

Innovation in Business Education: Disrupting the Status Quo

Beth Castiglia
Felician College

Margareta Smith-Knopik
International Assembly of Collegiate Business Education

Despite the current interest in United States higher education innovation, little is known about what existing colleges and universities are doing to keep up with – or lead—new educational models or approaches. While there has been a great deal of media attention paid to initiatives such as MOOCs or competency-based educational programs, the question about how more traditional institutions have been reacting to these new approaches largely has been ignored. To address this research gap, this study focuses on the innovations adopted by colleges and universities accredited by the International Assembly of Business Education, a US-based business accrediting body. The results reveal pockets of innovation in the sample of institutions examined, but contradict many stereotypes regarding sources of change in higher education.

INTRODUCTION

It is standard for college- and university-level business programs to teach about Joseph Schumpeter's theory of creative destruction in economics and entrepreneurship courses. Creative destruction describes the fundamental tendency for a capitalist economy to constantly evolve because of the emergence of new types of consumers, new means of production, and new forms of business organization. According to Schumpeter, competitive forces in capitalism, combined with profit-induced technological innovations, cause entrepreneurial businesses to arise in existing industries and outperform, and ultimately displace, previously dominant businesses. Until very recently, though, colleges and universities did not recognize the application of Schumpeter's logic to the very industry in which they operate.

Harvard's Clayton Christensen built on Schumpeter's work by analyzing the process of disruptive innovation, which occurs when sophisticated technologies are used to create simplified and more accessible solutions to consumer problems. According to Christensen, innovators tend to enter markets on the fringe, and, at least at first, offer lower-quality products attractive to a new or underserved component of the market. Their focus on the fringe places these newcomers below the notice of the leaders in the market, who ignore their work – until the innovators are able to perfect their offerings to encroach upon the core of the market. At that point, the innovation becomes the mainstream, and the existing players in the industry are left to fail or trail.

The principles of both creative destruction and disruptive innovation are applied easily to higher education. The costs of higher education have increased dramatically for the past two decades, with colleges and universities competing for the core academically-prepared students. The existing institutions

add programs and amenities – getting “bigger and better”- regardless of the consequence of these expansions on their finances. In addition, in their competitive arms race, these institutions appear to assume the populations they are serving actually need (or want) the expensive high end services included in the price of tuition.

Meanwhile, a group of innovative upstarts in higher education have come up with ways of unbundling educational services and leveraging technology to supply opportunities for learning to student customers on their own terms and at their convenience. Not surprisingly, the existing frontrunners in the industry scoff at these fringe down market competitors who offer an educational product which often is seen as inferior to that offered by the established players. The theory of disruptive innovation warns that many colleges and universities are ignoring these new competitors at their own risk, though, and may soon be rendered obsolete by the new learning models offered by the innovators.

The purpose of this paper is to evaluate the innovation occurring (i.e., disruptive innovation) within existing college and university business programs. Are colleges and universities blindly ignoring the threat of innovative competition (for whatever reason), or are they making attempts to come up with innovations of their own to better serve their changing student bodies? To determine the answer to this question, the researchers assessed the degree of innovation adopted by existing business programs accredited by the International Assembly of Collegiate Business Education (IACBE), a US-based CHEA recognized accrediting organization. Using the literature on disruptive innovation in higher education, the researchers attempted attempt to answer the following questions:

- (1) How innovative are the business programs accredited by the IACBE?
- (2) Does the degree of innovation differ between (a) public and private institutions; (b) older and newer institutions; (b) for- profit and not-for-profit institutions; (c) US and non-US institutions; and (d) large and small institutions?
- (3) Given the theories of disruptive innovation and creative destruction, are the innovations undertaken by the examined programs sufficient to protect them from new entrants into higher education or to ensure competitive sustainability?

The selection of IACBE members as the sample population is significant because, unlike many other US specialized accrediting bodies, IACBE has always focused on the achievement of outcomes in its accreditation decisions. While some accrediting bodies are prescriptive, IACBE does not require specific inputs to be used to generate the achievement of college outcomes. For instance, if a learning outcome is achieved, IACBE does not judge the type of faculty member employed or number of hours of seat time required in reaching that outcome. Because of this, the schools who seek IACBE accreditation may be somewhat more inclined to innovate than those that seek accreditation from other business accreditors. In addition, literature supports the notion that the shift toward assessment of outcomes, rather than judgment about inputs, characterizes many of the newest innovations in higher education.

The researchers developed rubrics to create an index measuring the level of innovation represented by a 80-member sample of business units accredited by the IACBE. The literature on disruptive innovation was used to inform the development of these rubrics. Besides scoring business units on their use of technology in course delivery, the rubrics also scored business units according to the flexibility of their scheduling models, degree of unbundling of educational services, use of specialized faculty functions, adoption of streamlined pathways to degrees, and willingness to focus on well-defined, but perhaps underserved, market niches.

After computing an innovation index for each of the schools examined, the researchers first assessed the overall level of innovation in the IACBE membership schools and then analyzed the relationships between the college indexes and the independent variables of ownership, for-profit/non-profit structure, location, and enrollment to determine if there are significant patterns distinguishing those schools which innovate from those which do not. The results of this analysis were then used to confirm or dispute the predictions on innovation drawn from the existing literature.

BACKGROUND

The concept of disruptive innovation perhaps is best described by first focusing on what it is *not*. Disruptive innovation is not the type of product improvements, enhancements, or breakthroughs that existing companies come up with by listening to their current customers. Instead, disruptive innovations involve the creation of simple, less sophisticated, and less expensive versions of existing products that appeal, initially, to nonconsumers of those products. The existing consumers do not want the innovative products because, at least for a while, they are inferior to those they are currently purchasing. These innovations are not “new and improved” versions of existing product offerings. They are stripped down basic products that do not offer all of the benefits of those already being sold. They do, however, offer enough and the right variety of benefits to draw new consumers into the market. While the prevailing firms in the industry scoff at the new down-market category of products, the upstart innovator has time to build efficiencies and conveniences to a point where the new product begins to appeal to even the consumers in the existing market. Unfortunately for the industry leaders, by the time they recognize the threat it is often too late to catch up.

