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Chapter

A Responsive Higher Education Curriculum: Change and Disruptive Innovation

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Abstract

This case illustrates how a large, regional university redesigned its program review, curriculum proposal, and curriculum approval processes to maintain currency and viability and meet regional educational needs. The chapter analyzes the problem, process, and outcomes of the changes, and discusses implications for broader contexts. It introduces the concept of disruptive innovation, discusses innovation and change within higher education, provides context for the institution highlighted in the case study, and outlines the initiatives. It then reviews the innovations from a change process model perspective and considers the implications of the case analysis. The chapter concludes with thoughts on the extent of change needed in higher education to keep pace with a continually-evolving global environment.

Keywords: disruptive innovations, curricular change, change models, institutional mission, higher education transformation

1. Introduction

"Most traditional organizations have accepted, in theory at least, that they must either change or die" ([1], para. 1). While dramatic, this statement bears consideration. Higher education is a traditional organization. "For a millennium, the basic structures of how universities produce and disseminate knowledge and evaluate students have survived intact through the sweeping societal changes created by technology—the moveable-type printing press, the Industrial Revolution, the telegraph, telephone, radio, television, and computers" ([2], para. 1). However, higher education institutions "are recognizing the need to change in order to provide an affordable, high quality product to a broader population" ([3], p. 87).

Concerns with return on investment, accountability, measuring quality with seat time and credit hours [4], and competition from for-profit institutions and learning organizations are causing disruption [2]. Disruptions include competency-based learning, work-based learning, prior learning credit, condensed degrees, distance learning, Massive Open Online Courses (MOOCs), personalized learning, outsourcing of educational services, new or revamped delivery modalities such as online learning, and partnerships between industry and higher education resulting in new forms of credentials.

One of the most increasingly common disruptions in traditional higher education is online learning, which institutions typically adopt to be competitive,

economically viable, and responsive to a changing market [3]. Formerly a disruption characteristic of open universities, distance learning has now become mainstream, with the potential to transform "curriculum and learning" ([4], p. 4). In addition to delivery modalities, transformations might also involve revising current curricula and creating new curricula based on findings from review and evaluation processes and in response to employer needs.

Employers of recent college graduates value cross-cutting skills such as critical thinking, problem-solving, oral and written communication, and teamwork [5]. These skills can be developed in programs of study throughout the university. However, universities must review current courses and program offerings to determine their effectiveness and currency, both in terms of cross-cutting skills and discipline-based knowledge, and identify new programs to address changing workforce needs. Although employers continue to rate these skills highly and consider them more important than area of study, they do not feel that recent college graduates have attained these skills [5], thus a gap exists between what higher education institutions are providing and what is needed.

This case illustrates how a large, regional university redesigned its program review, curriculum proposal, and curriculum approval processes to maintain currency and viability and meet regional educational needs. The changes aimed to address issues in these processes that had been identified by stakeholders, and to ensure that program revisions and new programs were strategic in terms of the institution's ability to prepare students with appropriate cross-cutting and disciplinary knowledge, skills, and abilities. This also entailed designing a more timely curriculum approval process so that curriculum changes and new programs reflected disciplinary currency and changing employer needs. In short, innovations to the institution's curricular processes were needed to ensure that the university was providing academic programs that were current and in demand, and that it was prioritizing the right new programs for development.

The chapter analyzes the problem, process, and outcomes of the changes, and discusses implications for broader contexts. It introduces the concept of disruptive innovations, discusses innovation and change within higher education, provides context for the institution highlighted in the case study, and outlines the initiatives. It then reviews the innovations from a change process model perspective and considers the implications of the case analysis. The chapter concludes with thoughts on the extent of change needed in higher education to keep pace with a continually-evolving global environment.

2. Disruptive innovation

Higher education is considered a sustaining innovation. Until fairly recently, in many contexts, participation was limited to those with the cultural capital (e.g., knowledge, skills, behaviors, social networks) [6] to be admitted and successful [3]. However, these formerly elite systems of higher education are now encouraging broad participation [7], particularly for those from disadvantaged socioeconomic backgrounds, certain geographical locations, and ethnic groups who do not have a traditional of higher education with the aim of improving social equity [8]. Various goals have been set related to degree attainment. European countries are striving for 40% of all 30–34 year-olds to complete a tertiary education by 2020 [9], and in the U.S., the goal is for 60% of working age Americans to obtain a postsecondary degree or credential by 2025 [10].

