technology to create increasingly more wealth. Where is higher education in all of this?

Higher Education and the Industrial Model: The Early Years

It seems that the industrial model should be applicable to education. After all, we apply it to just about everything else. However, education has not been subject to the scrutiny of the industrial paradigm until relatively recently. Although there were efforts to "modernize" higher education through correspondence study that date back to the middle of the 19th century, those efforts were focused mainly on increasing access to a college education rather than on reducing costs or improving efficiencies.

In the early 1960s, technology began to creep into educational delivery. "Instructional Television Fixed Service (ITFS) came on the scene in 1961 when the FCC issued an

experimental license to the Plainedge School System on Long Island.... Public School districts used ITFS for sharing specialist teachers and providing teacher continuing education courses" (Moore and Kearsley 2011, pp. 30–31). Through the next two decades, the use of technology in delivering education expanded commensurate with the development of new information conveyance systems. Instructional delivery via correspondence, television, radio, telephone, audiotapes, and similar technologies marked the evolution of distance education in the 1960s and 70s. It was at this time that efficiency and cost savings began to creep in as some of the criteria for moving education in this direction. Interestingly, however, most of the very large efforts to expand education to large numbers of students happened outside of the U.S. The British government established the Open University in 1971. It is a distance education institution, offering no face-to-face courses. To date, more than two million persons have accessed higher education through the Open University. China, India, Pakistan, Turkey, Iran, and other countries have also created national distance education universities to bring higher education to their citizens. Enrollments in these national institutions range from the hundreds of thousands to the millions; and, although they have now embraced the internet as a delivery mechanism for education, they continue to utilize nearly all forms of delivering instruction at a distance.

In the U.S., higher education has been and continues to be a public, state-based process in combination with large numbers of private non-profit and for-profit institutions. There are no large, national initiatives akin to what has happened in other parts of the world, and there has not been a public outcry for a national focus on higher education. The most significant national effort in American higher education was immediately after World War II with the GI Bill and broad concern about national security. At that time, higher education was seen as a pivotal component in a national defense effort. In 1946, Harry Truman appointed a Presidential Commission on Higher Education to define the responsibilities of colleges and universities in the U.S. "The significant feature of this endeavor was that it marked the first time a president of the United States deliberately extended federal inquiry into nationwide educational issues.... Particularly interesting was the rationale that higher education was integral to the national interest" (Thelin 2004, p. 268). Although the Commission found that higher education was critical for national security, social welfare, and economic growth and it encouraged more opportunities for access to and achievement in higher education, it did not recommend a national higher education system or a national university.

The Increasing Industrialization of Higher Education

In light of no clear, national direction for higher education, higher education is now struggling to fit into the industrial paradigm. Faculty members do not want to do it. The predominant academic paradigm is still rooted in the 19th century, and it is very slow to change. As Jeff Selingo wrote recently in the *Chronicle of Higher Education*:

> While amenities and services on campuses have been redesigned in the last decade with students clearly at the center, the core of the academic experience for students today is almost exactly the same as it was for their parents decades ago. While other industries have been able to find productivity gains without sacrificing quality, on most college campuses we still have professors at the front of a room at a table with an average of 16 students in front of them. (Selingo 2012)

Higher education has not undergone the kind of disruptive transformation that we have seen across the world in manufacturing, communications, and other sectors. In this regard,

faculty members live a dual existence. They live in a 21st century society, one that is highly dependent on mechanization and automation, one in which everything is plentiful (at least in the first world), one in which labor costs are continually being reduced, and one in which workers are all too frequently being replaced by machines or cheaper workers in other countries. Yet faculty members continue to conduct their work as artisans. Each faculty member is an independent creator. Intellectual property is sacrosanct, nonreplicable, and highly ethereal. Once spent in a classroom, it has to be re-created by the artisan him or herself.

