

Universal Design in Online Education: Employing Organization Change

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Abstract

With the rise in online education, universal design is an emerging trend aimed at providing available education opportunities to all students, accommodating for all disabilities. However, universal design in online education remains an ambiguous and lofty goal for an academic organization to undertake. This case analysis employs an organization change theoretical framework via archival document analysis to examine a failed universal design change initiative at a 1,500-student college. This analysis unpacks the complications inherent in the failed initiative via elucidation of the college's actions comparatively with foundational tenets of organization change, particularly the diffusion of innovations model. Elicitations from this analysis include possibilities for future universal design change initiatives, as well as an overarching call for academic organizations to consider organization change tenets in organizational decision-making.

Keywords: academic organization, universal design, organization change, diffusion of innovations

Introduction

In her discussion of strategic management, Serrano-Velarde (2010) posits that academic arenas maintain a problematic relationship with organization change. She explains that academic institutions traditionally enjoyed autonomy both as an institution and departmentally, within the “academic castes” (Serrano-Velarde, 2010, p. 127), but such seclusion is no longer relevant and can leave academic institutions uncompetitive and stagnant in their markets. According to Serrano-Velarde (2010), “The introduction of market devices in the public sector has stimulated the rise of ‘formal organizations’...where they previously did not exist” (p. 126). In other words, academic *institutions* have become academic *organizations* that must carefully consider their change initiatives due to competitive pressures from similar local and regional academic organizations.

Nowhere is this pressure more pronounced than in the rise of online education. Online programmatic offerings are growing at an astonishing rate, particularly with the rise of elite higher education academic organizations offering massive open-access online courses (MOOCs) (Marklein, 2012), as well as the rise in favorable opinion regarding online education amongst educators and administrators (“Latest Statistics...,” 2012, p. 177). Adding to this, according to the Integrated Postsecondary Education Data System (IPEDS), approximately 5.5 million students were enrolled in at least one online course in fall 2012, with approximately 2.6 million enrolled in fully online programs (Straumsheim, 2014). Thus, it looks as if these numbers will continue to rise, as academic organizations trend toward increased acceptance from students, faculty, and administration.

However, this trend also presents unique challenges for academic organizations, one of which is the appropriate way to provide accommodations to students with disabilities. Online classroom environments rely on recorded lectures, electronic discussion boards, and virtual dropboxes to transmit and assess knowledge (cf. Instructure, 2015; Pearson, 2015). Faculty have been racing to keep pace with these technologies, but at times faculty may feel reluctant to adopt new technological tools they feel may not be necessary for knowledge transmission and assessment (Edmonds, 2004). When considering accommodations for students with disabilities, this becomes particularly problematic, and academic organizations may find themselves floundering somewhat in their capacities to define/design

accommodations for online coursework. Furthermore, new trends in the online accommodations arena seem to be moving toward implementing accommodations in all online courses, even when no student in the course needs accommodations—something that is called *universal design* (Myhill et al., 2007). Therefore, an emerging struggle also exists in convincing faculty of the need for universal design when no students needing accommodations present in their classroom. Faculty may see this work as both superfluous and an infringement on academic freedom.

As such, an analysis of one academic organization's change initiative toward universal design will help to elucidate the problematic underpinnings of offering accommodations in online classrooms via the organization's recent attempt to implement a less than well-received mandate for faculty to offer universal accommodations in every online course. Specifically, this study will comprise archival document analysis of the final concerns and recommendations approved by the Faculty Senate body and presented to administration, following the failed initiative. Stemming from the results of this analysis, this exploration into organization change will offer possibilities for future universal design change initiatives and reveal the significance of organization change tenets in academic organization decision-making. These future-looking initiatives seek progress in a manner most efficacious for students, faculty, and administration—the academic organization as a whole—ensuring the organization remains viable and competitive in the increasingly prevalent modality of online education.

Theoretical Framework

Analyzing the complicated issue of universal design in online classrooms via an organization change lens offers a number of interesting angles through which to view the dissemination of a change initiative at an academic organization. First, it deals with the applied aspects of this very real trend that more and more academic organizations are facing. In his discussion of implementing changes, what he calls a *diffusion of innovations*, Rogers (2003) emphasizes that “the diffusion of innovations is a social process, even more than a technical matter” (p. 4), which deals especially with communication of new ideas. In other words, when organizations seek to diffuse an innovation (i.e., implement a new change initiative), they must consider the technical capabilities required for the change, such as manpower, technology, and skill sets, but more importantly they must consider the dissemination patterns that promote the innovation: the culture, the behaviors, and the social relationships.