Due to the changing landscape of higher education, and specifically the diverse populations of learners, as well as increasing competition from disruptive

innovators such as for-profit and other educational providers, some traditional institutions are becoming disruptive innovators. Disruptive innovation is defined as follows:

> *The process by which products and services, which at one point were so expensive, complicated, and inconvenient that only a small fraction of people could access them, become transformed into ones that are simpler, more convenient, lower in cost, and far more accessible* [4].

In general, disruptive innovations involve emerging technologies and related practices, which are initially unproven and appeal to a limited number of people, but as they improve, they attract more customers and displace current providers [3–4]. Included in the category of disruptive innovations is flexible learning, including technology-enhanced and work-based/work-place learning, which provides choice in "how, what, when and where" to learn and "the pace, place and mode of delivery" ([11], para. 1, 19; [12]). Another example of a disruptive innovation is open and distance universities, which were formerly innovative in their approach to the provision of higher education credentials, but are now looking for ways to distinguish themselves because traditional universities have become more like them. The concept of disruptive innovation provides a lens through which to examine change in higher education generally and the changes discussed in this case specifically.

3. Innovation and change in higher education

Change can easily go awry, particularly when people can "choose their own balance between conformity and innovation" ([13], p. 55), which is generally the case in higher education. Not only does the faculty have considerable autonomy, but often schools, colleges, and departments operate largely independently. Higher education is loosely coupled in terms of organizational structure, which can counter efforts at standardization [14]. In the case of the curriculum, the faculty have primary responsibility due to their disciplinary expertise. However, curricular changes and particularly the introduction of new programs can be a considerable investment to an institution, which suggests the need for a deliberate approach to decision-making related to curricular change. Thus, collaboration and effective processes are needed.

Another issue that impacts change in higher education is what some refer to as initiative fatigue—this occurs when various areas in the institution want to innovate, respond to needs, embrace opportunities, and contribute to student success. "In our experience, the reason for most [change] failures is that in their rush to change their organizations, managers end up immersing themselves in an alphabet soup of initiatives" ([1], para. 2). This is evident in higher education, particularly with the expanse of technological solutions designed to solve current issues, such as the use of data-analytics to improve student retention and completion, a significant problem in U.S. institutions of higher education (30% of students admitted leave during or after their first year) [15]. With multiple areas on campus striving to improve, enhance, and innovate, change can become too much to manage and end in frustration, or in compromise and incremental tweaking rather than true innovation.

Determining where to focus change efforts and how to manage them, then, are critical considerations. Leaders must determine if they are basing the need for change on a sense of intuition, their own agendas, past experience (e.g., when I

was at my former institution, we did this and it worked wonderfully), or personal opinion, or if they have identified a new opportunity for a highly desirable future for the organization or a danger in maintaining the status quo. They also need to determine the extent to which they can convincingly show their vision to stakeholders so that the latter can see the end result. Too much consideration and failure to act, however, can have repercussions. University presidents have been fired for not pursuing change quickly enough [2]. As they prepare for change, leaders might ask:

- How are various change efforts or proposed efforts connected and which should be prioritized?

- Will the proposed change address a particular issue or opportunity or threat? How do I know?

- What is the rationale for the change and will it stand up to stakeholder examination?

A first step, then, is to identify a true need or opportunity for change, determine how it will impact other initiatives, set priorities, and anticipate stakeholder reactions.

Related to stakeholder reactions, leading or managing change requires an understanding of sources of resistance. These include an unwillingness to change habits, concerns about security (job loss, lack of required skills, possible changes in pay), structural inertia (embedded policies and procedures), group norms that influence individuals not to change, and the threat of power redistribution [16]. Other factors are complacency, immobilization (due to fear or panic), defiance, and pessimism [17]. All of these apply to higher education. Leaders must determine the best approach to persuading and influencing others as well as initiating, implementing, and sustaining change.

In a study of 26 higher education institutions seeking to implement different types of change, those most successful at transformation were characterized as follows:

1. Favorable external environments and internal conditions allowed institutions to create and control their futures in the face of outside pressure to change.

2. Leaders upheld academic values, established trust, shared credit for success, and had a long-term perspective.

3. Leaders understood the need for new practices, structures, and procedures and encouraged people to examine underlying assumptions of the status quo.

4. Leaders made adjustments in their actions as they listened to stakeholders across the institution and learned from them [18].

These findings identify commonalities in successful higher education change, but do not specifically establish how to manage change. Kotter and Cohen's 8-step model [17] provides further direction for change management, and is based on data examining instances of why change failed. See **Table 1**.