Until recently, the unique role of the faculty, coupled with significant limitations in artificial intelligence, made the industrialization of higher education a remote possibility to be worried about sometime in the distant future. However, the future is now here; and a perfect storm is on the horizon for higher education. State and national governments are weak, and political processes are contentious and fractious; unemployment is high, the economy is bad, and people feel poor. Public support for anything is rapidly eroding; higher education is expensive, and it is becoming inaccessible to many because costs have outpaced inflation for years. Artificial intelligence is no longer science fiction; and the capitalist quest for better, faster, and cheaper is driving change. In a special report, *The Chronicle of Higher Education* asked Marc Bousquet, author of *How the university works: Higher education and the low-wage nation,* how he believes that job satisfaction and the expectations of faculty members will change over the next 20 years. His response was "Look at the tenured colleagues to your left and right. Imagine them gone. At the present rate of decline, the next two decades will see the percentage of tenured and tenure-track professors plunge into single digits." In the same piece, Anthony Grafton, Professor of European History at Princeton University, was asked the same question. He responded stating "Twenty years on, the humanities workplace will look and be worse. In recent decades, competition for stars in the top tier of research universities…has resulted in high salaries and low workloads for a fortunate few. Meanwhile, conditions for most humanists have deteriorated." Adding his voice, Joseph Hermanowicz, author of *Lives of Science: How Institutions Affect Academic Careers* responded with the following.

> In a recent study, I found academics to have far from definitive and emphatic enthusiasm for academic careers, despite the relative prestige of the academic profession—although this, too, has eroded over time. The American academic profession has reached the point where more faculty members hold non-tenure-line appointments than those who do. It will become increasingly difficult to say how such a community constitutes a bona fide profession when it consists of an even more disparate array of career lines and commitments. (Bousquet et al. 2009)

In a word, the forecast for the guild is not good.

Nowadays distance education is commonplace. Even five years ago—a lifetime in technology years—the National Center for Educational Statistics reported that 66% of all degree-granting institutions offered online courses during the 2006–2007 school year. (Parsad and Lewis 2008, p.2) The percentages were much higher among public institutions than among private, non-profit schools: 97% of public two-year institutions and 89% of public four-year institutions offered online courses, but only 18% of private two-year institutions and 53% of private, nonprofit, four-year institutions offered online courses. Among the private, for-profit, four-year schools, 70% offered online classes (Parsad and Lewis 2008, p. 5). Online education is a threat to the traditional faculty model because it allows courses to be captured, archived, and re-offered by less expensive instructors. This is the model commonly employed at the for-profit colleges and universities, and it is a model

that is continuously battled by the faculty at public and private nonprofit institutions. "The chancellor of the Tennessee Board of Regents, for instance, has proposed a plan to stress online education, hire more adjunct teachers, and put full-time faculty members in an 'oversight' role" (Wilson 2009). Frank Mayadas from the Sloan Foundation has been advocating this approach for years.

> A college can save money by purchasing online courses instead of sinking the resources into developing them, says A. Frank Mayadas, director of the Alfred P. Sloan Foundation's grant program for online education, which is financing projects to help spur the exchange of online courses, including a $225,000 grant to Project SAIL.... Mr. Mayadas says nonprofit colleges are applying lessons learned from for-profit institutions like the University of Phoenix. He says that that institution has become successful, in part, by having content experts develop online courses, and then training other adjunct professors to teach them. "There was an idea that this was a great thing to do from practically the very beginning, and it has been slow to take off," he says. "And it has been slow because it's not in higher education's nature to buy things. They tend to handcraft things." (Carnevale 2004.)

To underscore the way in which higher education is becoming more industrialized and more adapted to mass production for mass consumption, Christensen and Eyring (2011) compared online course development to auto manufacturing.

> To make an automotive analogy, online courses are comparable to the cars rolling off the line of a Toyota factory. The online course equivalent of this factory continually upgrades its technology and its workforce. In addition, it operates under the direction of educational "engineers" who are scientific about learning outcomes. These engineers minimize the use of nonstandard processes, such as professor-specific sections of the same course, which create unnecessary costs. This result is a system that continuously improves, providing ever-higher quality at low cost. (p. 329)

Recognizing the inherent threat of this process for traditional higher education, the authors commented that "Administrators and faculty members of traditional universities may understandably respond to this view of the future with a mix of incredulity and fear" (p. 329).

