University Business Models and Online Practices: A Third Way

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Abstract

Higher Education is in a state of change, and the existing business models do not meet the needs of stakeholders. This article contrasts the current dominant business models of universities, comparing the traditional non-profit against the for-profit online model, examining the structural features and online teaching practices that underlie each. It then offers a third option for existing non-profit universities that would enable them to continue offering multiple value propositions while increasing efficiency and quality of outcomes. This involves emphasizing online instruction, separating research from teaching, and adopting a more complex structure based on differentiated faculty roles that would enable economies of scale along with the benefits of research-informed instruction.

University Business Models and Online Practices: A Third Way

Higher Education is in a state of change. In recent years the problems faced by the industry have increased, as the cost of university education has increased by 6.5% each year (U.S. Department of Education, 2011) and student debt has overtaken all other forms of debt (Martin & Lehren, 2012). Enrollments have declined since fall of 2011 (Lederman, 2012; National Center for Education Statistics, 2012; Martin, 2013a), and state governments have applied increasing pressure to reduce tuition costs (Kiley, 2012). The higher education industry was downgraded by Moody's Investment Service due to fears of financial problems (Martin, 2013b), and many expressed fear of the bursting of a "bubble" of unwarranted investment in higher education (Davies & Harrigan, 2012; Lacy, 2011). Postsecondary graduation rates have remained low, with only 54 percent of all students graduating with a degree within six years (Shapiro & Dunbar, 2012).

Two dominant approaches to higher education have developed, with proprietary universities following a mass production model of largely online courses, and traditional non-profit universities following a craft model of mixed online and face-to-face, both for high prices. However, the upheaval has led many to call for a new business model for higher education to reduce costs (Breneman, 2010; Christensen, Horn, Caldear & Soares, 2011; Fried, 2011; Kastelle, 2010; Sheets, Crawford & Soares, 2012; Tapscott, 2009).

Many universities and colleges have looked to online learning to extend access and increase efficiency (Allen & Seaman, 2013), and some have implemented or planned to add large-scale online courses (Fain, 2013; Kolowich, 2012; Lewin & Markoff, 2013). However, the challenges of teaching critical skills and maintaining high student retention to all the students who need degrees, in a cost efficient manner, have yet to be met (AASCU, 2012; Ewell, 2012; Lumina Foundation, 2013; National Commission on Higher Education Attainment, 2013). While online learning holds promise, few institutions have addressed key issues to provide efficient and effective implementation. The Lumina Foundation recently called for "creating new higher education business and finance models that significantly expand the nation's capacity to deliver affordable, high-quality education" (Lumina Foundation, 2013, p. 3). Such a proposal is developed here, combining online learning with new operational practices and organizational structures that revise the traditional university business model while meeting the same societal needs.

The State of the Higher Education Industry

The last decade saw great expansion in US higher education, led by enormous growth in the for-profit higher education sector where enrollments grew 325% from 2001 to 2009. However, enrollments began to decline in the fall of 2011 (Fain, 2011; Lederman, 2012; Martin, 2013a). Several national commissions recently issued reports addressing the problem of low degree completion rates (*American Dream 2.0*, 2013; National Commission on Higher Education Attainment, 2013), which ranged from 43% at 4-year for-profit colleges to 61% at public universities and 72% at private non-profits (Shapiro & Dunbar, 2012).

The student body has changed (Rhoades, 2012). Currently 25% of students are over 30 years old, and the average age of undergraduates continues to rise. Approximately 25% are parents, and nearly 40% attend part-time (Soares, 2013). As Tinto (2012) noted, the critical factor affecting the success of adult and part-time students is their experience in the classroom, as most do not live on campus or participate in recreational activities. Four critical course factors needed to support adult student success include: 1) setting clear and high expectations; 2) providing academic and social support, ideally embedded into the class; 3) frequent and timely assessment and feedback; and 4) active engagement with faculty, course concepts and with other students, and the development of a learning community (Tinto, 2012).

Furthering the upheaval has been the combination of increased costs and reduced state funding. Universities have faced increasing expenses to support new physical facilities, expanded research, and more administrative personnel, technology, athletics, and other student services (Christensen et al., 2011; Fried, 2011; Hacker & Dreifus, 2010). Meanwhile, state support for higher education has declined steadily since 2008 (U.S. Department of Education, 2011); in 2012 alone, state funding decreased by 7.6% (Ma & Baum, 2012; National Commission on Higher Education Attainment, 2013). The result has been sharp increases in tuition. Even after adjusting for inflation, the cost of attending public universities in 2012-13 was 3.6 times greater than 30 years earlier (College Board, 2012).