Successful change involves careful planning and effective leadership. Models such as this provide a framework through which to consider opportunities, potential barriers and derailers, and determine strategies to make change last. They provide a means of implementing a disruptive change.

Create a sense of urgency	Examine opportunities and threats. Show people the need to change – not with data and presentations but with compelling stories. Appeal to emotions
Form a guiding team	Identify change agents and stakeholders and involve them in leading the change
Get the vision right	Communicate a clear and concise vision that helps people visualize what the organization will look like when the change is implemented
Communicate for buy-in	Share, report, motivate, get feedback. Listen to people's opinions and views. Involve others
Empower action	Remove barriers. Examine policies and processes that hinder change. Provide training. Reward change behaviors
Create short-term wins	Do not start too many initiatives at once. Aim for immediate, highly visible, and unambiguous wins
Do not let up	Avoid bureaucratic practices that take up time. Create structures that empower people to innovate and solve sticky problems. Build on short-terms wins and continue the momentum
Make change stick	Cultural changes take time. Reinforce positive behaviors with recognition; celebrate; reward; embed change into the culture

Table 1.
Kotter and Cohen's 8-step model for change.

4. Context and overview

The context for this case is a large, open admission university in the United States. The university has nearly 40,000 students, of whom a growing percentage are non-traditional (first in their families to pursue a degree) and non-traditional (25 years old and older). The institution has a teaching, rather than a research, mission, and its primary purpose is addressing regional educational needs. As such, it has a range of programs—certificates, associate's degrees, applied associate's degrees, bachelor's degrees, and selected master's degrees.

This in itself is unique as most higher education institutions in the U.S. serve a community college function with 2-year technical or preparatory degrees (e.g., the latter prepare students to transfer to a 4-year institution), offer 4-year undergraduate degrees, or a combination undergraduate and graduate degrees. The university in this case study offers a wide range of degree programs. This is challenging as the inclusion of technical training along with traditional liberal arts degrees requires differentiation in terms of faculty credentials, tenure and promotion, course delivery modalities, scheduling, and other logistics. Also, due to being open admission, the university provides developmental education programs in English (reading/writing) and math. It has a range of student support programming such as a student success course, academic tutoring, and retention mentors (peers who reach out to students who may need help).

The university also holds an elective Carnegie classification as a community engaged institution, reflecting its commitment to its surrounding community and to forging mutually beneficial partnerships with local organizations and businesses [19]. As such, it provides extensive community service learning opportunities through which students apply the academic content they are studying in their courses to help resolve community or organizational issues while simultaneously gaining practical, hands-on experience.

Finally, the institution has experienced steady and consistent growth in student enrollment and projections indicate continued future growth. As such, new degree programs are added each year to respond to needs and opportunities, and new faculty members are hired with the expertise to offer these programs. The institution

reviews proposals for new programs on a regular basis and may have as many as 35 new programs or program revisions in process at any given time.

5. The initiatives

This section discusses three change initiatives, all of them related to the university's mission, and specifically, its academic programs. These initiatives address the challenge identified in the introduction—to ensure that the institution's existing academic programs are in demand and current, that new programs are appropriately prioritized for development, and that all curricular changes are made in a timely manner. The overall goal of these initiatives is to prepare graduates with the cross-cutting and disciplinary knowledge, skills, and abilities to meet regional workforce needs. For each initiative, the following is provided: problem, change process, outcomes.

5.1 Program review

Problem: Program review is required by the governing body of the university every 7 years. The purpose of the review is to examine the purpose of the program, qualifications of faculty who provide it, costs, and outcomes; in other words, to ensure that programs are effective, in demand, and are graduating students. Prior to the change, program reviews tended to focus on compliance and rarely resulted in change or curricular enhancements. Department chairs or an assigned person in the department completed the report, submitted it, and then it sat unused. When time for the next review came around, generally those responsible for completing it had difficulty finding the previous review. It simply was not meaningful.

Change process: To examine the viability of changing the program review process, a consultant with expertise in a particular curriculum prioritization model was invited to campus. He talked to stakeholders (e.g., administrators, faculty members, staff, state regent's office representatives) to share possible new directions and determine readiness for change. Based on these discussions and ensuing feedback, a guiding team led the identification of new evaluation criteria and coordinated with the office of institutional research to provide needed data in a readily accessible interactive format on its website. The criteria, or sections of the report, were as follows: department description, workforce data and analysis, institutional data and analysis, student learning outcome results, and strengths, weaknesses, opportunities, threats.