The lens of organization change provides a means of exploring the effects of online classroom accommodations on the organization as a whole. In his application of Fritjof Capra's *deep ecology* worldview to organization change, Burke (2014) explains that understanding organization change involves viewing an organization as a system of organic interdependent agencies. He adds that focusing on changing individual aspects of an organization rarely equates to organization change; instead, again borrowing from Capra, Burke posits that organizations are essentially living systems that must constantly remake themselves and do so only by focusing on changing holistically, rather than piecemeal. In turn, organizations will evolve, affecting both their internal and external stakeholders in the process.

Putting this together, then, as academic organizations seek to undergo change initiatives, they will benefit from a focus on the organization as a system of interrelated entities, all of which must evolve with the change initiative in order for the innovation to diffuse successfully. Importantly, without evolution, an organization risks forfeiting its market value because a lack of innovation yields a stagnant state (Rogers, 2003). Therefore, to curtail this risk and to remain competitive, an academic organization must successfully diffuse their innovations. This diffusion requires technical components to start, but it likewise requires more complex components: a healthy *rate of adoption*, “the relative speed with which an innovation is adopted by members of a social system” (Rogers, 2003, p. 23); a *heterophilous communication network*, “the degree to which pairs of individuals who interact are different in certain attributes . . . [creating] interpersonal links in [an otherwise dissonant] system” (Rogers, 2003, p. 306); and utilization of *opinion leadership*, “the degree to which an individual is able to influence other individuals' attitudes . . . in a desired way with relative frequency” (Rogers, 2003, p. 27). These components exploit the cultural, behavioral, and social aspects of the organization—possibly the key aspects to successful innovation diffusion.

In short, analyzing the issue of systemic, academic organization change benefits most from considering the velocity at which a change initiative takes hold within the organization, the heterophily of the innovators leading the change initiative, and the influential capabilities of the individuals tapped to lead

the change initiative. These mainstays of organization change may be relatively new to academic organizations due to the holistic, systemic—organization-oriented—approach, yet consideration of these mainstays may be precisely what academic organizations need to evolve as a community within a larger ecology. Furthermore, consideration of these mainstays may help academic organizations diffuse problematic change initiatives successfully, ensuring the organization avoids stagnancy and remains competitive within its market.

Dovetailing back to the unpopular universal design change initiative, if academic organizations are to implement universal design into online classrooms in a manner that satisfies students, faculty, and administrations—all while conforming to ethical and legal parameters—it will require this holistic, systemic approach. Successful innovation diffusion will require more than simply training and requiring faculty to conform to new guidelines. It will likewise require a steady rate of adoption and innovation leadership that is influential and that stems from multiple academic castes. Analyzing these considerations in a recent, somewhat unsupported universal design change initiative will help to elucidate the centrality to organization change and thus the necessity for academic organizations to evolve systemically and interdependently.

Background and Context

The academic organization change initiative under investigation here occurred at a 1,500-student urban Midwestern health sciences college; degrees range from the associate to the doctorate. All master's and doctoral level programs are entirely online, as well as one bachelor's level program. Moreover, each semester approximately 90% of students from all levels enroll in at least one online course. As such, the universal design innovation stood to affect the majority of students, as well as around 125 full- and part-time and 75 adjunct faculty who teach the approximately 200 online courses and/or maintain the approximately 125 online eCompanion courses that accompany their on-campus classes each semester. In general, faculty receive technological support for creating online course knowledge transmission and assessment from a Center for Academic Excellence (CAE), and faculty enjoy a substantial amount of academic freedom in their online pedagogical choices. Each faculty designs and maintains their own online course shells and chooses the modality of their own online lectures and examinations. This environment has elicited much appreciated faculty autonomy, individual course identity, and unique pedagogical variation. In short, while curricula remain uniform, faculty nonetheless enjoy academic freedom.