Many state governments have responded by putting pressure on universities to change. The governor of Texas proposed "seven solutions" for public universities that would reduce funding for overall operations and research, view students as customers, and reward faculty based on student evaluations (Mangan, 2011; "7 solutions," 2013). State governors have called on public universities to offer Bachelor's degrees for a total cost of $10,000 (Kiley, 2012), and pressured public colleges and universities to increase their focus on teaching and student retention, improve access to key courses, and make more use of online learning (Lubbers, 2013; Rivera, 2013; York, 2013).

At the same time, some critics have argued that colleges have "lowered the bar" so that students are not learning much; course requirements have lessened to reduce the required levels of reading and writing, and as a result students have been spending less time on their studies and failing to develop critical thinking skills which has been masked by grade inflation (Arum & Roksa, 2011; Ewell, 2012; Tapscott, 2009). Many classes have been designed as lectures, with few applications and little active engagement, which limited skill development (Haak et al., 2011; Ruiz-Primo et al., 2011).

Despite the problems with higher education, it continued to play a critical role for students and for society. The financial return on the investment of obtaining a four-year degree has been calculated at over 15% annually (Greenstone & Looney, 2011). Adults with college degrees earned 64% more than high school graduates in 2011, and had far lower unemployment rates (U.S. Dept of Treasury, 2012). In addition to the benefits to graduates, universities benefitted their communities; one analysis found that every dollar invested in the University of Minnesota generated $13.20 for the state (Tripp Umbach, 2011).

Higher education is clearly important to individuals as well as to the labor force. However, it needs to become more efficient and effective. Solutions must not rely on either decreasing access to less-prepared students, nor on dropping standards for success; students must master the competences needed to succeed in the 21st century economy and to be active citizens (Ewell, 2012; National Commission on Higher Education Attainment, 2013), including critical thinking, writing and quantitative reasoning skills.

Two major forces have impacted higher education: the use of technology to teach via online learning, and the business models, policies and structures of higher educational entities. While technology may increase

access and efficiency, the outcomes depend on its implementation. The next section describes the major existing business models adopted by different kinds of universities that offer online instruction, highlighting both strengths and weaknesses.

Online Learning and Higher Education Business Models and Structures

Online learning is now a standard feature of higher education. As of the fall of 2011, over 6.7 million post-secondary students, or 32% of those in the U.S., took at least one online course (Allen & Seaman, 2013). Most university leaders consider online learning critical to their strategy (69%) (Allen & Seaman, 2013). Online courses and programs are available in public, private for-profit and private non-profit universities and colleges (Allen & Seaman, 2011). A small percentage of schools avoid online learning altogether; these are primarily small, non-profit Baccalaureate-oriented colleges (Allen & Seaman, 2008).

In most public and non-profit higher educational settings, the systems and processes used to teach online are similar to those used to teach in traditional formats; a recent study found that 36% of universities with online programs operate them through Continuing Education, 26% through traditional academic departments, 26% through other units in the university, and 12% follow other structures such as highly decentralized academic units or outsourcing to a private contractor (Hoyt & Oviatt, 2012). In for-profit schools, however, the entire approach to designing and teaching online courses is different. Such schools take advantage of the possibilities of the medium to modify the business model (Christensen et al., 2011), as well as the resulting structure of the organization and the work itself.

All higher educational institutions, whether for-profit or non-profit, private or public, have a business model. A "business model" does not mean that organizations are designed or operated like traditional businesses with a goal of maximizing profits; it refers to the way that an organization meets people's needs, operates and organizes itself to produce its products or services, and manages its costs and expenses to remain solvent. "Even Mother Teresa had a business model" (Hampson, 2012). Although there are many views of business models (Chesbrough & Rosenbloom, 2002; Zott, Amit & Massa, 2010), this analysis adopts Johnson, Christiansen and Kagermann's (2008) perspective, which Christensen later applied to higher education (Christensen, et al., 2011). In this view, business models include four interdependent elements: 1) the value proposition, which is the way that a university or other organization solves problems for a stakeholder; 2) resources that are used by the organization, including people, technology and any other organizational input; 3) processes used to do work, manage and organize it; and 4) the profit formula, or the design of pricing and cost controls in order to pay for resources and make a profit (Christiansen et al., 2011, p. 32).