The workforce data section involved reviewing and analyzing employment trends and projections such as job openings (local, state, national), number of graduates in the state with relevant degrees, salary ranges, and year over year changes. This information is directly related to the institution's mission to meet regional workforce needs and had not been previously available. Institutional data included information about students (e.g., number of majors, number of enrollments outside the department, number of students by class standing and minority status), graduation (e.g., number of degrees awarded, number of semesters to graduation – by student population), faculty (e.g., number, full/part-time ratio, teaching loads), and costs (e.g., cost per student). The focus of this component was to examine program effectiveness in terms of student completions (by ethnicity, age, full/part-time) and also costs based on number of faculty members and their teaching loads (along with other variables).

Two departments piloted the criteria and process. The guiding team worked closely with them. Based on this experience, modifications were made after which

a second pilot occurred to test the changes. Following additional adjustments, the new review process was fully launched. It entailed all departments in a single college or school undergoing review in the same year. Each department was given a packet with the criteria and guiding questions and access to a website with their data. The data was presented in a format allowing comparisons across the college/school and at an institutional level. Department members analyzed the information and provided written comments for each criteria after which their report was reviewed by their dean and the guiding team. The process required departments to create an action plan that was reviewed annually at the dean and vice president levels.

Outcomes: As a result of this program review innovation, departments had access to new types of data, giving them a better idea of the extent to which they were supporting the institution's mission and how they compared to other units. This information was available to institutional leaders who then had a comparative, analytical snapshot of all their programs. The purpose for the review was clearer and the results more meaningful. Also, for the first time, the data could be viewed by all degree types (e.g., emphases, certificates, 2-year degrees), which enabled faculty members to view numbers of students in these programs and their graduation rates.

A key goal of the change was to integrate planning, assessment, and program review processes. The integration is reflected in **Figure 1**. The requirement for commentary on student learning outcomes assessment in the program review reports connected review and assessment processes rather than having them be separate analyses. Additionally, budget requests could be supported with program review evidence. In other words, weaknesses in a program, identified as part of program review, could lead to funding requests (e.g., more faculty, new equipment), and subsequently, additional resources. The new reporting format could also show deans and leaders, however, that some programs had more positions that were justifiable given student enrollments.

Figure 1 also indicates that program review reports no longer sat on a shelf, but that the resulting action plans were reviewed annually. For department chairs, this review occurred with the dean, after which deans reported outcomes to the vice president. Overall, the change resulted in closer connections across planning, review, assessment, and budget functions as well as ensuring greater accountability. It addressed concerns with the currency and relevance of curricular content, the degree to which students were acquiring needed content and skills, the demand for a program, and needed budgetary adjustments by collecting and examining relevant data and acting on the findings.

5.2 New program proposals

Problem: With the enrollment growth of the university and extensive business and industry development in the region, the university had to be responsive to the needs of its community, which entailed consideration of program revisions and new programs. The typical process for new program approval prior to the innovation was for a faculty member to get an idea for a program and discuss it with his department chair and dean after which the dean would bring it to the dean's council. If there was general support, faculty member completed and submitted the formal curriculum proposal form.