Until recently, implementing accommodations into a classroom, including online classrooms, consisted of the following. A student registers with the accommodations office, the student presents the accommodations notification to the faculty member, and the faculty member provides those accommodations on an individual basis, changing lecture and examination dissemination accordingly with the student's unique accommodations needs. Rather than design courses with all accommodations in mind, faculty respond to each distinct accommodations instance. Again, this occurred in both on campus and online classrooms. For instance, faculty would provide individuals needing accommodations for extended examination times by lengthening the time parameters assigned to the online examination within the online course shell.

However, this became more complicated when administration received a scare from a litigious hearing-impaired individual who had enrolled in an on campus program, but also in one online course. The online faculty member provided accommodations for this student by placing her lectures on YouTube and enabling the closed-captioned option, yet due to other threats the student intimidated, administration became nervous and enlisted the help of the CAE, comprised of five non-faculty individuals, to keep this issue from occurring in the future. The CAE's decision: Effectively, all online courses would design their online courses to accommodate for all possible students; in other words, they issued a mandate for faculty to adopt universal design. Notably, the trend to adopt universal design is not entirely new. Myhill et al. (2007) explain that when online education was still relatively new, and thus comparatively infrequent, "it fell largely under the radar of most educators and students" (p. 22). However, with the exploded use of the Internet, online education grew exponentially, and with it eventually came the question of whether online education methods were violating federal disability laws (Myhill et al., 2007).

Since this time, academic organizations have been struggling to determine which aspects of federal laws (such as Section 508 that requires all federal departments' electronic/information technology be

accessible to people with disabilities) apply to online education; however, currently, no one law requires universal accommodations in every online classroom (Edmonds, 2004). As such, without a federal or state mandate, the CAE's requirement at the college was on tenuous ground, and faculty brought forth a number of concerns with the innovation. First, they worried that the technological requirements would be too cumbersome and that there was no college training initiative in place to assist them. To assuage this, CAE designed a few workshops on various speech-to-text and text-to speech options, which received average attendance. Importantly, though, these workshops failed to address the many additional disabilities that Myhill et al. (2007) discuss as complicit in universal design, such as fine motor and speech impairments, attention disorders, and learning disabilities.

This point supports faculty's second concern, which was how to design a course that could possibly address every accommodation need that may arise. They argued that universal design might be a quixotic notion with a goal that was simply untenable. Finally, faculty pointed to the nonstandard definition of universal design. For instance, the University of Washington lists in its definition a need to "make all aspects of the educational experience *more inclusive* [emphasis added] for students, parents, staff, instructors, administrators, and visitors with a variety of characteristics [such as] gender, race and ethnicity, stature, disability, and learning style" (Burgstahler, 2012, para. 1). What precisely is meant by *more inclusive*?

Faculty argued that they remained happy to provide accommodations to students presenting with documentation, but they felt adopting universal design remained an ambiguous endeavor in definition, in need, and in the college's preparation for it. As a result, faculty resisted adoption of the change initiative, few faculty adjusted their online courses, and the CAE settled on encouraging, rather than requiring, faculty to consider moving toward a universally designed pedagogy—also differently, only as faculty created new course materials, no requirements to revise existing course materials. Despite these concessions, faculty felt they needed to represent their concerns regarding future universal design change initiatives. They formed an ad hoc Faculty Senate committee, which sought faculty feedback, designed to be shared with administration.

Study Design

To move past the anecdotal and provide empirical data to substantiate these issues, this qualitative study was designed with one overarching research question and two subquestions. The overarching question seeks best practices for undertaking a universal design change initiative, while the subquestions seek more specific information. The first relates to faculty perceptions. Since faculty at the institution under investigation retain considerable autonomy over their online courses, faculty would be responsible for enacting all changes to comply with universal design. Because of this needed participation, it is crucial that faculty's perceptions be understood. The second subquestion relates back to Rogers' (2003) diffusion model and attempts to tease out the specific methods of diffusion that would most effectively streamline a successful change initiative. The question and subquestions are as follows:

- What are best practices for undertaking a systemic change initiative to adopt universal design at an academic organization of higher education?
 - o What are faculty perceptions regarding universal design?
 - o What methods of diffusion will best facilitate the change initiative?