The theory of disruptive innovation originated with Clayton Christensen’s (1997) exploration of the disk drive business. IBM was a leader in this industry in the 1970s and 1980s and, like other established firms at that time, focused on upgrading and enhancing the standard 14-inch disk drive. The end result was a superior, high capacity product that fully satisfied the existing mainframe computer users.

On the fringe of this industry arose new entrants (including, at that time, Shugart Associates, Micropolis, Priam, and Quantum) who initially developed an 8-inch disc drive (Christensen, 1997). These smaller discs had much lower capacity than the dominant 14-inch discs, and were of no interest to existing IBM customers. They were recognized as inferior products that did not satisfy all the needs of the mainframe clients. These clients were not the target of the 8-inch manufacturers, though, who instead focused on the original home minicomputer market. This lower-margin market was unattractive to the existing firms in the industry, so the new entrants were virtually ignored by the large dominant technology companies of the time. Of course, the ending to this story is well known. While IBM and other industry leaders continued to focus on providing mainframe users with ever more sophisticated and high powered products, upstart companies developed smaller and smaller discs that captured the yet-to-emerge PC market (Christensen, 1997).

The personal computer market, itself, serves as another classic example of disruptive innovation. Apple, one of the pioneers in personal computing, initially produced its product to be targeted at children, who obviously represented a market never considered by the mainframe producers (Christensen, Horn, & Johnson, 2008, p. 48). Ignored by the market leaders, Apple enhanced and perfected its product until it was appealing to a market comprised of both the initial mainframe consumers and many, many more.

A disruptive innovation, therefore, is not a breakthrough improvement designed to serve an existing customer base. Instead, it is the development of a product or service that disrupts the current trajectory of the market by offering a simplified new product or service to a different group of consumers who did not need (or could not afford) the expensive embellishments of the existing products in the first place (Christensen, Horn, & Johnson, 2008). Successful disruptions occur in markets where the alternative was nonconsumption. What starts out as a disparaged product application broadens a market from a small, sophisticated segment to a larger one comprised of clients who initially found the product too complicated, expensive, or inaccessible. Although the stripped down products start their lives as inferior to the existing offerings, over time they improve and begin to pull from the original client base. The established frontrunners in the market dismissed the innovative competitor at their own expense.

CONCEPTUAL FRAMEWORK

Disruptive innovation takes root when industry leaders, in the attempt to satisfy their customers more fully, overshoot their goal and begin to produce products or services that exceed their clients’ needs.

Costs escalate, and the market is poised for the emergence of an innovator to provide a simpler, less expensive alternative to the existing market choices.

The business model, technological underpinnings, and cost escalations in higher education make it a prime target for disruptive innovation. In fact, it can be argued that this disruption has already begun. Each of these characteristics, with an explanation of its connection to innovation, is described below.

Business Model

Traditional colleges and universities in the United States perform three separate business propositions (Christensen, Horn, & Johnson, 2008). Colleges teach, and in doing so spread knowledge. They engage in research, and thereby create new knowledge. And they guide and mentor, helping students progress into adulthood and preparing them for their future lives and careers. Each of these functions is distinct, and each is expensive to provide. Effective teaching requires skilled faculty with access to tools and technologies to address myriad student learning styles. Research requires highly educated subject experts who are leaders in their academic fields and support for data collection and analysis. Mentoring, finally, requires vast staffs of career, academic, athletic, and student support employees. In many cases, this function also entails the maintenance of manicured campuses, sports facilities, and state-of-the-art residence halls. Combining the three businesses under one university banner creates an expensive, but high end, product that well serves a small fraction of the potential market (18-year old high school graduates). This complex model is the predominant university model in the United States, and has caused the cost of college to rise a staggering 429 percent in the last two decades (Sheets & Soares, 2012, p. 1). Similar to the disk industry in the 1980s, higher education today has become complex, over-elaborate, and expensive, creating a large population unwilling or unable to afford its high end products. The stage is thus set for an innovator to target this market which has been underserved so far by simplifying and commensurately lowering the cost of education.

Technological Underpinning

Technology enables disruptive innovation when sophisticated tools create simplified and routinized solutions to consumer problems (Sheets & Soares, 2008, p. 3). The traditional instructional model in higher education has not budged almost since its inception (Kirschner, 2012) and is, perhaps, overdue for a technological boost. While almost every aspect of people's lives have become more mechanized over the past 40 years, the college experience has remained virtually untouched. A student who had attended college in the 1960s would probably feel right at home if he or she signed up for a traditional course today. Knowledge continues to be disseminated in a classroom by a single faculty member (although this faculty member now may be using SmartBoard technology and a web companion). Learning is still measured by successfully completing a course, which carries credits dictated by Carnegie standard for appropriate seat time. The student still expects to spend approximately four years accumulating credits, which add up to a degree accepted by future employers as a seal of competency.

Technology has the potential of changing not only the nature of academic delivery, but also the symbolic value of the college degree. Today, the number of these degrees disseminated in traditional colleges is limited to the number of students who are able to sit in a fixed location and listen to the professors who lecture in a classroom setting, which enables the degree to serve as a screening device in the workplace. Space is scarce, and scarcity breeds selectivity. Therefore, only the better prepared students academically are granted space, and this initial screening process cements the acceptance of the degree as an indication of quality by future employers. If the student was hard-working and intelligent enough to gain admission to a given college, he or she is considered good enough to work for a given employer - regardless of the learning, or lack thereof, which took place during the student's stay at the university.

The acceptance of the degree as quality assurance is an expensive and flawed proposition, however, and one easily confounded by technology. What if, instead of limiting the number of students permitted to learn, technology gave anyone interested access to learning materials and was able to assess the results? What if, instead of rewarding seat time affordable to a select few, degrees or credentials could be granted

on the basis of documented achievement, regardless of time or physical place? Technology provides the means to do all of these and, as such, could provide the mechanism by which disruptive innovation emerges.