The concept of the business model is extended to include elements of the structure that determine and reflect different organizational operations through which value is created (Hedman & Kalling, 2003). In particular, the structural variables of centralization, formalization, standardization and specialization are critical in the university context. Centralization is the extent to which decisions are made by organizational leaders as opposed to those at lower levels in the hierarchy (Child, 1973; Fredrickson, 1986; Ireland & Webb, 2007); in a decentralized organization, key decisions are made by staff. In the context of higher education, a centralized university would have decisions made by Deans or Directors, while in a decentralized one they would be made by individual faculty.

Standardization is the degree to which employees' behavior and decisions are determined by rules, regulations and procedures that apply to multiple employees (Child, 1972, 1973; Hinings & Lee, 1971; Ireland & Webb, 2007; Pugh, Hickson, Hinings, & Turner, 1968). Formalization is "the extent to which procedures, rules, instructions, and communication are written down" (Child, 1973, p. 3; Hinings & Lee, 1971; Ireland & Webb, 2007; Pugh, et al., 1968). In the context of higher education, standardization includes policies and practices about the design of courses such as procedures to follow when developing a new course and the overall design; a higher level of standardization would include rules about naming the parts of a course, the number of units, the kinds of activities and assessments used, syllabi templates, etc. It would also include policies and practices around teaching such as requirements to visit courses daily, time frames for responding to inquiries and providing feedback, exam deadlines and other teaching behaviors. Formalization in this context would include the specificity of job descriptions and contracts, instructional handbooks, and the extent to which policies and rules are codified and documented.

Last, specialization refers to the extent to which work is broken up into discrete jobs (Child, 1973; Mintzberg, 1981; Ruekert, Walker & Roering, 1985). In higher education, the work of designing and teaching courses can be integrated in the job of "professor" which is specialized in different fields; professors of law teach classes differently than do professors of social work or sociology (Shulman, 2005). At a greater level of specialization, the work of developing and teaching courses can be separated out further into multiple jobs of "course author" and "instructor." Together, these dimensions describe how people and units are structured in organizations, how work is coordinated, and how decisions are made.

Because of the growing problems in the higher education sphere, several authors have advocated the development of new business models for higher education. Unlike many organizations, traditional universities offer many different value propositions. These are enumerated in Table 1, and address the two major areas of producing new knowledge (research) and disseminating knowledge (teaching), and specify the stakeholders whose needs are met by each value proposition.

Table 1
Value Propositions of Traditional Non-Profit Universities

Area of Operation		**Stakeholder**	**Value Proposition**
Teaching	T1	All students	Providing credentials and/or access to networks needed to obtain a better job
	T2	Working adult students	Developing skills and knowledge needed for employment, quickly and at low cost
	T3	All students	Developing critical thinking, writing, quantitative reasoning, ethical decision-making, and other skills needed to be an effective citizen
	T4	Young adult students	Supporting young adults' "transition to independent adulthood" (Christensen, et al., 2011, p. 40)
Research	R1	Society at large	Creating new knowledge that benefits society and business, such as the development of new technologies, medical procedures and understanding of the human condition
	R2	Universities and Colleges	Training new scholars
	R3	Business Community	Incubating new businesses through partnerships[1]
Service	S1	Society at large	Providing direct community support through volunteerism and community support services[2]

Traditional University Business Model and Structure

All of the teaching value propositions are espoused by most non-profit universities, although they vary; small liberal arts colleges focus more on T3 and T4, while many large research universities do not implement T2 effectively (Christensen & Eyring, 2011). Clearly research-oriented institutions focus more on the research value propositions, acquiring grants and other funding to meet the needs of non-student stakeholders. In order to meet all of these needs, traditional non-profit colleges and universities align the processes used to teach with those used to conduct research; each project or class is designed and implemented by a skilled expert who has autonomous control over most aspects of instruction as well as scholarship. Thus the practice of teaching in traditional universities follows a "craft" approach. The business model is a "Value Added Process," where the organization transforms inputs according to more "complete outputs of higher value" (Christensen, et al., 2011, p. 34). In contrast, the business model of research is essentially a "solution shop" where skilled experts work independently to diagnose and solve unstructured problems (Christensen et al., 2011, p. 33). However, these are combined within a single

infrastructure, which is designed like a solution shop.