The capturing and reoffering of courses is only the tip of the iceberg. Artificial intelligence processes are expanding rapidly, and they are making the teaching of courses—rather than just the offering of classes—more automated and automatable than ever before. For instance, Latent Semantic Analysis is a "machine learning algorithm that understands the meaning of words and texts in such a way that frequently matches the judgment of humans" (LaVoie et al. 2010, p. 102). This algorithm, along with other similar tools, allows online learning to become highly automated. These kinds of tools have been used to track student comprehension in online classes, monitor online student discussions and alert faculty to potential problems, and serve as student aids in online classes.

> In an ideal world…online course software would be self-monitoring, alerting instructors as needed. The software would keep track of participation and the ratio of on-topic to off-topic comments to determine when students need help. The software would provide students with feedback about their comments and overall performance during the discussion, as well as aid instructors in assessing the relative contributions made by each student. (LaVoie et al. 2010, p. 99).

In brief, the online environment would be the equivalent of individualized, benevolent tutors cajoling, encouraging, and helping students understand and learn the material. When

students run into trouble and the tutor cannot correct the problem, the tutor would notify an instructor to engage. This removes the daily process of teaching from faculty members and automates it. Faculty members would thus be needed only periodically to instruct, so they could concentrate more on research and addressing atypical student learning problems.

Although we do not yet have a fully automated benevolent tutor at the ready, the evolution of artificial intelligence is growing rapidly; and increasingly computers are being used to do what we only read about in science fiction a few years ago. According to Daniel Lyons (2011), "Some law firms now use artificial intelligence software to scan and read mountains of legal documents," and researchers are also "developing algorithms that can gather facts and write a news story" (p. 28). Both of these higher order cognitive tasks have been done by highly paid professionals: lawyers in the first case and journalists in the second. They are now beginning to be performed by computers. There is no reason to believe that this process will not extend to education. Of course, using machine labor to replace human labor is not new; it is synonymous with the industrial process. However, it is relatively new to education, and it is bringing us to the brink of a new educational paradigm. What the new paradigm will be we do not yet know, but we have hints.

Paradigm Prototypes

Free courses and free education are increasingly available and popular. The Massachusetts Institute of Technology made its first big splash in 2002 with its OpenCourseWare initiative (http://ocw.mit.edu/index.htm) and recently with MITx; and since then some providers have made academic content, courses, and learning modules available online to anyone for free. New and existent for-profit companies have also gotten into the free education marketplace, including Apple with its iTunes University (http://www.apple.com/education/itunes-u/); Peer-to-Peer University (http://p2pu.org/en/) leveraging social learning as a mechanism for informal, peer-led instruction; and Knext (http://www.knext.com/) helping people create prior learning portfolios to show mastery of subject matter in order to place out of traditional classes. The Obama administration wants to support the expansion of free online education and has proposed a four-year $2B grant program ($500 M per year) to be used in part to encourage "proposals for the creation of openly available online courses, putting the government's support behind the burgeoning movement to publish learning materials free on the Web" (Gonzales 2011, p. 1).

Pearson, Cengage, McGraw-Hill, and other large publishers have identified higher education as one of their primary growth opportunities; and they have been transforming the textbook business to the online instruction business by creating textbooks in the form of courses, by developing learning object libraries for faster course development and by incorporating social media into the mix to create entire learning experiences for students. So far the publishers have respected the role of higher education, and they continue to play a more or less supporting role for faculty members by making online textbooks and related course materials increasingly easier for instructors to use in their classes. They are poised, however, to move beyond that model in the near future and to create classes and possibly entire academic programs on their own. Their business model is far less costly to students than traditional higher education. They hire content experts (from anywhere in the world) on a work-for-hire basis and then package the content in interactive online learning experiences, using the term "textbook" only as a historic relic for those who still remember them. These online textbooks live in clouds and are accessed by students for nominal fees, often costing less than $100 and offering nearly the equivalent of complete courses.