Nearly all ideas were considered worthy and moved forward to the formal proposal stage and were subsequently approved. There was minimal scrutiny of which programs should be prioritized; new programs were proposed throughout the year and approved as they were presented. Each proposal had budget implications—new faculty and staff positions, equipment, and office space. No one tracked what additional proposals were in the idea or development stage at the department level.
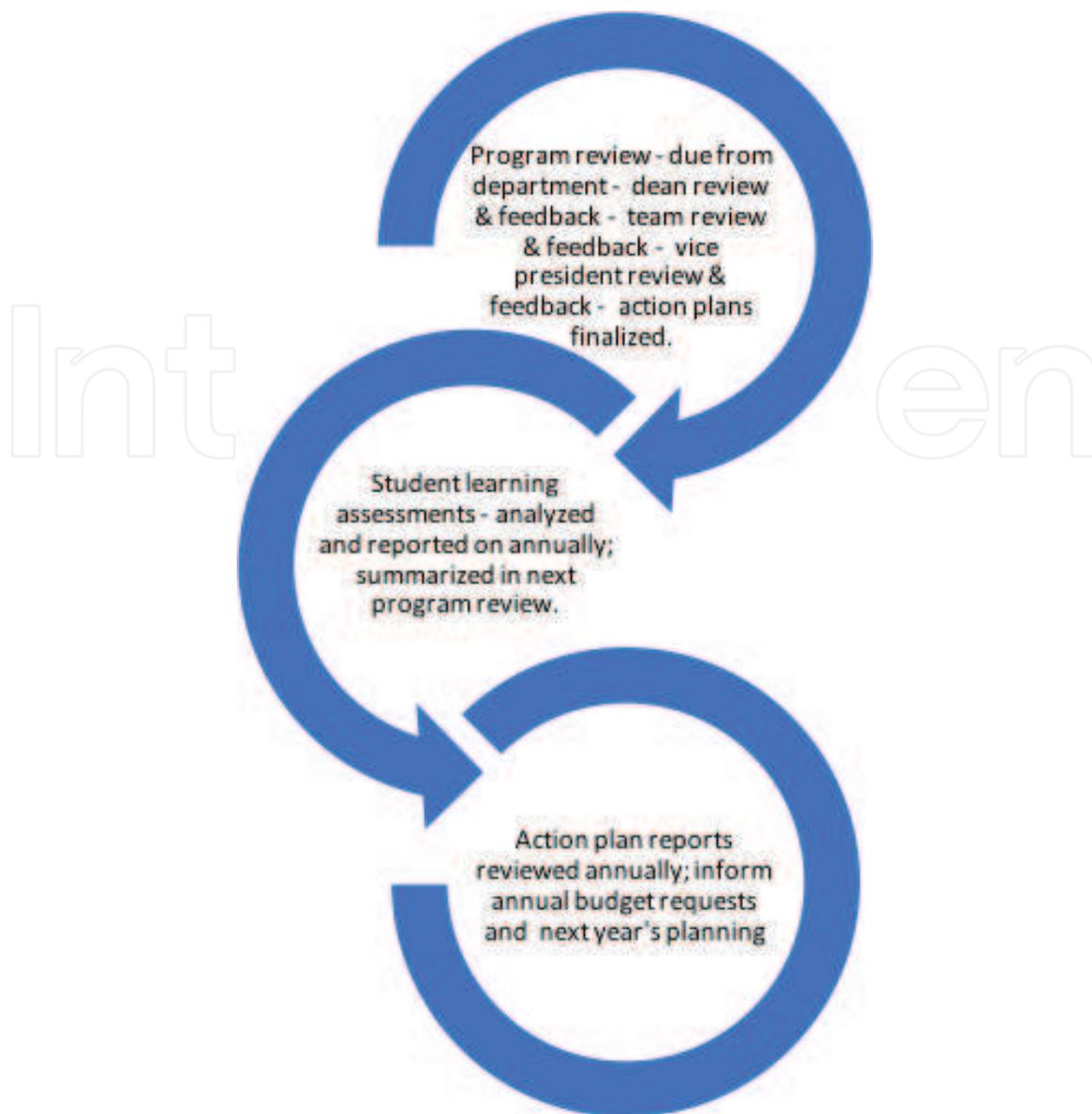
Figure 1.
Program review, assessment, and planning/budgeting cycle.

Initial proposals were simply approved when presented with no consistency in the types of information, evidence, or data provided, and even though formal proposals contained standardized information, these were generally moved forward although requests for clarification or additional information were sometimes made.

Change process: To address this issue, particularly due to the resource implications of establishing new programs and the desire to ensure their relevance, the dean's council decided to have a preliminary review of all programs under consideration at a set time each year. The review would also require specific standardized information. As such, a feasibility template was created and refined with feedback from the deans and their faculty as well as the curriculum office. The template included information needed for the full template that would be completed if the proposal was approved to move forward. The full template needed dean's council, provost, trustee, and regent approvals. Programs approved through this process also needed to be submitted to the university's accrediting body.

The feasibility template consisted of the following criteria: program name, sponsoring department/college, number of required credit hours, program type, proposed beginning term, rationale, consistency with university mission, labor market demand (e.g., Bureau of Labor forecasts, growth rate, wages, required

education, job postings over a 3-year period), student demand (e.g., number of degree completers in the region, enrollments in core courses required in the degree – if applicable), similar programs offered at universities in the region, external accreditation requirements, estimated enrollments and expenses (e.g., new positions, capital costs). Additional questions were mandatory for proposed graduate programs to ensure appropriate pathways from undergraduate programs and department capacity. These included how the graduate program would be distinct from the undergraduate program (if one existed); faculty staff, or resources from the undergraduate program needed to support the graduate program, reassignment of faculty members' workload hours from teaching undergraduate courses to teaching graduate courses, and recommended tuition rate with rationale. The required data for the feasibility template was provided upon request from the institutional research office, and partially overlapped with the data for program review.