The organizational structure is similar to that of hospitals and accounting firms: decentralized, with most decisions are made by the operating core of professionals who do the primary work that provides value to customers (Mintzberg, 1981). They are highly trained and indoctrinated into a common culture, and much of the work is standardized into routines that are well-practiced but vary according to functional specialty such as Law, Business or Medicine (Shulman, 2005). Little is formalized or documented.

In strongly decentralized universities, programs and courses are added based on faculty preference, whether individually or by committees; student demand may or may not be considered. Faculty are organized into departments and schools based on fields of study, which gain power and prestige with more staff, programs and degree offerings as well as more research; therefore there are incentives to add all of these. Similarly, each course is designed independently and generally idiosyncratically, with few standards or rules, although in some cases core required courses are standardized in terms of textbooks and syllabi, and occasionally use a common final examination. All aspects of the courses are the intellectual property of the faculty member. In order to support this, graduate teaching assistants and adjunct faculty are used to reduce expenses and provide faculty time to conduct research and engage in collegial decision-making about all academic aspects of the institution (Christensen et al., 2011; Hacker & Dreifus, 2010).

Most traditional universities offer online learning that follows a similar model of faculty autonomy and degree of specialization that exists in the rest of institution. The same person generally designs and teaches classes; only 36% of research universities report institutional ownership such that that multiple instructors can teach a course, and only 8% pay faculty any kind of compensation when others teaching the course (Hoyt & Oviatt, 2012). Developing an online course requires a good deal of effort, so faculty are paid to develop or revise online courses in 82% of universities (Hoyt & Oviatt, 2012). Most schools provide training, such as how to use the online Learning Management System to host and manage the course. Faculty generally make all decisions about the course, just as they do in the traditional classroom. They use whatever pedagogy they choose, structure the course as they choose, and select visual elements such as color schemes and fonts. There is little standardization in the appearance or design, nor in the quality of the online learning materials.

Similarly, when teaching an online course, faculty generally make decisions about their teaching behavior; for example they give feedback as often as they like, provide information where and how they prefer, and use teaching tools such as feedback mechanisms, discussion boards and grade books as they prefer. There are a few exceptions, where non-profit universities provide rules that must be followed in teaching, such as Penn State Global Campus.

There are advantages and disadvantages to this approach. The outcomes are highly variable; some courses are brilliantly designed and taught, and others not. Some faculty will prepare their courses carefully, while others will still be designing – or redesigning – them throughout the course, causing confusion. The ability to design courses using a wide range of pedagogies and closely facilitated learning makes it feasible to teach critical thinking, ethical decision-making, writing, and many other core skills that require iteration and formative feedback. Authentic, applied and interactive activities can be designed, and a committed instructor can develop strong communities of learning. Courses can be customized to meet different learning goals, with a range of activities from debates to case analyses, negotiations to building and taking intelligence tests. Variety in pedagogy and design can heighten students' interest. However, such an approach requires intensive training in course design as well as technology; support from an instructional designer; and a high degree of commitment on the part of the faculty. And, of course, the individualized approach is extremely expensive (Christensen, et al., 2011).

Proprietary University Business Model and Structure

For-profit universities and colleges focus on providing the first two value propositions: developing skills efficiently and obtaining a degree for career mobility. This is particularly true for those using online learning, and the narrow focus allows very tight standardization of procedures and a mass-production design, which increases efficiency. The business model is value-added (Christensen et al., 2011), and the

organization is highly specialized, with work broken up into discrete units that can be done consistently and routinely. Decision-making is centralized at the top and decisions are implemented through middle-management.

Programs and courses are selected by administrators to meet market demand. Courses are then designed to fit a common structure, with consistent appearance and naming conventions. This provides not only a consistent visual brand, but also simplifies the process of taking each course; once the structure has been learned, students do not waste time figuring out where to find things. Instructional design staff have final authority over courses to ensure that course design, workload and pedagogy are consistent and meet the university's goals. In most of the large online universities, course pedagogies are structured such that a specific proportion of the grade is determined by asynchronous discussion, a certain proportion by the midterm, and another by the final exam. Some universities standardize the proportion of exam questions that assess learning at the top or bottom half of Bloom's taxonomy (Bloom, 1956).