The e-revolution makes many institutions nervous. A number of traditional universities are behaving increasingly more nontraditionally; some nontraditional schools are growing fast; and college and university presidents all over the country are strategizing about how to use online education to expand their scope, reduce costs, and grow market share. The University of Southern New Hampshire, for example, has grown into the second largest online provider in New England with 7,000 online enrollments (Parry 2011). Looking to grow even more, the school is considering moving into the free or near-free education model. Southern New Hampshire University President Paul J. LeBlanc (2011) wrote in a white paper that a new model might be one in which students enroll in self-paced courses with no conventional instructors.

> The courses are designed as a series of learning modules, each with very clear learning outcomes and built-in assessment along the way. The students can at any time join a group of peers working on the same course to pose questions, seek advice…through a social networking platform built for each course. At the end of the course, students take practice assessments and review their in-stream assessments to determine when they are ready to be assessed in the course. (pp. 1–2)

The students then go to a proctored site to be tested, are assigned a grade, and awarded credit.

> The whole model hinges on excellent assessment. …We should no longer care if [students] raced through the course or took 18 months or if they worked on their courses with the support of a local church organization or community center or on their own. The game changing idea here is that when we have assessment right, we should not care about how a student achieves learning." (LeBlanc 2011, p. 2)

Whether the model is game changing or not, it is not new. It is the independent study correspondence model married to 21st century technology. LeBlanc's model is one where online courses are designed in ways that allow students to learn on their own and to seek help wherever, whenever, and from whomever they can get it. Once they are ready to prove their mastery, they sign up to take a test and pay a fee. If they pass the test, they get credit for the course. The institutional and industrialized business model moves from delivering formal instruction to testing students' mastery. Money is made by charging for the test and credits. Because the input costs are much lower, the test and credit costs can be much lower. Presumably, money is made by lowering costs on both the instructional side and on the facilities side and by increasing volume at the testing and credit awarding revenue points. The Achilles heel for this model is student motivation. Except at a few institutions, independent study programs are neither big nor popular. According to the Association for Distance Education and Independent Learning, enrollments in most online independent learning programs range from a few hundred to less than four thousand (Distance Education Survey 2009). For many students they are the choice of last resort because all responsibility for being motivated to get through a class is on the student. Maybe LeBlanc's introduction of social media into independent study will overcome this problem, but that is yet to be seen.

In a variation on the theme, Western Governors University is based upon a hybrid model between the independent study approach and traditional, paced approaches to higher education. Classes are offered year-round, and students enroll in as many classes as they wish. They pay an annual tuition that is essentially a membership fee. They take tests that demonstrate mastery, and they can take as many tests and pass as many courses as they like within their subscription period. They graduate when they amass enough credits by demonstrating sufficient mastery of a subject area.

Yet another model, as described by Christensen and Eyring (2011) is that of Brigham Young University-Idaho. Formerly Ricks College, BYU-Idaho is the latest evolutionary stage of a private, nonprofit institution that has transformed itself into a low cost, four-year school that takes extensive advantage of online technology but offers few of the amenities to which many undergraduates have become accustomed. For instance, it has jettisoned varsity sports and increased its student-to-faculty ratio—all in effort to save costs.

> Whereas the student body had grown by 80 percent, the full-time faculty had grown by only 50 percent.... Efficiency could also be seen in the academic catalog. The number of courses in the catalog had grown from 879 to 1293, but that 30 percent growth was, like the increase in faculty, small relative to the student body growth. (Christensen and Eyring 2011, p. 320)

The model pursued by BYU-Idaho is one that blends the cost-cutting measures of the for-profits with some of the traditions of nonprofit institutions. Giving up varsity sports is one step toward reducing costs, and jettisoning tenure is another. In remaking itself as a more "cost-effective" institution, BYU-Idaho moved from traditional tenure based on research to "continuing status" after three years of probationary status. Continuing status is dependent on classroom performance, not on research (Christensen and Eyring 2011, p. 73). Although it took a number of steps toward a for-profit model, BYU-Idaho has retained some of its traditional higher education culture. It continues to operate on its campus in Rexburg, continues to focus on face-to-face instruction, and supports student life amenities including extramural sports. Other schools are exploring other approaches, all trying to find the ideal strategies to promote higher education cost containment and effective enrollment management.