Cost Escalations

The United States currently spends 2.6% of its GDP on higher education (OECD, 2006), and the cost of a private education has risen from 80% of per capita income in 1980 to 112% today (Butler, 2012). The demand for higher education, despite its cost, is driven by the importance of a degree to an individual's future earning potential, and students and their families often scramble to pay for college by combining personal resources, federal financial aid, and student loans. Other students (particularly adults) are left out of the market altogether because of economic circumstances.

One of the drivers of the spiraling cost of higher education is the competitive arms race among colleges and universities for qualified students. Costs escalate as colleges add expensive "frills" to existing products. Today, college tours show students restaurant-style cafeterias, beautiful recreational facilities, and fitness centers that could compete with stand-alone health clubs. College catalogs brag about the breadth and depth of their curricular offerings. Student handbooks describe the myriad services available to help students remain happy and healthy. To remain competitive, institutions strive to offer attractive physical, academic, and social amenities, regardless of the impact this may put on their budgets. The improvements progress at a rate that exceeds the students' needs, and ultimately beyond what the students can use -- or even value (Christensen, Horn, & Johnson, 2008, p. 45), setting the classic stage for disruptive innovation.

The Future

The story of American colleges and universities follows a refrain similar to that of other industries ripe for innovation. Costs are escalating as additional features are added to existing products. The result is a highly evolved, sophisticated – and expensive – service that overshoots the needs of a large market segment. Opportunities for unbundling prevail. Why should an adult student hoping to earn the credits necessary to complete his or her career pay a high tuition that covers services and facilities he or she will never be interested in using? Why should the "degree" be the ultimate measure of learning at all? Why can't students avail themselves of free open courseware throughout their lives and be recognized for the learning they have achieved in this manner?

These questions have been raised repeatedly, and have been responded to by multiple innovators in higher education. As would be expected, these innovations began in the fringes of the industry, as fully online career-focused programs offered credentials to busy working adults. Predictably, the established institutions downplayed the significance of these upstarts. Today, however, the innovators in higher education are arising from the most prestigious corners of American universities, and the traditional, lower-tiered brick-and-mortar colleges are beginning to take note. They are learning, as articulated succinctly by Stokes (2011) that "Done well, innovation can stir up a good deal of trouble" (p. 197).

Higher education, therefore, is at a critical crossroad. Faced with the rise of disruptive innovators, existing institutions can either ignore the threat and risk obsolescence, or embrace the emerging innovations to fundamentally change the way they do business.

Innovations by existing colleges and universities tend to fall into six primary categories: (1) use of technology; (2) scheduling; (3) service bundling; (4) pathways to degrees; (5) faculty specialization; and (6) market niche. Each of these, with examples of its application, is described below.

Use of Technology

Technology provides the underpinning of all potentially disruptive innovations in higher education, from college-based online learning to self-paced adaptive "do it yourself" education (Kamentz, 2009). Innovation started, perhaps, with the emergence of fully online learning as an application designed to serve a neglected segment of the education market: adult students unable or unwilling to attend a traditional college yet needing specific career preparation. This focus on "training," as opposed to

“educating,” placed these upstart educational providers on a separate plane from the market of the existing colleges and universities, and they therefore were ignored as inconsequential. Their products were not of the same quality as the full university experience, and the existing students in the market had no need for them.

Over time, however, this form of instruction began to capture the attention of traditional students, who were attracted by its student-centric approach and convenience. Online learning is highly scalable and characterized by extremely low marginal costs. This form of pedagogy divorces teaching from the rest of the academic business model, and thereby escapes the overhead of a traditional course offerings, providing the promise of opening higher education to hundreds of millions of people.

McMahan and Loyola (2011) separate technology innovations into three categories. First, technological *innovations in access* are characterized by pedagogies such as Khan Academy, which provides more than 2,100 videos viewed an average of 70,000 times a day (p. 11). Second, technology provides *innovations in affordability*, as companies such as StraighterLine provide students with access to online courses for a flat, single fee of \$999 for up to 10 courses (p. 11). Third, and potentially most important, technology promises to launch *innovations in quality*, as pioneers such as Knewton lead the way in adaptive learning whereby technology can respond dynamically to each student’s learning style.

Existing colleges and universities have been adapting by adding technology to their current face-to-face courses or offering a smattering of online courses themselves. Unfortunately, many of these institutions have injected online applications as “add ons” to already expensive cost structures. The true innovators have found ways to leverage technology to fundamentally change the way they educate. For example, new online models, including the massive open online courses (MOOCs), have captured the attention of the most elite echelons of US higher education, and amount to what promises to be a game-changer in online learning (Lewin, 2012). Other existing institutions will need to learn to position themselves in this new world, perhaps by integrating the free content currently available into their existing curricula.

Flexible Scheduling

The traditional college semester, generally comprised of 15-16 weeks in the fall, followed by 15-16 weeks in the spring, has prevailed in US higher education for generations. However, this arrangement of terms, which was designed to accommodate both an agrarian society and Christian holidays, eliminates most working adults from higher education. It is time consuming, inconvenient, and designed for young students enjoying a traditional campus experience (Simon, 2007).

Many colleges already have adapted their schedules to better attract this adult population. Courses are either accelerated (meeting fewer hours over fewer weeks) or compressed (meeting the same number of total hours but over fewer weeks) and programs are run year round to move adults through their degrees more quickly.

Fewer existing institutions, though, have abandoned scheduling altogether. Self-paced, competency-based learning, as exemplified by the model used by both Western Governor’s and Westminster Universities, divorces learning from time and place by granting credit based solely on demonstrated learning. Whether a student acquires required competency in two days or two years is irrelevant: in this new equation, learning is held as the constant and time is the variable. This model of learning may be the antithesis of the traditional term in higher education, and has caused many to question the wisdom of the existing Carnegie measure of a time-locked credit hour. According to McKendrick (2010), the very concept of a course, as measured as a block of sessions held several days a week, is breaking down as learning is “granularized” into small parcels of instruction. Taken to its limit, this type of breakdown surely could represent a disruptive innovation to the traditional model of higher education.