Faculty go through identical recruitment and training procedures, and their online teaching skills are developed and supported by consistent practices and ongoing monitoring. Formal policies determine key factors such as minimum frequency of course monitoring and posting, time frames for feedback, and use of tools such as gradebooks and both formative and summative feedback.

These practices mean that many key decisions are centralized, and much of the work is both standardized and formalized. Course development costs and times are minimized, and the use of adjunct instructors reduces the costs as well, enabling efficient operations and a baseline of responsiveness to student needs. The student experience is standardized so that they know what is expected and can quickly move into mastering the knowledge and skills of the course. The standardization and separation of work into course designer and instructional designer, usually with a formal Quality Assurance review, ensures quality control in terms of clarity and internal consistency.

In many proprietary schools and others with innovative business models such as Western Governor's University, students receive extensive support from advisors who have similarly standardized work. Guided by an information system that provides critical facts such as lists of students who have not participated in class or who have not enrolled in the next term, they reach out to students to help solve problems and provide caring support, as well as a sense of connection to the university.

These systems are directed to student success, which is defined as obtaining passing grades, retention and satisfaction. The programs are designed to provide mastery of knowledge and basic skills, and passing is generally determined by scores on (largely) multiple choice exams, perhaps along with discussion participation and/or group work. These systems create consistent courses that are easy to understand and progress through. The similarity of structure and approach makes them efficient to create and to teach. The separation of course design and instruction means that the course is always complete and integrated before the term begins. The expense of having instructional designers oversee the courses and actually create the online shells is offset by economies of scale if multiple faculty teach each course.

However, this approach can limit the breadth and range of learning, and classes can become boring. It also fails to fully provide the third and fourth Teaching value propositions: the development of independence in young adults, and the development of cognitive skills that are difficult to master such as critical thinking, writing and ethical decision-making. Such skills require iterative coaching to develop; although they may be assessed with some degree of validity by multiple-choice exams, no algorithm can provide formative feedback needed to help people learn how to analyze, reflect and accurately apply concepts to new situations (Arum & Roksa, 2011; Lumney, Fredrickson, Spark & McDuffie, 2008). Interaction with content, other students, and instructors are critical to satisfaction and deep learning in online courses (Garrison, Anderson & Archer, 2010; Jiang & Ting, 2000; Moore, 1989; Picciano, 2002; Shea, Frederickson, Pickett & Peltz, 2003; Swan, 2001, 2004; Tapscott, 2009; Twigg, 2004).

Proposed New Business Models and Structures for Higher Education

Some theorists recommend new business models for higher education that utilize online learning and new structures for teaching and learning, applying the research on "disruptive innovation" to this arena

(Christensen et al., 2011; Christensen & Eyring, 2011; Johnson et al., 2008). Christensen and his colleagues recommend new policies and structures that support efficient, high-quality online learning through simplification of work flows, standardization and economies of scale (Christensen et al., 2011). They also advocate assessing outcomes via a combination of metrics such as job placement rates, salary changes, cost per degree, student satisfaction and other indirect measures; this formula does not include any direct assessment of learning.

Other analysts propose similar processes, focusing on public policy that regulates and supports research and innovation in higher education (Sheets, Crawford & Soares, 2012). They suggest "open, multisided and unbundled" business models (Sheets, et al., 2012, p. 6) in which universities integrate and support the use of learning resources from many providers in individualized learning plans to meet each student's needs, supported by information and regulatory systems that would model university education after health care networks. These solutions would expand the options for higher education, but are directed primarily at the Teaching value propositions needed by adult students who want a work-focused solution.

Christensen and Eyring (2011) compare effective universities that utilize very different business models as well as online learning. They recommend that research institutions focus on specific academic programs, provide year-round instruction, use online learning, design modular programs that enable speedy student completion, modify tenure, support research on instruction, and focus on developing student competence through course design and mentoring. They further recommend that traditional colleges either focus on outstanding teaching and eschew research, or focus on limited areas for research. These changes have not been broadly adopted, and require substantial structural change to all aspects university operations.