Outcomes: In the past, the information presented for initial approval of a new program was inconsistent. Data sources varied, and student demand typically consisted of surveying students to see how interested they would be in a particular degree. The new system addressed these issues. Moreover, all ideas for new programs were reviewed annually as a set and discussed based on the standardized criteria, and programs deemed the most compelling were selected to move forward to the next step which entailed further review.

As an example, in the first round of the process, 25 initial ideas for new master's degree programs were considered based on feasibility studies. Only eight were selected to move to the next stage and the rest were put on hold for future consideration. Determination for the selections was based on projections of workforce demand, costs, and other criteria as provided in the new template. Decision-makers prioritized the programs that were of most relevance and value to students and employers. In this way, they were supporting the mission of the university and making a wise investment in the future. The changes resulted in a system that addressed the challenge of developing new academic programs based on faculty expertise or preference rather than responsiveness to external demand.

5.3 Curriculum process

Problem: One of the most critical aspects of being responsive to workforce needs, specifically the ability to create new programs, was the curriculum approval process, which was thorough and lengthy prior to the change initiative. Based on the approval steps and the number of bodies which needed to approve new programs, it could take as long as 2 years for a program to be implemented. This was particularly problematic when local businesses approached the university to request training and certification programs, and was also frustrating to faculty members who could not understand why the process was slow and entailed so many steps as well as cumbersome forms.

In addition to new program approvals, changes in existing curricula were also quite involved. Due to the detail and complexity of preparing the required documentation for a change and the scrutiny this information received, curricular revisions could take a considerable amount of time to be approved. Extensive revisions were often needed until departments got all the information right, and implementation of changes had to be far in advance of the start date of classes to account for catalog inputting and registration processes. Overall, the curriculum process was one of the most criticized areas at the university.

Change process: Similar to the process for program review changes, in this case, a consultant was involved. One reason for this was that the current system was strongly embedded into the university and previous attempts at change had not

been received favorably by those with direct responsibility for the process. Having an external perspective by one with expertise in the area was hoped to have an impact. The consultant did preliminary work by reviewing documentation prior to her visit to consider not only process, but organizational structure, roles, and responsibilities; she then engaged with constituent groups across campus during her visit. She identified a number of ways the process could maintain an emphasis on quality yet be shortened.

Subsequently, a number of changes that were under the control of the institution were made to expedite internal approvals. The primary goals were to devolve greater responsibility for curriculum processes to faculty, departments, colleges, and schools, shortening the timeline for curriculum approvals, and simplifying and streamlining the types of information required for curriculum changes. In essence, the new process allowed for a greater number of curricular changes to be approved at the department/college level and simply communicated to the university-level curriculum committee as information items rather than having to be reviewed and approved at that level.

Other aspects of the curriculum approval process, such as those involving the trustees, regents, and accrediting body were more problematic. However, the institution made a significant change to address this. Rather than allowing curriculum change proposals to be submitted only once a year, it moved to a rolling submission process. This meant that once all the needed steps had been accomplished at the institutional level, proposals could move forward to other approving bodies and be considered at their scheduled meetings throughout the year rather than at only a limited number of meetings as was the case previously. The rolling process also allowed changes to be implemented into university systems at more points during the year rather than only annually. Related changes involved new curriculum management software and a curriculum policy outlining responsibilities, roles, and process.

Outcomes: The changes had a positive impact on the curriculum process, particularly by giving it more flexibility with implementation of the rolling process and identifying consent items that did not need full curriculum committee review. Having responsibilities documented in policy was also helpful in terms of providing guidance. As such, the change addressed the challenge of the institution's inability to respond to workforce needs in a timely way. However, turnover in various positions created a lack of follow-through and understanding of what needed to occur and why. Devolving responsibility to the college level was only partially successful as the need to appoint someone responsible for this fell through the cracks at the dean level.

Additionally, existing systems and structures within the institution, such as having an annual catalog, were somewhat set in stone and those responsible for them insisted they could not change. This resulted in minor tweaks rather than the overhaul needed to be truly responsive to regional workforce needs. Business and industry representatives have difficulty understanding the slow pace of higher education. This initiative is a prime example of higher education as a sustaining organization rather than a disruptive innovator. The constraints higher education operates under need to be disrupted for true innovation to occur. This did not completely occur in this case.