Unbundling of Academic Services

The most prestigious of US educational institutions provide a full service experience to those students lucky enough to attend them. These students enjoy leafy campuses, high profile athletic events, a wide variety of academic offerings, and mentoring relationships with faculty. Until very recently, most colleges

aspired to be more like the elite ones, and students were faced with the costs that accompanied this attempt to move upstream.

In what Kamenetz (2009) refers to as the “great unbundling” (p. xi), some institutions have begun to disaggregate academic services. These colleges and universities have recognized that while in the past most consumers were parents who wanted to provide their teenage children with a full college experience, today the new majority of consumers are adult nontraditional learners themselves, who have little interest in full-service cafeterias and Saturday afternoon football games (Brewer & Tierney, 2011). Functions traditionally linked, such as teaching and research, academics and sports, or learning and socialization can be separated, and in separating them innovative institutions can attract previously untargeted markets.

Brigham Young University-Ohio serves as one example of an existing college that decided to disaggregate college services. Instead of continuing to emulate the services of the elite US universities, it underwent “genetic reengineering” (Christensen & Eyring, 2011). It instituted year round scheduling, removed competitive athletics, and rewarded faculty solely for teaching rather than research. The cost of the four year education fell commensurately with the number of services provided: a BYU-O degree can be earned for approximately \$8,000 (Christensen & Eyring, 2011, p. 28).

Pathways to Degrees

Perhaps the most innovative form of unbundling is the disaggregation of the college degree altogether. While no one suggests that the traditional model of a four-year residential college will disappear, Kamenetz (2010) and others (Brewer & Tierney, 2011; Christensen, Horn, Caldera, & Soares, 2011; Massey, 2011) foresee a future where courses are split apart from degrees and sold separately, much as songs are now bought separately from CDs, albums, or cassettes. The nontraditional student and those who currently attend nonselective institutions make up the population most likely to avail themselves of this option. The internet has a history of unbundling services and selling them in a more convenient, and less expensive, fashion. Much as newspapers have been augmented by online stock quotes, sports scores, and want ads, college services can be spun off and repackaged. The student of the future may be able to create his or her own degree by compiling learning from multiple sources.

To date, no college or university has been able to escape the fact that all recognized degrees still must bear the name of a single institution. This is unfortunate, since this traditional packaging of education probably gets in the way of the provision of quality education to a large number of people who could use it (Wellman & Soares, 2011). Currently, flexibility in pathways can be demonstrated only through flexible transfer credit policies and competency-based assessment of learning outcomes, as seen in Western Governor’s University. In the future, though, it is possible to imagine a student assembling his or her own degree by accumulating distinct “badges” from a number of free, open online programs.

Faculty Specialization

Most traditional higher education institutions model themselves after Harvard and other elite universities, and, like them, craft faculty roles which balance teaching, scholarship, and service. The ideal faculty member, under this model, must be a consummate teacher and curriculum author, a pioneer in his or her field, and an active participant in college and civic affairs. On top of that, today this individual must also possess technology skills and the ability to collect and use assessment data. This combination of talent, if it exists in a single individual at all, is expensive, and not required by most modern colleges and universities.

As a result, some innovative institutions have redefined the roles and responsibilities of faculty to reflect only the services their college or university requires. A college that focuses on teaching, for instance, may deem it unnecessary for its faculty to publish or present research at academic conferences (Bauerlein, 2012). Similarly, a college that focuses on web-enhanced courses may hire specialist faculty to develop their curriculum, and allow the teaching faculty to focus on course delivery instead of development. Other colleges and universities, such as Southern New Hampshire University, may delegate all course management to adjuncts, while course development and supervision is controlled by a small number of full-time faculty (Christensen, Horn, & Johnson, 2008). The faculty of the future will likely be

more specialized – and less costly—than the one presently in place as more colleges and universities begin to break the existing faculty model and innovate in this area. Through the use of technology, colleges and universities can hire adjunct faculty who may be better qualified than normally available, since they are no longer limited by geography.

Market Niche

Imitation of the Ivies does not end with the replicating their faculty job descriptions. Most colleges and universities in the United States are guilty of “Carnegie climbing,” where two year institutions dream of becoming baccalaureate universities, baccalaureate institutions strive to launch masters and doctoral programs, and all institutions yearn to be both bigger in size and better in academic caliber. While most industries become more differentiated as they mature, the history of higher education in the twentieth century is characterized by colleges and universities attempting to be more and more alike (Brewer & Tierney, 2011).

Disruptive innovation, of course, occurs when a player in the market begins to focus on a small, nonconsuming population. In higher education, this occurred when the for-profit institutions began to cater to the at-risk students (Hentschke, 2011). These students were of no interest to the existing colleges and universities in the industry, who continued to emulate Harvard in seeking out the “best and brightest” traditional students.

Innovative colleges and universities avoid the product proliferation evidenced by the sizable course catalogs and mission creep of most institutions. They focus intensely either on a few key academic programs or a small target population. For example, Western Governors University focuses solely on assessment of learning, regardless of the source from which students acquired that learning (Soares & Morgan, 2011). Similarly, DeVry University avoided the “all things to all people” trap by offering only business programs (McMahon & Loyola, 2011). These focused institutions reduce their cost and thereby increase their potential for success through their innovative streamlining.

RESEARCH METHOD

Given the multiple types of innovations available to institutions of higher education, this study was designed to determine where- and to what degree- existing colleges and universities are innovating. Are there specific institutional characteristics that lead colleges and universities to experiment with changes to their use of technology, types of scheduling, unbundling of services, pathways to degrees, and target marketing? Conversely, what types of institutions cling most to the traditional college model?

To address these questions, the researchers posed six hypotheses:

H₁: Newer institutions are more innovative than older institutions. Rationale: Newer institutions may be able to innovate without the burden of an existing culture.