A recent trend that has captured the public interest is the use of Massive Open Online Courses, or MOOCs (Fain, 2013; Lewin & Markoff, 2013). In recent years, such large-scale courses have been designed to provide undergraduate and graduate educational opportunities (Rodriguez, 2012). These are offered over the internet to any student for little or no cost; one early and well-publicized course offered by two Stanford University professors had 160,000 registrants (Rodriguez, 2012).

Several MOOC providers have been established, including the for-profits Coursera and Udacity, and the non-profit edX, which is jointly funded by Harvard and MIT. These providers partner with faculty from traditional universities to design courses (Lewin, 2012b), and the approach has been lauded as a solution to the problems of higher education (Brown, 2012; "Free Education," 2012; Pappano, 2012). Several community colleges and universities collaborate with MOOC providers Udacity and edX to offer courses for credit (Fain, 2013; Levin & Markoff, 2013). Other universities are developing their own MOOCs (Lewin, 2013); 9.4% of universities plan to offer them, while 2.6% already do (Allen & Seaman, 2013). The Gates Foundation is dedicating three million dollars to developing and examining the effectiveness of MOOCs (Fain, 2012; Gates Foundation, 2012), while the American Council on Education is certifying some MOOCs for college credit equivalency (American Council on Education, 2012; Fain, 2012; Young, 2012).

However, existing MOOCs use computer-scored assessments in conjunction with TAs evaluating tests (e.g., https://6002x.mitx.mit.edu/), or rely on student scoring (e.g., https://www.coursera.org/about/pedagogy) which can be open to cheating. These approaches work well for teaching skills with clear right and wrong answers, such as math or engineering; they are not well suited to teaching critical thinking, writing, and similar skills where personalized formative feedback and iteration are essential to learning.

The other major limitation of MOOCs is the extremely low retention rates, typically between 5 and 15% (Balch, 2013; Rodriguez, 2012). In one report of a technically-oriented MOOC, at least half of the students already held a bachelor's degree or higher (Balch, 2013), or were professionals employed in related fields (Kolowich, 2012), or both (Rodriguez, 2012); those who successfully completed were older and even more likely to have an advanced degree (Balch, 2013).

Undoubtedly, many of these alternatives will change the higher education ecosystem. However, like the existing proprietary online institutions, they are best suited to meet the needs of self-directed and adult

learners. They do not address the value propositions that meet the needs of younger students or those without substantial educational preparation, and they do not meet any of the research-oriented value propositions of traditional universities.

A "Third Way" to Design a Business Model and Structure for Universities

There is an alternative approach available for traditional non-profit universities that combine a mission of teaching with research. In politics, the "third way" is a political movement that lies between the right and left wing, drawing from the strength of each approach (http://www.thirdway.org/). In the world of higher education, the third way lies between the efficiency-oriented market perspective aimed at adults, as taken by proprietary universities, and the traditional approach that focuses on research and teaching young students. As with the political Third Way, it is rooted in belief that both the public and private sectors should work together, providing opportunities while emphasizing personal responsibility. It values social justice and enabling people to improve their intellectual capital, developing not just facts but critical thinking skills. It incorporates the range of value propositions of traditional universities, but applies some of the business models and structures of the proprietary world to achieve efficiency and scale.

1. For all colleges and universities that include a mission of developing new knowledge, disaggregate the roles of teaching and research (Christensen & Eyring, 2011; Fried, 2011). Scholarship is important to maintain currency in many areas; however, every faculty member does not need to conduct it, nor is it needed in every academic area. The number of research-focused faculty would likely be reduced over time, concentrated in areas of interest to the university, and faculty encouraged to collaborate with colleagues around the world via the internet where feasible. Active participation in scholarly conferences and other developmental activities should be supported to maintain currency for all faculty.
2. Provide three separate paths for faculty, equally weighted for tenure: pedagogic roles that focus on teaching; discovery and integration roles that focus on research; and application roles that focus on administration and service (Boyer, 1990). The compensation for all three roles must be equal, and success evaluated by metrics determined by specialists in each area. Discovery/Integration faculty would be evaluated primarily on their research, and would teach upper level and specialized courses, and serve as subject matter experts. Pedagogic faculty would author courses, teach them, and coordinate and oversee other instructors; and application faculty would lead academic programs as well as external service programs, and develop skills for upper level administration. Joint appointments would be available for faculty who desire to follow multiple paths simultaneously, and because compensation is the same faculty could transfer from one path to another.
   Academic units would be comprised of all three kinds of faculty, in whatever proportions needed for the unit.
   In order to support collaboration, the current practice of student evaluations reviewed by deans and department heads could be extended to include systematic input from colleagues, graduate students and others, perhaps through 360 degree assessments of contributions that might factor into annual reviews.
3. Support and enhance research on the effectiveness of different approaches to teaching (Boyer, 1990), with the expectation that both pedagogic and discovery/integration faculty would collaborate on this work. Scholarship of teaching and learning would hold the same weight in tenure decisions as scholarship of discovery, as would also scholarship of application. Internal grants would include funding for research about teaching and instructional improvements.
4. Train graduate students for the requirements of their role. Doctoral students would select a role that interests them; those who focus on application would receive training in educational management, and those who focus on pedagogy would receive training in instructional design and online learning.
5. Offer most courses online, in particular all multi-section courses. All large-scale courses, whether online or face-to-face, would be developed using the same process.
   a. Separate the design of courses from their instruction. Courses would be created by pedagogic faculty, with input by discovery faculty with expertise in the area and guided by an instructional designer.
   b. Create standard elements of courses with consistent appearance, layout, naming