Whether one of the above models becomes the new paradigm or whether there is another model yet to be created is still being played out. What is clear, however, is that cost-reduction is going to be a key driver in the new paradigm and that technology is going to play an essential role in helping to reduce costs. Faculty members will not engage with students as they have historically. There are some who argue that the faculty will be more engaged through technology because they now have many more opportunities for intersection: emails, chats, blogs, videos, wikis, phone texts, and tweets. Although this is true, all of this interaction requires more time, something that most faculty members argue they do not have. More to the point though, faculty time is expensive; and by the logic of the industrial process, reducing costs—primarily by reducing labor costs—is the key to greater efficiency. So, although some faculty members are likely to have more contact with their students as a result of technology, many institutions will strive to use technology to reduce their labor costs, i.e., to reduce their labor forces.

Certainly, some traditional campuses will remain—at least for the foreseeable future—for those students who want the "college experience." We know that the college experience is valuable for helping new high school graduates transition to adulthood. However, the college experience is expensive; and how important that experience will be once the paradigm changes is unclear. Perhaps there will be technological substitutes that aid in the maturation process. We are experiencing now how technology changes the *Zeitgeist* of our society, and this might be one of those changing moments for the *Zeitgeist* of higher education.

The Future of Higher Ed

Given the above situation, environment, and climate, how worried should the faculty be? The newly minted Ph.D. hoping to teach in front of a classroom for the next 30 years should

worry a lot. That model is almost certain to change. However, the need for researchers to do academic research and then to translate their knowledge into learning materials for others is only going to increase. What is not at all clear is how payment for those services will work in the future. Will universities and colleges become testing centers along the model described by Southern New Hampshire's Paul LeBlanc? Some probably will. Will traditional non-profit institutions adopt the approaches and tactics used by the for-profits? Surely many will. And will universities become mostly research institutes teaching to the elite? Undoubtedly, this will be the position that the current research elites will fight to maintain. Other institutions will explore different models, hoping to be alive after the dust settles.

It is interesting to examine how American culture is an impediment to change on the one hand and a driver of constant change on the other. The quest for that which is better, faster, and cheaper is relentless; and, unless the limits of the natural environment slow it down, it will rumble across all obstacles. Yet despite wanting the benefits of mechanization to continually increase, Americans are change-resistant and highly conservative. In the case of higher education, for example, the American public is only lukewarm to online education. Pew Research Center data indicates that only 29% of adult Americans believe that online education is as good as classroom teaching (Parker et al. 2011, p. 3). Yet, 75% of Americans believe that higher education is too expensive (O'Shaughnessy 2011, p. 1), while 50% of women and 63% of men do not believe that higher education is of much value in general (Wang and Parker 2011, p. 3). These opinions are integrally entwined with public sentiment that higher education is a virtual right, that colleges today are run too much like businesses, and that raising taxes or reducing program quality is not justified to help reduce costs of higher education (Immerwahr and Johnson 2007, pp. 6–8). All of these competing cultural beliefs lie atop the fact that educational attainment is directly related to lower levels of unemployment, a higher quality of life, and a more effectively functioning democracy as Ben Bernanke and others (Cunningham 2001; Longley 2011; Baum et al. 2010.) have repeatedly pointed out. Hoping for reason in public consciousness is an exercise in futility. The comfort level with the old is so much greater than the comfort level with the new that the public simply wants the old at less cost, even if there is no practical or logical way to get there.

The U.S. Federal Government is a bit of a wildcard in the future of higher education. At present, accreditation is key to receiving Title IV funds—the federal funds that support student financial aid. In order to be eligible to receive federal financial aid, a student must be enrolled in a degree program from an accredited institution of higher education. There are six regional accrediting agencies in the U.S and several specialty national accrediting organizations that focus on institutions such as technical colleges and religious schools, and they determine which institutions and which programs are worthy of being accredited. If an institution is not accredited, registered students there cannot receive federal financial aid. This severely limits the number and type of students that can attend non-accredited institutions, and for all but a handful of schools not having accreditation means not being in business.