H₂: For-profit institutions are more innovative than not-for-profit institutions. Rationale: The profit motive may drive innovative practices that yield efficiencies.

H₃: Private institutions are more innovative than public institutions. Rationale: Private institutions may have fewer layers of bureaucracy to deal with in implementing change.

H₄: Non-US institutions are more innovative than US institutions. Rationale: Non-US colleges may be subject to less governmental regulation.

H₅: Larger institutions are more innovative than small institutions. Rationale: Large institutions have the financial ability to implement technology and the need to serve large numbers of students.

Sampling

This study was conducted using a list of members of the International Assembly of Collegiate Business Education (IACBE), a U.S. based business accreditation body. This population was selected for several reasons. First, the researchers had access to both contacts at IACBE and annual reports submitted

by affiliates. Second, the IACBE is an agency that focuses primarily on student learning outcomes in granting accreditation. This focus does not prescribe organizational structure, faculty size, or delivery methods individual institutions use to obtain the learning outcomes: if the approach the college takes to teach students is measurably effective and the organization complies with the IACBE standards of excellence, it is granted accreditation. This outcomes-based approach does not preclude accreditation of innovative and nontraditional institutions, and it is reasonable to expect IACBE to attract a large representation of this type of institution. Finally, the IACBE has an international focus, and a large number of non-US based members.

To obtain the research sample, all member IACBE institutions were asked via email to participate. Approximately two-thirds of the invited schools agreed to participate. The colleges that gave consent were then sorted into the categories of public/private, US/non-US, and for-profit/not-for-profit. Subgroups were created for each of these categories, and schools were randomly selected from the volunteer institutions to fill each subgroup in compliance with the proportions represented in the entire IACBE population. For example, the IACBE is made up of 90% private institutions (10% public) and 84% US institutions (16% non-US). It was the goal of the researchers to maintain approximately those proportions in their study. Therefore, some institutions needed to be removed from consideration to create a balanced sample. In the end, a sample of 80 colleges and universities – including both private and public, US and non-US, for-profit and not-for-profit, and large and small – was assembled. There were no major differences between the composition of the sample and the composition of the IACBE membership as a whole.

The purpose of the study was to determine the level of innovation for IACBE participating schools, and uncover any differences in innovation among their subcategories. The first step in measuring innovation was to develop a rubric that would be applicable to all schools. The rubric below was created based on the six categories of college innovation (described in the previous section).

**TABLE 1
INNOVATION RUBRIC**

Innovation Category	1	2	3	4
Use of technology	All programs are fully face-to-face	Most programs are face-to-face, but some evening and nontraditional courses are offered in hybrid or online form	At least half of all programs are hybrid or online	All programs are either hybrid or online.
Scheduling	Programs follow traditional fall/spring calendar, with some summer classes	Most programs follow the traditional fall/spring calendar, but some nontraditional programs are accelerated/year-round in nature	All programs follow a nontraditional, year-round schedule	Most programs are self-paced with flexible start dates

Course bundling	All students get a traditional campus experience (sports, residence halls, clubs)	Most students get a traditional campus experience, but some students are either offsite or online with fewer campus amenities.	Most students are either offsite or online, but some traditional students get a traditional campus experience	Services are completely unbundled, with most students exposed only to coursework through the institution. No sports, residence halls...
Faculty specialization	Traditional tenure track faculty functions: course development, service, research, teaching	Some traditional faculty roles, but significant use of adjuncts	Heavy use of adjuncts, specialized faculty roles, less focus on research	Specialized faculty roles. Teaching, course development, research functions separated
Pathways to degrees	Large majority of programs are comprised of traditional 4-year full time degrees	Combination of traditional, accelerated degrees. Some transfer credit accepted.	Heavy reliance on transfer, prior learning, and/or CLEP	Use of stackable degrees; focus on certificates...
Market niche	Traditional large array of majors and programs	Some degree of specialization, e.g., specialized focus on student population (adult...) or degree (all business...)	Relatively small number of specialized degree programs	Niche market only

Each school was placed at one level for each of the innovation categories. Each placement was given a score ranging from 1 to 4, as shown on the rubric. These scores were then added together to assign each institution a total innovation score. The higher the total, the more innovative the college. The total innovation score had the potential range of 6, representing a highly traditional program, to 24, representing a very innovative one.

A second series of data was collected for each institution. This information designated whether the college or university was public or private, for-profit or not-for-profit, US or non-US based, and large or small. Each of these metrics was then compared with the innovation scores developed to determine significant relationships between college characteristics and innovative practices.

Data Collection

The primary sources of information used for filling out the rubrics for US schools were IPEDS data and the college websites. For non-US schools, information was gathered from the websites and the annual reports sent to the IACBE. Specifically, for US schools the scores were assembled using the following sources and guidelines. (Note: for non-US schools, the IACBE annual reports were used in lieu of IPEDS data.)

TABLE 2
SOURCES AND GUIDELINES

Category	Source(s)	Criteria
Technology	Website	Primary: Homepage – Are online programs featured? Secondary: Class schedules posted: What percent of courses are online or hybrid?
Scheduling	Website	Primary: On Business Academic page, are programs described as accelerated? Secondary: From course schedules: Are courses offered in less-than 15 week sessions?
Bundling	IPEDS Website	Primary: Does the school provide residence halls and athletic teams? Secondary: What percent of students are full time vs. part time? Tertiary: What percent of students are served off campus?
Faculty	IPEDS Website	Primary: What percent of faculty is full time vs. part time? Secondary: How much emphasis is placed on scholarly accomplishments on the website?
Pathways	Website	Primary: On Business academic page, how much focus is placed on degree completion programs? Secondary: On Admissions page, how much focus is placed on transfer credit, CLEP, and prior learning?
Niche	IPEDS Website	Primary: How many types of degrees are offered? Secondary: On the website, is a specific student population targeted?

To test each of the hypotheses, Pearson correlation coefficients were calculated between innovation indexes and each of the relevant independent variables. In addition, bar charts were constructed and analyzed for each comparison group (e.g., for-profit vs. not-for-profit) and each individual category of innovation score (e.g., technology, scheduling, bundling...). Finally, the sample was ranked according to (1) innovation index, (2) age of institution, and (3) enrollment to glean additional information about differences among groups.