conventions, structure and navigation tools within each department or school (Swan, 2002).

c. Utilize a formal development process for all courses. Proposals for new courses would include learning outcomes, resources, major activities and assessments, following a template. Development would occur in fixed stages that involve specifying the elements of each unit of the course, specifying outcomes, resources, learning activities and assessments and media, following templates to ensure integrity and completeness.
d. Utilize a "backward design process" for course development, so that courses focus on what students do to develop and apply skills and knowledge, rather than on what information faculty convey to them. Classes designed for face-to-face instruction might use a "flipped" design such that listening and reading occur outside of class, with knowledge assessed as appropriate with automatically-scored online tools; class periods would be dedicated to applications, experiences, simulations, discussions, and other authentic learning approaches (Lombardi, 2007; Lumney, et al., 2008).
   Whether online or face-to-face, learning would be active rather than lecture-based, including appropriate learning games, simulations, cases and problem-based learning; Socratic inquiry and similar learner-focused techniques would guide discussion. Teaching resources may be purchased from publishers, accessed from online sources such as edX or Merlot, or developed by the faculty, and integrated into a coherent set of learning experiences that lead to mastery. Rubrics would be developed for all courses, and shared with students, to support consistent and transparent assessment.
e. Review all courses for structural quality, consistency and design, using a standard rubric such as Quality Matters (http://www.qmprogram.org/). Faculty would review them for content accuracy and pedagogical effectiveness.
f. Employ a combination of combination of pedagogic faculty, adjunct instructors and graduate students (especially those who are pedagogically-focused) to teach these standardized courses. Appropriate teaching tools such as webinars, wikis, ePortfolios, and other technologies would be used where appropriate to support a community of learning.
g. Follow a structured review and revision process that examines student evaluations, completion and withdrawal rates, consultation with all faculty who have taught the course, and reviews for design quality (e.g., Quality Matters), engagement and active learning, adherence to standards, and use of media and other resources. Reviews would be led by pedagogic faculty authors.
h. Share the intellectual property of the large-scale courses between the author and the university, following a textbook model where the university has the right to hire others to teach the course for a period of time, but the author maintains rights to the course materials. The license might be extended for a fee based on the number of students who take the course. Alternatively, courses that are essential to operations might be owned by the university, with pedagogic faculty assigned as part of their official duties to support and improve the classes in lieu of other responsibilities.

6. Offer online classes year-round to allow students to complete degrees faster.
7. Determine new courses and programs through a combination of academic and administrative oversight. Courses and programs would go through a vetting process that includes both a peer academic review and administrative review for need and alignment with the university's goals.
8. Assess learning outcomes systematically to monitor and improve instruction. This would include student satisfaction, withdrawal, and completion at the course level, as well as 4 and 6-year graduation rates and GPAs at the program level. However it would extend beyond these indirect measures to include direct assessments of learning for students in each program. Program-level assessment may use standardized measures of critical thinking, writing and quantitative skills such as the Collegiate Learning Assessment (Arum & Roksa, 2011), the Proficiency Profile or the Collegiate Assessment of Academic Proficiency. Alternatively, key competencies may be assessed via class-based activities using rubrics that are consistently applied across different classes in the curriculum (e.g., National Institute for Learning Outcomes Assessment, 2013; Association of American Colleges & Universities, 2013; Ewell, 2013).
9. Invest in student advisors, supported by information systems to alert them to student problems such as failure to participate in online courses, poor grades, etc. Advisors should be assigned specifically to students so they can contact them regularly, develop personal relationships, help them access resources such as tutoring, and solve problems that impede success.