To investigate these questions, data were gathered by means of a qualitative analysis of archival documents, following receipt of the participating college's Institutional Review Board approval of this study. The archival documents consist of the final recommendations and concerns of the college's Faculty Senate body. Following the universal design change initiative, these documents were approved by Faculty Senate vote and later presented to the college's administrative body. The documents were read repeatedly, hand coded and themed, identifying sets of items seen as related to one another conceptually. Once themes were identified, they were member checked (Creswell, 2014) for validity with the Faculty Senate ad hoc committee chairperson who presented the recommendations and concerns to the college's administrative body.

Data Analysis

Archival document analysis revealed six conceptual themes: (a) resources to undertake the online course revisions, (b) time and workload required to implement the online course revisions, (c) questionable benefit to students, (d) faculty representation and open communication for any future universal design change initiatives, (e), academic freedom, and (f) how universal design would be evaluated by the college.

Resources Needed

The term *necessary resources* occurred three times throughout the documents. In the first instance, it was couched within parentheses, stating that faculty was not entirely opposed to the change initiative if “given the necessary resources.” These necessary resources, however, took two forms. The first form was technological; faculty mentioned hiring a transcriptionist, but they also mentioned purchasing software for each faculty member that would better enable them to add universal design elements to their courses themselves (e.g. iSpring Pro or Camtasia). On the other hand, they also mentioned cultural resources that would assist in the transition. These consisted of roundtable discussions, designating “super users” from each department to train and disseminate the universal design knowledge and techniques, and perhaps even an “accessibility committee” that would be ongoing and dedicated to exploring universal design and sharing best practices with faculty and to which faculty could turn with questions.

Workload and Time

The second major concern demonstrated in the ad hoc committee’s recommendations and concerns was related to time and workload needed to implement these changes. The documents represent several curveballs on this theme—more than a general compensatory glance might reveal. For instance, the differing design of each online course was mentioned, with the comment, “Requirements vary GREATLY from course to course, instructor to instructor.” The emphasized all caps on *greatly* connotes the different time that individual faculty would need to spend on each course. For instance, one faculty member might have two online lectures each week, while another might have one online lecture every three weeks. Similarly, some faculty load their courses with multiple videos for illustrating concepts for students; all of these videos would need to be transcribed or scripted and remade.

Likewise, instructors teach a range of courses. The final concerns and recommendations exemplified this issue, listing the following workload possibilities: “All on campus vs. all online, 7 different virtual courses vs. 2 courses with 3 sections, on campus courses with virtual content...” In other words, one instructor might teach four sections of one course, while another instructor might teach four different courses. The time that the latter instructor would need *could* be much greater than the former who only has to make revisions to one course and push it to all four sections. Of course, this is also contingent, as mentioned above, on the amount and type of materials within each course, as well as when an instructor may be updating course material or adopting a new textbook, also mentioned in the document. Basically, there seems to be no easy way to either assess how much each instructor must do to comply with universal design or determine how much equitable compensation each instructor should receive. The variables are voluminous and multifaceted.

Benefit to Students

Problematizing this further is whether universal design is an actual benefit to students. Oft-cited, Burgstahler (2012) is adamant that universal design is, indeed, a benefit and touts the diversity of learning styles as her reasoning—that universal design will match content to more learners. However, the faculty under investigation here remained unconvinced. One of their chief concerns was that the “style of instruction remains clear to students.” Their concerns indicated that too much iterative information will overwhelm and confuse students—that they may equate iterative information with unnecessary information. Interestingly, faculty also mentioned the benefit of universal design for students as a decision made by administration, not faculty: “...to achieve the goals/best practices outlined by the [administration] for the benefit of our students.” This seems counter to faculty agreeing that universal design is a benefit and more to acquiescing that these changes will be taking place, which is a crucial distinction for effective diffusion.

Representation and Communication

Moreover, the concerns and recommendation document places an additional item in all caps—twice: “OPEN DISCUSSION/COMMUNICATION!” In sum, only four words in the entire document were in all caps, these and the above-mentioned *greatly*. Thus, for *open discussion* and *communication* (with an exclamation point) to appear under two headings—“Workload” and “Room for Negotiation/Flexibility/Faculty Input”—it reveals that faculty wanted their voices to be heard; it seems the written equivalent of yelling, and it may be the strongest message in the document. It is the reason that faculty formed the ad hoc committee in the first place, and it continued to be a very real issue. Faculty wanted open communication, not just about the overall implementation of universal design; they also wanted to be involved in decisions about how it would affect workload and how it would affect students, and they wanted to know how much their voices would affect the outcomes. Would they have room for negotiation and flexibility, or was it a strict mandate, simply handed down?