FINDINGS

H₁: Newer institutions are more innovative than older institutions.

Finding: This was confirmed.

The schools in the sample ranged in age from 196 years to five years. The Pearson correlation coefficient for age and innovation index was -.364, which was significant at the 0.01 level. Moreover,

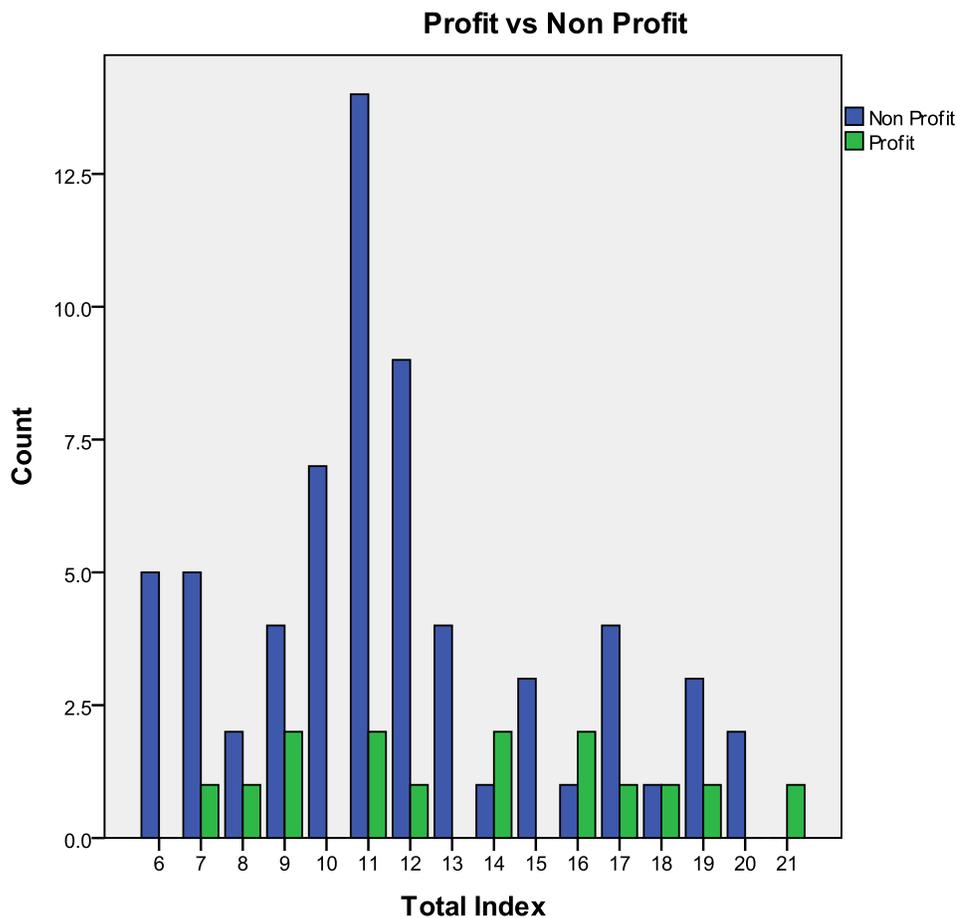
when examining just the schools ranking in the top 10% for innovation and those ranking in the bottom 10%, there was almost a 100 year difference in age. The eight most traditional schools, with an average total innovation score of 6.4, had an average establishment year of 1858, while the most innovative 10%, with an average total innovation score of 19.4, had an average establishment year of 1954. The correlation between age and innovation may have been deceptively low because many of the schools in the sample changed their ownership and/or mission since the date reported on their website as their founding year, and it is logical that they may have also changed their degree of innovation at the time of these other changes. The data analyzed would not have picked up this nuanced change. The hypothesis that newer institutions are more innovative than older ones should be tested in further research.

H₂: For-profit institutions are more innovative than not-for-profit institutions.

Finding: This was not shown in the aggregate data.

Not only was there no significant correlation between for-profit status and innovation index, but there also was no central tendency for the index displayed by the fifteen for-profit institutions included in the study (see exhibit 1). The for-profit sector demonstrated evenly distributed innovation scores ranging from 7 to 21, with no more than two colleges at any single level. On the other hand, the innovation indexes for the not-for-profit schools were distributed around the score of 11.