The three approaches are summarized in Table 2.

Table 2
Three Models of Universities

	Traditional Non-profit (Craft)	**For-profit (Mass-Production)**	**Third Way**
Teaching			
Required activity	Conducted by all faculty	Conducted by all faculty	Conducted by some (pedagogic) faculty
Division of teaching tasks (separation or integration of design and instruction)	Design and instruction integrated	Design and instruction separated	Design and instruction separated
Training	Course design and teaching learned via apprenticeship, not required	Teaching learned formally, required for all faculty	Course design and teaching learned formally; required for some (pedagogic) faculty
Proposal and design process	Idiosyncratic	Standardized and formalized	Standardized and formalized
Work with Instructional Designer	Not required; sometimes available	Required	Required
Control over course design, pedagogy	Held by faculty, minimal standards	Held by instructional designer, tight standards for design	Held jointly by instructional designer and faculty; guidelines for design
Control over formatting, "look and feel," structure, etc.	Determined by faculty	Standardized across courses by instructional design team	Standardized across courses within departments by instructional design team and pedagogic faculty
Intellectual property rights	Held by faculty	Held by university	Jointly held, or held by university
Course delivery policies (e.g., response times)	Determined by faculty	Standardized across courses	Standardized across courses
Course review and revision procedures	Ad hoc	Ad hoc or standardized	Standardized
Course offering dates	2-3 semesters or terms, excluding summer	Frequent starts, including summer	3-4 semesters or terms, including summer
Creation of new courses and majors	Held by faculty	Held by administration	Held by faculty and administration
Assessment of learning	Generally indirect assessment	Generally indirect assessment	Direct and indirect assessment
Student advising	Low-intensity, provided by advisors or faculty	High-intensity, provided by advisors	High-intensity, provided by advisors
Research			
Required activity	Conducted by all faculty	Not conducted	Conducted by some (discovery) faculty; collaboration with

			pedagogic faculty on scholarship of teaching
Training	Learned formally and via apprenticeship by all	Not required	Learned formally by all, and via apprenticeship for some (discovery) faculty
Service/Administration			
Required activity	Conducted by some faculty, idiosyncratic	Conducted by some (full-time) faculty	Conducted by some (application) faculty
Training	Not required	Not required	Learned formally by application faculty

In order to implement this, a university would modify its structure to separate out instructional from scholarly activities, because these are highly diversified activities; schools and departments would have teaching and research-oriented subunits. Each subunit would have its own leadership and assessment of outcomes, tightly linked by collaborative relationships, symposia and other integrating mechanisms. Tenure decisions would be made primarily by faculty specializing in the type of role (pedagogic, discovery or application). This would modify but not eliminate the existing structures.

This model and structure would enable non-profit and research-oriented universities to obtain some of the economies of scale of the proprietary schools, while improving teaching. It supports the value propositions of research that benefit society, as well as those of teaching both younger and adult students, and reduces costs. The interaction between research and teaching encourages collaboration on the scholarship of teaching as well as that of discovery, and provides processes for cutting-edge expertise to inform teaching as well as enabling specialized development of new scholars. Further, the use of three faculty roles provides an opportunity for university administrators to develop expertise.

This approach increases the formalization, standardization and centralization above those of traditional universities and colleges, but not as far as the for-profit schools; structure and consistency are imposed in course development processes, format and appearance, but not in pedagogical approach. It separates the design from instruction of courses in order to obtain economies of scale and quality control, focusing on student learning needs. In sum, this "third way" gives traditional universities a chance to provide value propositions that meet the needs of students, parents, businesses, policy makers and community members, while reducing costs and therefore tuition.

[1] The University of Minnesota found that "commercialization activities such as patents, licensing, royalties and business spin-off companies" provided $390 million over five years (The Economic and Societal Impact of the University of Minnesota, 2011).

[2] The University of Minnesota was estimated to contribute more than $204 million annually in charitable work, donations and provision of services (ibid).

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