There is considerable pressure on accrediting agencies to accredit new programs and new institutions, and the rapid expansion of for-profit higher education providers has put a lot of pressure on the accrediting agencies to include them in the accredited category. Some of those for-profit providers turned out to be usurers of students and the public, taking advantage of the Federal Higher Education Program (Bridgepoint Education, Inc. 2011) Even the legitimate for-profits designed their business models around federal financial aid limits, charging the highest possible tuition that would be covered by financial aid. Because much of federal financial aid comes in the form of low-cost loans, students at such

institutions placed themselves in significant debt to go to school. In many cases, their debt limits exceeded their earning potentials when (and if) they graduated, putting them in either long-term or permanent and debilitating debt. Filing bankruptcy is generally not allowed for students who cannot repay their student loans.

Recognizing the problem, members of Congress and staff in the Education Department have been questioning the entire accreditation and financial aid process. In 2006, a report of the Commission on the Future of Higher Education—also called the Spellings Commission after then Secretary of Education Margaret Spellings—focused extensively on learning outcomes and accountability in higher education, suggesting that the U.S. Federal Government should have more oversight over the accreditation process and should restructure the entire financial aid system (U.S. Dept. of Education 2006, pp. 19–26.). In 2010, Senator Tom Harkin led a hearing on for-profit education, highlighting the enormous costs of for-profit higher education to students and the exponential profits made by the higher education corporations. The irony, as Harkin (Bridgepoint Education, Inc. 2011.) pointed out, was that the for-profits generate enormous revenues from budget models that rely almost completely on taxpayer-financed financial aid. Also in 2010,

> The Education Department's inspector general…threatened to strip the Higher Learning Commission's authority because it approved accreditation of the for profit American Intercontinental University despite an agreement among commission members that the school had an "egregious" policy of giving more credit for certain graduate and undergraduate courses than was "common practice in higher education." (Marklein 2010, p. 4)

Not surprisingly, the accrediting agencies have become very nervous and highly conservative in awarding accreditation, and Congress passed Program Integrity Regulations (US Department of Education 2010) intended to hold higher education institutions accountable and responsible for the welfare of students while they are in school and after they graduate. However, by nearly all accounts, sections of the Regulations are a complete mess and virtually unworkable. There are efforts in Congress to try to change the Regulations, and sections of it are being challenged in the courts. The overall consequence of the Regulations, however, is to reduce access to higher education especially in the online arena. One part of the Regulations requires that colleges and universities must get permission to teach students in states outside of their home states. To get permission, a school in state A must pay state B for the privilege of teaching state B's students. The impact of this on online education is enormous. Because permission can be very expensive and varies dramatically from state to state, a number of universities are simply choosing not to allow students to enroll in their online programs if they live in other states. This effectively makes those institutions inaccessible for students in the expensive permission states, thus limiting students' choices for higher education.

Sooner or later, the federal government is going to have to solve the financial aid quagmire. This might include a radical change to accreditation. A big change in that area would have enormous impacts on the structure and functioning of American higher education. If, for instance, the federal government were to centralize accreditation or to create a different process for awarding financial aid, completely new kinds of higher education institutions might arise as a result. Similarly, if the federal government were to put a lot of money into open courseware and do away with the connection between credit, degrees, and aid—or even get rid of credit all together, the higher education landscape would undergo comprehensive terraforming. For now, the federal government and Congress are too busy campaigning and fighting to focus too much on higher education. However, given the

extreme importance of higher education for the future of the U.S., sooner or later this issue will likely gain momentum.