Academic Freedom

On this same note, how would universal design affect instructors' course autonomy, of which they enjoyed a healthy amount? A great fear was that faculty would not “remain in control over” their “course shell format”—that they might turn into “cookie-cutter” classes; wherein, all courses look, feel, and progress, in much the same manner, with few individual characteristics. While the benefit of cookie-cutter approaches also remains under debate to some extent (cf. Mathews, Rivera, & Pineda, 2001), the institution under investigation here indicated this possibility as a genuine threat to universal design acceptance. Notably, however, this theme did not occur frequently in the document, perhaps because the prevailing academic freedom at the college took for granted an autonomous future, or perhaps because the prevailing academic freedom at the college blinded faculty somewhat to the possibility.

Evaluation of Universal Design

Instead, based on the recommendations and concerns in the document, faculty seemed more worried about how universal design in their courses would be evaluated—(a) whether it would be treated as a professional development goal or a mandate and (b) of what the evaluation process would consist. To begin with the latter, faculty wrote, “Evaluation-how will this be done? By whom?” Faculty had little idea who would be performing the evaluations, be it the CAE, fellow faculty, an administrative body, or staff, such as the information technology department. Furthermore, how would these individuals go about evaluating all of the courses? There appeared to be no mention of a rubric, but the document did include a further area of confusion on this. Under the above comment, faculty mentioned “20% of ‘foci’ vs. 20% of content.” In other words, faculty were concerned that placing a simple percentage of completion would be too vague. For instance, if one course has 15 foci in a given semester, an instructor might revise three foci (20%) when actually the material in those three foci only represent about 5% of their actual content. Further complicating this, it may be near impossible for an evaluator to accurately judge what in a course constitutes 20%; they would need to weight countless possible course materials, as well as weight those materials separately. After all, a 5-minute video lecture would seemingly take less work to transcribe than a 45-minute video lecture.

Taking a step back and looking at evaluation more holistically, faculty were concerned with how evaluation would be used and/or treated, such as penalization versus goal-setting. They also worried about “adjuncts or those off campus” and if this might “deter [contingent faculty] from teaching at the college,” particularly if universal design became a “mandate,” rather than a “goal to strive for.” These comments illustrate the ambiguity surrounding the change initiative as a whole, its opaque tone and impetus. Overall, faculty seemed willing to undertake the innovation, but these missing or unclear elements and the overall hasty and under-planned diffusion approach created hesitation and questions, rather than clarity and buy-in.

Organization Change Perspective

From an organization change perspective, most of the concerns from faculty could have been addressed from the very beginning. Instead, the college approached the change initiative without the technical preparation needed to diffuse the universal design innovation; more importantly, they approached this issue without the cultural and social preparation needed for successful diffusion. Technically, they lacked a concrete definition of universal design, including a concrete example of a universally designed online course. Faculty remained unsure of what, exactly, they were supposed to do to enact their course

revisions. The CAE focused mainly on revisions to lectures for hearing impaired and visually impaired individuals, but these revisions only scratched the surface of the range of disabilities with which students might present. Overall, the CAE remained largely unprepared to explain the impetus and need for universal design. Further, they remained unprepared to define and exemplify universal design, and they remained largely unprepared to train faculty on how to revise their online courses for universal design.

Perhaps more importantly, the social dissemination, or diffusion, of this innovation ran counter to several primary best practices in organization change theory. First, Rogers (2003) explains that innovation leaders are often outsiders, unassociated with the social relationships of the organization. Thus, organizations must take care to tap key *opinion leaders* at the organization—who are trusted and well liked—to promote the innovation (Rogers, 2003). However, the college did not follow this concept; instead, they recruited the CAE whose director and assistant director had both been at the college fewer than six months. These individuals were relatively unknown, yet they were tapped to diffuse this rather complex and debated innovation themselves with only a few top administrators' support.