FIGURE 1

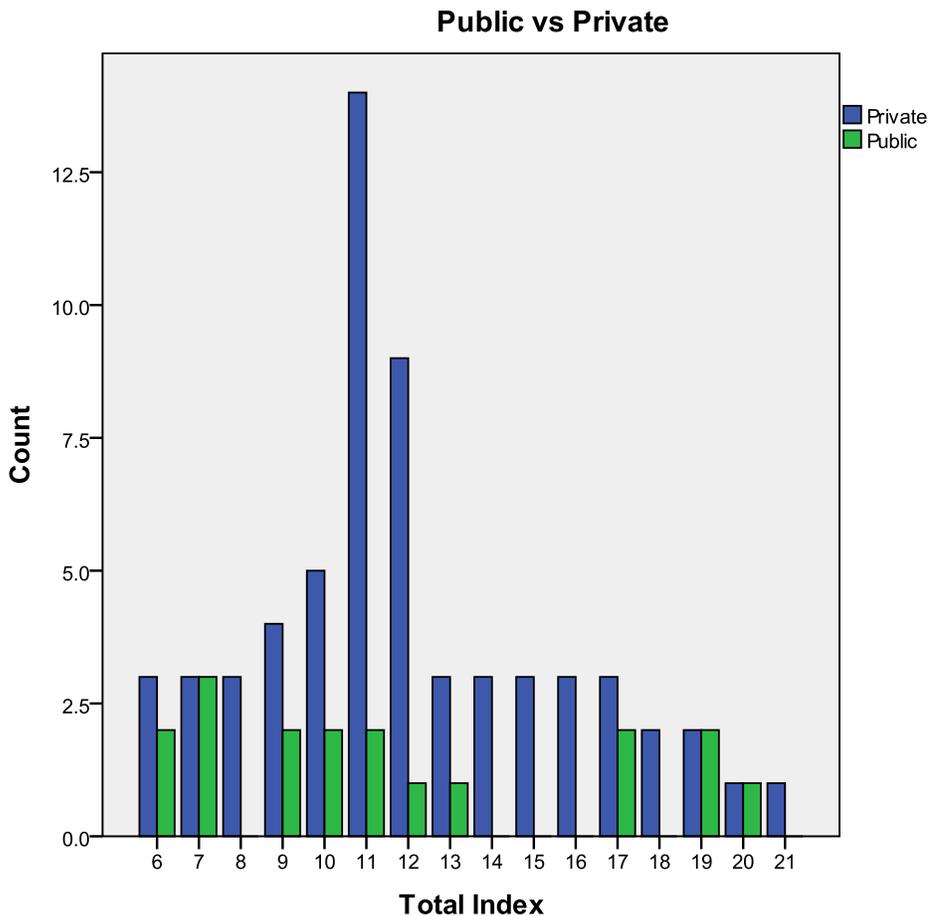


This finding implies that the for-profit segment is extremely diverse. For every innovative for-profit college, there is a highly traditional one. This finding contradicts other studies which have found that schools in the for-profit sector tend to be online, focused on adult learners, and fully unbundled (Bennett, Lucchesi, & Vedder, 2010). However, this discrepancy could have been because the colleges in the sample may not have been typical of their sector. First, these schools were interested in specialized US business accreditation, and may have believed that the traditional approach was that valued by IACBE. Second, half of the for-profit institutions in the sample were non-US schools. These schools, which were, again, interested in US specialized accreditation, may have modeled themselves after what they believed to be a traditional US structure. Further research is needed in this area to determine the degree of innovation in the for-profit sector using a larger sample.

H₃: Private institutions are more innovative than public institutions.

Finding: This was not shown in the aggregate data.

FIGURE 2



Both public and private institutions tended to be relatively conservative according to their rankings. As shown in exhibit 2, the midpoint of the total innovation index for all schools is 13.5. Approximately 70% of both private and public institutions fall below this midpoint, in the ranges of composite scores of

six to 13. Digging deeper into the subcategories of innovation provides some additional insights. For instance, 44% of private institutions offer something other than a traditional semester schedule, while only 27% of the public institutions offer accelerated courses. Also, the private institutions tend to be more creative in their use of faculty: 58% of private institutions rely predominantly of full time faculty in traditional roles, while 72% of public institutions still do so.

H₃: Non-US institutions are more innovative than US institutions.

Finding: This was not shown in either the aggregate data or the subcategory descriptive analysis.

There were only 13 non-US colleges included in the analysis, so this small sample may have been insufficient to reveal any differences between US and non-US institutions. However, even given these small numbers, a drill-down into the subcategories of scheduling and faculty would have been expected to show innovation on the part of the non US institutions. An analysis of the subcategories, though, confirmed the “no difference” conclusion. If anything, the non-US schools in the sample were more likely to have traditional scheduling and more likely to rely on full time faculty than their US counterparts. This finding should be further investigated with a larger population of non US institutions in further research.

H₄: Larger institutions are more innovative than small institutions.

Finding: This was not confirmed in the Pearson coefficient, but was confirmed in subcategory descriptive analysis.

Although the correlation coefficient was not significant at the 0.01 level, a sorting of institutions based on level of innovation did reveal an interesting pattern. The average size of the schools ranking in the top 20% by innovation index had an average student enrollment of 9,023, while the bottom 20% had an average student enrollment of 1/3 of that, or 2,940. If the non-US innovative institutions are eliminated from this tally, the distinction becomes even greater. (The size comparison between US and non-US colleges can be misleading, since the US colleges tend to be comprehensive, while the non-US schools are program-specific.)

This finding is important because it suggests that the innovation that occurs in higher education might be a necessary adjustment – an adaptive rather than destructive innovation. Schools might reach a size inflection point at which they are no longer able to educate additional students without coming up with creative means of course delivery, scheduling, and faculty use. Smaller colleges may cling to traditional structures because they can, but large colleges may be forced to innovate to manage their large numbers.

An alternative explanation, of course, is that the innovations drove growth in these institutions. Further research is necessary to uncover the direction of the causality in the relationship between size and innovation.

DISCUSSION

Overall, this research refuted the assumptions of pockets of innovation in higher education. Instead, it suggested fringe adaptations occurring in most colleges. The only colleges resisting the need to change delivery methods and scheduling, for instance, are some very small traditional private colleges and some larger public institutions.

Rather than being truly innovative, the changes occurring within this sample of colleges and universities appear to align more with Christensen’s examples of businesses that make minor adjustments to their products, which continue to become more complex, elaborate, and expensive. A few of the most innovative colleges in this study may represent disruptive innovators. They do not offer a full repertoire of campus life, do not offer a full complement of academic programs, do not encourage faculty research outside the realm of teaching, and do not seek to attract the top performing traditional aged students.

These few institutions are larger and newer than the average in this study. If their names were revealed, those in traditional higher education may scoff at them, and consider them not worthy of further consideration.

There are very few of these institutions, though. Of the 80 colleges in this sample, only four scored at 20 or above in the innovation rubric. (Conversely, there were fifteen that scored below 10.) The top innovators were not those many might expect – they were a mixture of public and private and for-profit and not-for-profit. Similarly, the most traditional colleges were probably not of the profile anticipated when this study began – they, too, were a mixture of public and private, for-profit and not-for-profit, and US and non-US.

Whether the innovative colleges existing today are the disruptive innovators referred to by Christensen remains to be seen. The implications for current higher education administrators, though, is that they must be aware that these innovators are out there, and, like it or not, and will soon be competing for the same students as the traditional colleges. Innovations in higher education have begun to move upstream given the publicity surrounding the Coursera and Udacity projects (MOOCs). Once the tier one institutions align themselves with nontraditional – and inexpensive – modes of educational delivery it is time for all college administrators to take note.