Conclusion

It is clear that higher education is going to change, and what is means to go to college is going to mean something very different in the future from what it means today. We are somewhere in the change process; and, as with most large changes, it is impossible to step outside for a clearer look. Technology, capitalism, the culture of the United States, federal and state laws, politics, and money are all converging to change the higher education paradigm. The public is confused and uninformed about higher education and understands neither how higher education works nor how it is funded, which further clouds the picture. In addition, we are in the midst of the Great Recession; and people are scared, angry, and poor. They want their old lives back; they want to feel rich and good; they want access to all of that cheap stuff, and they do not understand why buying higher education cannot be like buying a new LED TV.

From inside academe, the impacts of these cultural, technological, and social changes are equally great; and the lack of political support and decreasingly effective leadership compound the feelings of vulnerability and helplessness. In the face of externally imposed change, the faculty—like the public—reacts negatively, tending toward conservatism and retreat. Some faculty members become luddites, others simply hope to retire before the real pain comes, and a few embrace the changes and look for new opportunities. Despite the affective reactions of all of the players involved, however, the changes will continue to come. That is the inherent logic of the system. As Bob Dylan sang to us nearly 50 years ago, "the times they are a-changin'," and for higher education they're a-changin' fast.

References

Baum, S., Ma, J., & Payea, K. (2010). *Education pays: The benefits of higher education for individuals and society. Trends in higher education series*. College Board Advocacy and Policy Center. Retrieved July 21, 2011 from http://trends.collegeboard.org/downloads/Education_Pays_2010.pdf

Bernanke, B. (2007, September 24). *Education and economic competitiveness*. U.S. Chamber Education and Workforce Summit. Washington, DC: Board of Governors of the Federal Reserve System. Retrieved November 12, 2010 from http://www.federalreserve.gov/newsevents/speech/bernanke20070924a.htm

Bousquet, M., Carmody, T., Grafton, A. T., Hermanowicz, J. C., Hu-DeHart, E., Stearns, P. N., & Trower, C. A. (2009). The faculty of the future: Leaner, meaner, more innovative, less secure. *The Chronicle of Higher Education*. Retrieved August 14, 2011 from http://chronicle.com/article/The-Faculty-of-the-Future-/47017

Bridgepoint Education, Inc.: A case study in for-profit education and oversight. Hearing before the Committee on Health, Education, Labor, and Pensions. Senate, 111th Cong. (2011).

Carnevale, D. (2004, October 15). More professors teach by using other colleges' online courses. *The Chronicle of Higher Education*. Retrieved July 28, 2011 from http://chronicle.com/article/More-Professors-Teach-by-Using/12471/

Christensen, C., & Eyring, H. (2011). *The innovative university: Changing the DNA of higher education from the inside out*. San Francisco, CA: Jossey-Bass.

Cunningham, A. (2001). *The broader societal benefits of higher education*. Retrieved July 20, 2011 from http://jcu.edu/academic/planassess/planning/files/Planning%20articles/Broader%20Social%20Benefits.pdf

Distance education survey comprehensive report. Association for Distance Education and Independent Learning (2009). Retrieved January 7, 2012 from ADIEL website, http://www.aacis.org/?q=node/12

Gawande, A. (2009, December 14). Testing, testing. *The New Yorker*. Retrieved August 14, 2011 from http://www.newyorker.com/reporting/2009/12/14/091214fa_fact_gawande

Gonzales, J. (2011, January 20). 2-year colleges get details of $2-billion grant program. *The Chronicle of Higher Education*. Retrieved September 5, 2011 from http://chronicle.com/article/2-Year-Colleges-Get-Details-of/126006/

Hallett, J. (2011, October 23). People are scared; Why won't their lawmakers listen? *Columbus Dispatch*, p. G5.

Immerwahr, J., & Johnson, J. (2007). *Squeeze play: How parents and the public look at higher education today*. San Jose, CA: The National Center for Public Policy and Higher Education.

Krugman, P. (2009, December 27). The big zero. *The New York Times*. Retrieved September 14, 2011 from http://www.nytimes.com/2009/12/28/opinion/28krugman.html

LaVoie, N., Streeter, L., Lochbaum, K., Wroblewski, D., Bouce, L., Krupnick, C., & Psotka, J. (2010). Automating expertise in collaborative learning environments. *Journal of Asynchronous Learning Networks, 14*(4), 97–119.