Second, the way in which the CAE presented the innovation to faculty seemed only to burden faculty. Faculty saw only questionable advantage in the innovation. Rogers (2003) states, "The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption will be" (p. 15). The CAE did not explain how the innovation would benefit faculty, benefit students, or benefit the college. They presented the innovation as simply a new directive. This was also problematic because the directive was, at least initially, not optional. Rogers (2003) is very clear that innovations diffuse more successfully when they begin with a trial period on a limited basis. The CAE's efforts to mandate that all online faculty adopt universal design was too severe in this sense. All of the uncertainty that accompanied universal design had no time to percolate and resolve itself during a trial period; rather, the uncertainty came *with* a mandate for everyone to adopt it immediately. This created a substantial barrier to the innovation's diffusion.

Finally, and most importantly, the *innovation-decision process* that Rogers (2003) defines as the process by which a group learns about an innovation, decides how they feel about the innovation, makes a yes or no decision about the innovation, and eventually confirms that decision occurred at light speed. Rather than take the time first to educate everyone, then tap opinion leaders to tout the benefits and advantages of the innovation and place the decision in the hands of those affected by the decision, administration met with the CAE behind closed doors. In a figurative sense, they emerged from these closed doors having dictated the decision that they then literally attempted to enforce on faculty. Therefore, it seems less surprising that faculty immediately resisted the innovation. Faculty had no time to understand the innovation, receive answers to their questions about the innovation, and come to a decision as individuals or as departments. This truncation of the innovation-decision process ultimately inhibited diffusion and caused administration and the CAE to reverse their initial mandate and fall back, instead, on an extremely light recommendation—only to begin using closed caption options in all future recorded lectures—doing little to address all of the questions and complications inherent in the original universal design innovation.

Future Possibilities

The organization change lessons learned from this failed diffusion offer possibilities for revisiting the universal design innovation in the future at the college; these considerations will be important, as universal design continues to evolve and gain in popularity and evidenced success for all students—not just those with disabilities (cf. Catalano, 2014). However, these lessons also speak to a broader purpose: the efficacy of academia's consideration of organization change as a theoretical framework that should undergird its decision-making at the organization level. Academic organizations are no longer immune to market pressures, quite the opposite; thus, academic organizations that fail to consider organization change tenets in their decision-making risk fragmented evolution and eventual obsolescence. To ward off these possibilities, three innovation diffusion tenets stand out as foundational platforms from which academic organizations can begin to "think" like organizations and therefore evolve competitively: rate of adoption, heterophilous communication networking, and opinion leadership.

Rate of Adoption

Rogers (2003) is very explicit that the rate of adoption maintains a positive correlation with the perceived advantage of an innovation, particularly an advantage that aligns with an organization's values. As

alluded to earlier, organizations should diffuse innovations slowly, on trial bases, in order to garner support incrementally while simultaneously allowing organizations to engage early problems and handle them before the entire organization becomes involved. Yet, accompanying this must be an advertised adherence of the innovation to the organization's values, what Rogers refers to as *compatibility*. Innovation leaders must illuminate how the innovation exemplifies the organization's values. In other words, an organization's population must understand how the innovation will further the mission of the organization while continuing to reflect the values that the population sees as underpinning and motivating that mission.

In addition, the rate of adoption will increase if an organization makes the innovation easy to understand and clarifies the benefits that it will produce (Rogers, 2003). These steps consider adopters' social practices. The steps work because they appeal to group norms and group behaviors. Haslam, Reicher, and Platow (2011) explain that "*for would-be leaders, nothing can substitute for understanding the social identity of the group they seek to lead*" (p. 133). A group responds to leaders who represent their best interests and, importantly, to leaders who represent who the group thinks it is—leaders who model the values and mission that drive the group and leaders who advocate for changes that do the same. Thus, a leader who hopes to champion an innovation must likewise champion the group, and this involves a clear and logical explanation of the change, how the change aligns with the group's values and identity, and how the change will benefit the group. Satisfying these key social factors will readily increase the rate of adoption.