6. Analysis and observations

The innovations described had the same underlying goal—to be responsive to employer needs by making curricular adjustments and developing new programs,

thereby preparing students with knowledge, skills, and abilities for their careers. In the case of program review, data on employment demand as well as student learning outcomes was included, thus addressing this goal. The same was true of proposals for new programs—the change resulted in substantiating requests with evidence of demand. The curriculum approval process change aimed to enable the university to decrease bureaucracy, increase flexibility, and decrease time to implementation. All changes resulted in some level of success.

Although a change model did not guide these innovations, it may be helpful to review the changes from the perspective of Kotter and Cohen's 8-step change process [7] in order to determine what might have been done differently. See **Table 1** for a review of each step and **Table 2** for an evaluation of the changes in terms of the model.

For most of the change initiatives, a fairly compelling reason existed but a great deal of *urgency* was not evident; the systems that were the focus of the change had been in place for a considerable time and were stable, and those closest to them did not see a need for change. Those leading the changes did not appeal to people's emotions or help people see the need to the extent necessary; thus some were unconvinced. The need for the curriculum approval process change was clearly evident to one group of stakeholders, but not to those most closely responsible for the process and who had designed the existing process, which met their goals but not the institution's goals.

Although the program review change was led by a *guiding team*, the other initiatives were largely top-down from the administration. The *vision*, or the purpose for the changes and where the university wanted to end up was clear, yet communication of the vision likely did not reach all levels of the organization nor was it touted on a regular basis by organizational leaders. They were leading a number

Step	Program review	New program proposals	Curriculum approval process
Create a sense of urgency	Some stakeholders perceived more urgency than others. A compelling need was not established for all stakeholders		
Form a guiding team	A team of key stakeholders led the initiative	Changes were initiated and led by top-level administrators rather than by key stakeholders and change agents	
Get the vision right	The vision for the initiatives was appropriate to the institution and its mission, but the intended results of the vision were not clearly established for the stakeholders		
Communicate for buy-in	Communication was uneven due to being left to unit leaders. Buy-in was somewhat accomplished due to the appeal of simplification of processes and consistency of standards, but change was primarily accomplished through compliance		
Empower action	Departments were provided with needed data, which simplified the program review process	The new proposal template provided structure and guidance	Implementation was uneven due to lack of training at department/college levels
Create short-term wins	Short-term wins were present in all cases as new procedures were initially implemented and evaluated		
Do not let up	Short-term wins were not utilized to further refine or eliminate bureaucratic processes or launch further innovations		Turnover of people in key positions resulted in limited change
Make change stick	Change was permanent largely due to the fact that the new processes were required and embedded into existing systems		Further changes to more fully expedite curriculum approvals did not occur

Table 2.
Evaluation of curricular innovations.

of initiatives and placed higher priority on some over others. Thus a consistent message about the vision was lacking. Unit leaders were responsible to convey the vision and this was uneven; thus, *communicating for buy-in* was only moderately accomplished. In the case of the program proposal change, communication was more successful, but likely because those who wanted to propose new programs had to comply with the new template. However, it also gave those proposing a program the opportunity to create a strong case and it leveled the playing field, which were advantages readily recognized.

Empowering action involves removing barriers. In the program review scenario, this was accomplished by making the process easier. Departments were provided with data for their reports and the data was consistent across programs to enable comparisons. They did not have to find their own data or request it and wait. This is an example of removing barriers. In the case of new program proposals, structure was provided in the form of procedural documents and notations on the proposal form providing guidance. In this case as well, a packet of needed data to support demand was distributed to departments. Curriculum approval processes fell short due to lack of follow through in identifying and training people at the department level to manage the approvals that had been pushed down from the centralized committee, so once again, this was uneven. The new curriculum policy, however, provided support for the changes to be stabilized.

Short-term wins were most visible with the curriculum approval process. There were a few examples early on of approvals occurring in an expedited fashion that were used to illustrate the success of the change. Program review also had some early success with the piloting of the changes, which helped others see the value of the new criteria and data sets. The program proposal process was shown to be effective in its first iteration as proposals were screened more rigorously and consistently.

Do not let up and *make change stick* were least evident in the curriculum approval change. This change was characterized by a turnover of people in key positions and much of the momentum was lost. It is not clearly evident that the new system is having the impact originally anticipated. Once the first wave of change occurred, additional change did not ensue. In the case of program review and new program proposals, the desired changes were implemented but not used as a springboard for further refinement or change in bureaucratic processes or to launch further innovations. In all cases, the changes became permanent in the sense that all the processes are required. For example, the new program review process is mandatory, and if one wants to modify curriculum, one must follow set procedures and policies.