LeBlanc, P. (2011). *Next big thing*. [White Paper]. Retrieved September 18, 2011 from http://www.insidetrack.com/blog/?p=296

Limbaugh, R. (2011). *Wisconsin freeloader protesters whine about what they want*. Retrieved January 13, 2011 from http://www.rushlimbaugh.com/daily/2011/02/18/wisconsin_freeloader_protestors_whine_about_what_they_want

Longley, R. (2011). *Lifetime earnings soar with education*. Retrieved January 12, 2012 from http://usgovinfo.about.com/od/moneymatters/a/edandearnings.htm

Lyons, D. (2011, July 25). Who needs humans? Outsourcing and unemployment are not the only threats to American workers. Robots are infiltrating everywhere from slaughterhouses to law offices. *Newsweek*, 158(4), 28.

Marklein, M. (2010, September 29.) *For-profit colleges under fire over value, accreditation*. Retrieved July 9, 2011 from http://www.usatoday.com/news/education/2010-09-29-1Aforprofit29_CV_N.htm

Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning* (3rd ed.). Belmont, CA: Cengage, Wadsworth.

O'Shaughnessy, L. (2011, May 20). Do Americans think college is worth it? *CBS Moneywatch.com*. Retrieved July 24, 2011 from http://moneywatch.bnet.com/spending/blog/college-solution/do-americans-think-college-is-worth-it/5488/

Parker, K., Lenhart, A., & Moore, K. (2011, August 28). *The digital revolution and higher education*. Retrieved September 4, 2011 from www.pewsocialtrends.org

Parry, M. (2011, August 28). Online venture energizes vulnerable college. *The Chronicle of Higher Education*. Retrieved September 24, 2011 from http://chronicle.com/article/How-Big-Can-E-Learning-Get-At/128809/

Parsad, B., & Lewis, L. (2008). *Distance education at degree-granting postsecondary institutions: 2006–2007. U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences. (NCES 2009–044)*. Washington, DC: Government Printing Office.

Selingo, J. A disrupted higher-ed system (2012, January 26). *The Chronicle of Higher Education*. Retrieved January 26, 2012 from http://chronicle.com/blogs/next/2012/01/26/a-disrupted-higher-ed-system/?sid=at&utm_source=at&utm_medium=en

Smith, W., & Bender, T. (2008). *American higher education transformed 1940–2005*. Baltimore, MD: Johns Hopkins University Press.

Steckel, R. H. (2010, February 1). *A history of the standard of living in the United States*. Retrieved September 23, 2011 from http://eh.net/encyclopedia/article/steckel.standard.living.us

Tales from the old-timer: War on our schools and teachers (2011, December 28). *Peshtigo Times*. Retrieved January 13, 2012 from http://www.peshtigotimes.net/?id=18270

Thelin, J. R. (2004). *A history of American higher education*. Baltimore, MD: Johns Hopkins University Press.

U.S. Department of Education. (2006). *A test of leadership: Charting the future of U.S. higher education. A report of the commission appointed by Secretary of Education Margaret Spellings*. Washington, DC: U.S. Department of Education.

U.S. Department of Education (2010, October 28). *Department of education establishes new student aid rules to protect borrowers and taxpayers.* Washington, DC Retrieved October 14, 2011 from http://www.ed.gov/news/press-releases/department-education-establishes-new-student-aid-rules-protect-borrowers-and-tax

Wang, W., & Parker, K. (2011, August 17). *Women see value and benefits of college; men lag on both fronts, survey finds*. Pew Research Center. Retrieved October 14, 2011 from http://pewsocialtrends.org/2011/08/17/women-see-value-and-benefits-of-college-men-lag-on-both-fronts-survey-finds/#executive-summary

Wilson, R. (2009, February 6). Downturn threatens the faculty's role in running colleges. *The Chronicle of Higher Education.* Retrieved October 24, 2011from http://chronicle.com/article/Downturn-Threatens-the/10586/