To illustrate this, consider the sputtering rate of adoption in the failed universal design innovation. The innovation lacked a clear explanation; neither administration nor the CAE defined universal design or provided a working example of a universally designed online classroom. In short, they neglected to explain exactly what the innovation was, which essentially stopped the innovation before it even started. Exacerbating this, the CAE made no effort to align the innovation with the college's values. The college has a rich history and is very much value driven, yet the CAE failed to use this to their advantage in their diffusion attempts, yielding an untapped resource, as well as a lack of alignment to group identity. Overall, then, potential adopters saw the innovation as a foreign concept in both explanation and applicability, resulting in faculty's creation of concerns and recommendations of their own.

On the other hand, some effort to espouse the benefits of universal design did occur during the diffusion process; however, they did not go far enough. The CAE touted universal design as an eventual requirement for online education's accreditation—the lifeblood of any academic organization. Yet, they lacked evidence of this eventuality, making it seem far, far into the (still only possible) future. Some faculty questioned why a small college should be the forerunner for such a considerable undertaking. Why not wait until more prestigious academic organizations had begun to revise their online classrooms in this manner? Moreover, faculty worried about their academic freedom; they worried that courses would become too scripted and/or redundant and lose their dynamic capabilities. Ultimately, this threat to academic freedom coupled with the lack of immediate value to students, with only a far off *possible* benefit, was not enough to persuade faculty of the innovation's necessity, effectively stunting the innovation's rate of adoption. Any future attempt at this innovation will need to closely examine and then tout the benefits of universal design, including what it is, what it looks like, how it will mesh with the college's values, and how it will benefit the college's online education offerings.

Heterophilous Communication Networking

An additional way in which an innovation may diffuse more quickly is by taking advantage of a heterophilous communication network. People of similar appearance, educational background, socioeconomic status, religion, etc. often group together naturally (Haslam et al., 2011; Rogers, 2003). People are simply attracted to individuals who are most like them due to easier communication and understanding; less effort is necessary to comprehend motivations and thus reach consensus. This occurs in practically every aspect of life, and an academic organization is no different. Individuals will naturally bond with similar individuals in their section of the college—be it an academic program, a cohort of incoming students, or a less formal grouping, such as a booster club. Yet, this natural grouping can inhibit communication from one group to another group, which can also inhibit diffusion of an organization-wide innovation. Communication within an organization must be interdependent in order for change to be systemic (Burke, 2014).

To accommodate for, or take advantage of, this natural tendency, Rogers (2003) recommends that change leaders create heterophilous communication networks that bridge the traditional boundaries between groups and speed the rate of innovation adoption. Markedly, this theory posits that, without heterophilous links, diffusion of an innovation will rarely be organization-wide. While communication occurs naturally and easily amongst similar individuals, communication occurs much less easily amongst individuals/groups of different goals and backgrounds, even if the groups comprise the same organization—a caveat reminiscent again of the outdated academic castes. As such, to diffuse an innovation to an entire organization, such as the universal design innovation, innovation leaders will receive an increased rate of adoption if they ensure that communication networks bridge the castes, making this a crucial step, particularly for academic organizations to undertake.

Unfortunately, this advice could not have been more different from the actions of the college when attempting to diffuse the universal design innovation. All programs remained confused as to the innovation's definition and purpose, and communication remained largely within the CAE. The CAE enacted a very limited communication plan, aimed solely at a one-stop faculty senate meeting. This communication, and at the time mandate, raised many questions and concerns; following the meeting, communication about the innovation seemed veiled and did little to answer the questions or address the concerns, again resulting in faculty senate's efforts to express their concerns and recommendations. The communication network would have benefitted from a more detailed plan of diffusion, including a more heterophilous section of the college population, making the step imperative for a future attempt at a universal design innovation.

Opinion Leadership

Finally, one of the keys to effective heterophilous communication networking is to tap the individuals from the various groups who are prestigious within their groups and who serve as opinion leaders (Rogers, 2003). Since communication flows freely within groups, though not necessarily from group to group, tapping the individuals with the most status in each group can diffuse the communication throughout the organization more rapidly. Intriguingly, Rogers (2003) warns that potential adopters do not want too much knowledge about an innovation. While heterophilous communication networks are important, opinion leaders should distribute only the information that potential adopters in their group need. Rogers (2003) writes,

We should not forget that the general pattern of interpersonal networks in the diffusion process is one of homophily [as opposed to heterophily]. Such homophily means that the dyadic followers of opinion leaders usually learn appropriate lessons about an innovation through their ties with near peer opinion leaders. (p. 308)

In other words, overloading individuals with *all* of the information about an innovation risks inhibiting the communication process, as it runs counter to the natural way individuals glean information. Potential adopters seek pertinent information from a trusted individual in a manner that they can understand.