7. Discussion and implications

Lessons learned from this analysis are that for change in higher education to be long-standing and rooted in the culture of an institution, it needs careful planning and effective leadership. Many change models exist, and most of them are based on research that has revealed why change has not succeeded. Without the guidance of a change model, change efforts will result in compromise and small, incremental change, which has little impact. Kotter and Cohen [17] explain a some of the circumstances that block change. In the case of the initiatives in the case study, the one most applicable is the focus on small modifications.

> *People without a great deal of bold strategy development experience often flounder. They can't figure out what to do because it's different from anything they have done before. They sometimes back away from the obvious because it's threatening. Or they convince themselves that small modifications in their current ways of operating will*

> *achieve the vision—eventually. Or, because they can think of no strategic possibil-*
> *ity, they conclude that the vision is ridiculous, even though it is not* ([17], p. 73)

The basic structure of higher education with its semester system, official annual catalog outlining policies and program offerings, software management systems for processes such as registration, curriculum, and scheduling, and accreditation standards is not designed to be nimble. All of these affected the changes in this case study. The people behind these systems have been trained to ensure that policies and standards are met and are not generally in a position to encourage or make sweeping changes. Those in higher level positions often do not have the detailed knowledge of systems and how they are designed, thus a gap exists that is difficult to overcome. The experts resist and say it cannot be done and the change agents or leaders do not have the technical knowledge to counter. This inhibits true innovation.

The innovations described in this case are not disruptive, and likely do not go far enough to address what the university set out to achieve and what it needs to achieve to manage its substantial and continuing enrollment growth with limited appro-priated government funding and budgetary restrictions on building projects and infrastructure enhancements. Although the changes discussed in this case resulted in subtle improvements, they fell short of true disruption or innovation due to the stability of traditional practices and culture. These hinder the university from fully meeting its mission as an open admission institution serving all students who enter its doors (e.g. a growing non-traditional student body, many of whom work full-time and are raising families as well as students with limited cultural capital), and ensuring that these students have a range of appropriate learning experiences that result in the knowledge, skills, and abilities needed by employers.

Innovations in higher education require knowledge about how to lead change and also the vision and commitment to move beyond the confining barriers within insti-tutions into uncharted waters. Some institutions are succeeding at this, and particu-larly in designing responsive curriculum that addresses both student and workforce needs. Partnering with edX, a MOOC venture developed by Harvard and MIT, one institution is offering credit for completion of MOOC courses at a discounted tuition rate, sets of MOOC courses that result in micro-degrees accepted by employers, and first-year credit-bearing MOOC course packages that are accepted at a range of universities [20]. These initiatives are disruptive in the sense that they are accrediting MOOC courses and not only offering them for credit but credit at half the price of regular campus courses to improve access and cost, and not requiring payment of the fee until after course completion.

Increasingly, universities will need to come to terms with these innovations by such strategies as altering their entire course pricing structure, concentrating on their core competencies, and perhaps restructure themselves as two-year institu-tions that contract out the rest of their degree requirements to other providers. If they do not, they could soon be out of business ([20], para. 3). The curriculum is at the heart of higher education and as such, transformations must focus on what is taught and what is learned, and the relevance of this teaching and learning to society. The institution in this case study made strides toward this goal by imple-menting curricular process innovations relevant to its context. Lessons relevant to managing change were also learned.

8. Conclusion

In this chapter, we explored factors directly applicable to higher education change efforts and introduced a model for change. We reviewed three instances

of change initiatives at a large open admission university, and analyzed them to determine their degree of success. We reflected on disruptions in higher education and their necessity in order to ensure the relevance and value of higher education to its constituents.

In this particular case, although enhancements to the institution's current processes were made, the changes fell short of the types of disruption needed to fully respond to internal and external stakeholders and make curricular adjustments in a timely manner. Long-standing practices and systems can stagnate change unless needed changes are clearly envisioned and effectively managed.

Disruptions in curriculum delivery and packaging are critical to the higher education sector globally. Opportunities exist for those with the courage and boldness to take risks and innovate. Others will make incremental improvements, as did the institution in this case study, to ensure quality and valued outcomes. Institutions must determine how to innovate their curricula in order to ensure the relevance of higher education in the future. This chapter offered insights into how one institution engaged in this process. An evaluation of the case demonstrated the need to identify and follow a model for change in order to maximize the effectiveness of curricular change. Such a model is needed to ensure the success of disruptive innovations. Only by doing so will higher education institutions be able to transform practice across diverse settings, and not only meet, but anticipate, the needs of a rapidly-changing world.

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