This study was, of course, subject to limitations. First, the sample was limited to IACBE members, which may not be representative of the overall college and university population. For one thing, all of the IACBE schools have business programs which focus on student learning outcomes and continuous quality improvement. If anything, these parameters would make them somewhat less traditional than the total possible population. Second, the composition of schools in the sample reflected the overall proportions of IACBE member schools. This means there was a predominance of private not-for-profit colleges examined. Finally, the need for subject anonymity prevented a qualitative examination of the characteristics of the most and least innovative schools. Further qualitative research is needed in this area. The question of why the schools innovate needs to be explored. Is innovation driven by competitive necessity or an educational strategy? Is it reactive or proactive? Similarly, further research is necessary to determine why larger schools are more innovative than smaller schools. Is it because of necessity (i.e., technology and innovative scheduling are the only ways to accommodate the large enrollment)? Is it because size provides the financial strength to invest in the technology necessary? Or, most interesting, does the relationship run in the opposite direction: does innovation drive growth in these institutions?

These questions are becoming increasingly important in the field of higher education. The last question this research sought to answer was whether the innovation being adopted by mainstream colleges and universities today is enough to protect them from the forces of disruptive innovation in the industry. This study did identify some highly innovative institutions, but, overall, most of the schools examined were simply making small adaptive changes to remain competitive. This is probably not enough for long-run sustainability. For the past few years, a great deal of attention is being paid to costs containment, outcomes, and affordability in higher education. The disruptive innovator who begins to offer low cost and high quality education has the potential of rendering many more traditional institutions obsolete.

REFERENCES

- Bauerlein, M. (2012). Improving incentives to boost academic productivity. In Kauffman Foundation College 2.0: An entrepreneurial approach to reforming higher education (pp. 42-43). Kansas City, MO: Kauffman.
- Bennett, D., Lucchesi, A., & Vedder, R. (2010). For-profit higher education: Growth, innovation and regulation. Washington, DC: Center for College Affordability and Productivity.
- Brewer, D. & Tierney, W. (2011). Barriers to innovation in U.S. higher education. In B Wildavsky, A. Kelly, & K. Carey (Eds.), *Reinventing higher education: The promise of innovation* (pp. 11-40). Cambridge, MA: Harvard Education Press.

Butler, S. (January 13, 2012). The coming higher-ed revolution. *National Affairs*, 10. Retrieved on January 20, 2012 from <http://www.heritage.org/research/commentary/2012/01/the-coming-higher-ed-revolution>.

Christensen, C. (1997). *The innovator's dilemma*. New York: HarperCollins.

Christensen, C., Horn, M., & Johnson, C. (2008). *Disrupting class: How disruptive innovation will change the way the world learns*. New York: McGraw Hill.

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

Christensen, C., Horn, M., Caldera, L., & Soares, L. (February 2011). *Disrupting college: How disruptive innovation can deliver quality and affordability to postsecondary education*. Washington, DC: Center for American Progress.

Hentschke, G. (2011). For-profit sector innovations in business models and organizational cultures. In B Wildavsky, A. Kelly, & K. Carey (Eds.), *Reinventing higher education: The promise of innovation* (pp. 159-196). Cambridge, MA: Harvard Education Press.

Kamenetz, A. (September 1, 2009). How web-savvy Edupunks are transforming American higher education. *FastCompany*. Retrieved May 22 from <http://www.fastcompany.com/magazine/138/who-needs-harvard.html>.

Kamentetz, A. (2010). *DIYU: Edupunks, edupeneurs, and the coming transformation of higher education*. White River Junction, VT: Chelsea Green Publishing Company.

Kirschner, A. (April 8, 2012). Innovations in higher education? Hah! *The Chronicle Review*. Retrieved May 4, 2012 from <http://chronicle.com/article/Innovations-in-Higher/131424/>.

Lewin, T. (July 17, 2012). Universities reshaping education on the web. *The New York Times*. Retrieved July 17, 2012 from <http://www.nytimes.com/2012/07/17/education/>.

Massey, W. (2011). Creative paths to boosting academic productivity. In B Wildavsky, A. Kelly, & K. Carey (Eds.), *Reinventing higher education: The promise of innovation* (pp. 73-100). Cambridge, MA: Harvard Education Press.

McKendrick, J. (March 24, 2010). How creative destruction is altering the economics of higher education. *SmartPlanet*. Retrieved April 24, 2012 from <http://www.smartplanet.com/blog/business-brains/how-creative-destruction-is-altering.com>

McMahan, V., & Loyola, M. (May, 2011). *College 2.0: Transforming higher education through greater innovation and smarter regulation*. Washington DC: Institute for a Competitive Workforce.

OECD Education Ministers. (2006, June 27). *Higher education: Quality, equity and efficiency*. Retrieved May 11, 2012 from <http://www.oecd.org/dataoecd/30/7/36960580.pdf>

Sheets, R., Crawford, S., & Soares, L. (March 28, 2012). *Rethinking higher education models*. Educause. Washington DC: Center for American Progress.

Simon, C. (November 4, 2007). The weeklong semester. *The New York Times*. Retrieved August 3, 2012 from <http://www.nytimes.com/2007/11/04/education/edlife/>

Soares, L., & Morgan, J. (June 29, 2011) Guiding innovation in higher education. *American Progress*. Retrieved May 22, 2012 from http://www.americanprogress.org/issues/2011/06/managing_innovation.html.

Stokes, P. (2011). What online learning can teach us about higher education. In B Wildavsky, A. Kelly, & K. Carey (Eds.), *Reinventing higher education: The promise of innovation* (pp. 197-224). Cambridge, MA: Harvard Education Press.

Wellman, J., & Soares, L. (September, 2011) Bringing business analytics to the college campus. Delta Project. Washington DC: Center for American Progress.