Moreover, individuals will begin to internalize the innovation as their own if it becomes a component of their group's identity. If the innovation makes sense to the group and reflects who they believe they are and what they believe their purpose is, then the group will adopt the innovation (Haslam et al., 2011)—even without knowing all of the aspects involved in the innovation (Rogers, 2003). Thus, tapping heterophilous opinion leaders who represent the groups' identities, speak the groups' vernaculars, and relate only the appropriate information stands to bridge previously barred communication networks within an organization. In an academic organization, this may include, but certainly is not limited to, a member from each academic department, a group of student representatives, and key administrative and technical support representatives.

More specifically, when considering future attempts at a universal design innovation, opinion leaders should include faculty senate representatives, student government representatives, accommodations office representatives, and online course management representatives. These individuals will be key players in the implementation processes and can speak to administration regarding the concerns that are important to faculty and to students, as well as the concerns that are required for accommodating disabilities in the classroom, creating communication networks that allow the innovation to diffuse gradually, evolving as it diffuses. These opinion leaders will act as conduits for the innovation, as well as

bring important information that will begin to arise, such as unforeseen complications and benefits of the innovation, back to administration, allowing further evolution of the innovation, yes, but also further adhesion of the organization to the innovation. In sum, mandating an innovation without first tapping opinion leaders will create a staunch barrier to its diffusion—a barrier that might be avoidable with a more carefully planned communication strategy that aligns with organization change tenets.

Conclusions and Recommendations

Online education is a trend that will continue to accelerate and pervade academia and, as Myhill et al. (2007) note, due to its rapid acceleration in a relatively short period, it stands to present any number of unforeseen financial and legal obstacles that simply have not had time to surface...yet. One of these obstacles is providing accommodations for students with disabilities, and universal design may be a possible solution. However, universal design is fraught with uncertainty, exemplified by the lack of a tactile definition. Thus, for now, academic organizations that attempt to implement universal design should consider creating their own definition—one that is specific to their context and their needs—as all online education programs will vary in the level of academic freedom allotted to faculty and the level of technological support that faculty and students receive.

Moreover, when undertaking a change initiative of this size, academic organizations must think like traditional business organizations and diffuse innovations in a manner that reflects best practices in organization change models. As mentioned, online education programs are growing increasingly prevalent and, consequently, increasingly competitive. The pressures to keep online education interactive, dynamic, and intellectual—not to mention cost-effective and technologically savvy—particularly more so than competitors' offerings, will continue to be a challenge for academic organizations. Academic organizations should take advantage of the available theoretical resources, such as Rogers' (2003) diffusion of innovations model, that supply evidenced best practices for undertaking change initiatives.

These theoretical resources remind academic organizations that organizations are systems of interdependent groups that require communication networking that bridges dissonance in order to diffuse innovations more rapidly and more systemically, as this advice may be particularly foreign within the traditional academic castes. Further, these resources also remind academic organizations that change involves more than the technical aspects—more than training and developing skill sets. Change involves cultural aspects, as well, including individual and group behaviors and social relationships. These cultural aspects can be just as important, or just as threatening, to an organization change initiative if not accommodated for in the planning and implementation phases.

Overall, the lessons learned from the tepid universal design innovation provide fruitful insights for academic organizations seeking to implement similar ideas in their online education programs. However, more broadly, the lessons learned provide an introspective look at the inner workings of academic organizations as a whole, particularly when considering their systemic change practices. Academic organizations undertaking systemic change initiatives will benefit from following organization change models, allowing the organizations to evolve holistically and, in turn, making them increasingly more viable and competitive in their markets.

To continue this important dialogue, future studies should move past general observations and post hoc perspectives and actually employ the diffusion of innovation model while tracking its systemic acceptance. This would be particularly useful at a larger institution that is considering piloting universal design in an initially small population of its online course offerings.

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