Chapter 2
The Impetus for Change: Why Entrepreneurial Universities Will Transform the Future (While Others Will Cease to Exist)

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As leaders and innovators in educational institutions attempt to meet future learning needs, it is paramount that they reconsider both the structure and processes that have become legacy models in their academic infrastructure. One key challenge for higher education leadership (and those within the institution seeking to innovate for the future) is to incorporate the spirit and drive exhibited by entrepreneurs. Entrepreneurial spirit has driven much development in the economic annals and is key to future societal expansion. Universities can play a vital role in such expansion but only if they align internal structures and manage risk and ambiguity to support mechanisms for learner-centered approaches and leverage technology in the learning process. University leaders must challenge the status quo and address the urgency to balance forces involved in the creation of knowledge and processes for the dissemination of knowledge. Therefore, this chapter focuses on entrepreneurial leadership, organizing structures for reward and risk management, tolerance for ambiguity, leading change efforts that include adjusting to more learner-centered approaches, and leveraging technology to transform higher education.

2.1 What Is an Entrepreneur?

An entrepreneur is someone who has strong passion for a particular activity that has the potential to create value for others. Successful entrepreneurs are able to sell that value proposition to others and reap benefits by doing so. The term,

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initially used in academic circles in the early 18th century by Irish-French economist Richard Cantillon, was introduced in the early 13th century using the French word "entreprendre" which means "to undertake" or "do something." Cantillon used it to connote an individual who puts their personal fortune at risk for the benefit of the enterprise (Tarascio 1985). The risk to which he referred pertained to both finances and career, as these persons put their future reputation on the line.

Entrepreneurs appear to have thick skin, or as psychologists proffer, "high internal locus of control," such that what others think about them is rather insignificant and where risk of failure is accepted and sometimes even cherished. The point is that if entrepreneurs are not stretching beyond their known limits or the limits proclaimed by others, they are not doing enough or learning enough. Entrepreneurship has been more recently described as the process whereby one or more persons use concerted efforts and means to pursue opportunities to create value, and grow by fulfilling wants and needs through innovation and uniqueness, no matter what resources are currently controlled (Coulter 2001).

People who tend to exhibit these behaviors on repeated occasions are known as serial entrepreneurs. They possess high tolerance for ambiguity, adapt easily, and display an ability to take risks, putting everything on the line in order to pursue their goals. Probably the most important element is that they sustain a genuine passion for their mission that appears to grow as obstacles present themselves. Perhaps the simplest and most salient expression of the value of an entrepreneur was provided by Peter Drucker (1985) when he exerted that "entrepreneurs innovate."

Although they are not typecast in one personality or set of skills, entrepreneurs do tend to exhibit a common set of attributes. They are continuous, lifelong learners; unafraid of failure; willing to venture outside their comfort zone and to take risks in highly unpredictable environments; comfortable with ambiguity; and skillful improvisers. The fact that there is no right answer is reassuring to them (Thorp and Goldstein 2010).

Drucker also claims that entrepreneurship is neither an art nor a science but a practice. This concept of practice is perhaps the driver of much of what we see today as new business start-ups evolve into fully appreciated engines of social value and/or wealth creation. Research suggests that entrepreneurial leadership has become a requirement for success (Oosthuizen 2009). Many of the policy-making formulations around the globe today call for evidence-based accountability. Combining the wisdom of entrepreneurs with evidence-based knowledge, Baron (2012) advocates this orientation toward the use of metrics to provide success criteria for future use. A plethora of examples demonstrates the value of an entrepreneurial orientation for businesses and other organizations.

Entrepreneurs know the difference between leading and managing. They also know that both skills are necessary to build and sustain a successful organization. Most entrepreneurs find themselves often uncomfortably positioned in leadership roles as they begin to craft their organizational pathways toward the realization of their dream. They soon discover that leadership alone is not sufficient and seek managers who can help to connect the dots between their dreams and the practice of

the organizational operations. It has been proposed that "entrepreneurs don't usually have an MBA, but they hire as many of them as they can" (Krogue 2013, n.p.).

Leaders and managers differ in their orientation. Leaders spend much time in the recruitment and nurturing of other leaders to help them in realizing their mission. Similarly, entrepreneurs attempt to build a cadre of individuals (often in a team) who can help to further expand their thinking on the vision. Managers, on the other hand, focus on getting the details right and making sure tasks are accomplished in the attainment of mission-related goals and objectives.

Although the root meaning of the word connects enterprise with action, common opinion places entrepreneurs outside corporate structures and labels their counterparts within corporations as intrapreneurs. Corporate leaders held in high esteem for their entrepreneurial ability include Richard Branson and Jack Welch, both of whom have demonstrated success in charting innovative terrain for their corporations. These men also exhibited high capabilities in leadership, management, and team building – all considered key abilities for entrepreneurs.

Entrepreneurial activity is thus characterized by actions that demonstrate individuals, or groups of individuals, who take risks to achieve something that they value. Leadership, management ability, and teamwork enhance such activity. Other qualities associated with entrepreneurial leadership include: (1) dissatisfaction with the present, (2) recognizing and taking advantage of unfair advantages, (3) vision, (4) ability to get people on board and expand the vision, (5) flexibility and adaptability, (6) receptivity to feedback; (7) willingness and ability to learn, and (8) persistence and execution (Warren 2012, n.p.). The successful entrepreneurial leader is one who either possesses these attributes or recruits others who have them. Acknowledging the value of each quality to the success of the venture is what initially separates entrepreneurs and managers.

2.2 Why Should Universities Be Entrepreneurial?

The missions of most universities lay claim to discovery, knowledge creation and dissemination, teaching, and service to the greater community. Briefly, the main mission is to seek and promote change. Such change behavior aligns with the key characteristics of entrepreneurs. Most universities today contain entrepreneurship in their curriculum, typically in engineering or business schools. Listening to university presidents, one hears proclamations of their schools' attempts to lead into the future, typically with selective targets as their key differentiators.

But those platitudes appear more often as words and less frequently as actions. Most university leaders continue to "toe the line" or "follow the leader" than assume a genuine leadership stance moving toward an uncertain future. It has recently been suggested that academic leadership become more entrepreneurial and responsive by advancing to an evidence-based approach or developing an "accountability culture" that reinforces actions to truly educate students rather than "preparing them to look good on a resume" (Buller 2013, p. 30). A similar sentiment was expressed as a

desire to "see universities as a public good once more instead of as a finishing school for tadpoles" (Smith 2013, p. 157). A colleague once observed, "You don't become number one by following number one." Yet most processes in place at that institution were poised to emulate the top-ranked schools. A push toward following the examples set by the top schools clearly is not entrepreneurial. Attempting to clone certain processes or structures used elsewhere by top-ranked schools is not the best approach to build a genuine entrepreneurial culture. In fact, the more time and energy spent "playing by the rules," the less likely the university is to develop new approaches toward competitive differentiation. Christensen's (1997) model of disruptive innovation suggests that leaders are often in a quandary about future action due to the very nature of their inability to see beyond the current state. This is frequently due to the failure of education leaders to confront the reality of the impending change in their industry.

The impetus for taking an entrepreneurial path involves awareness that change is needed. The ability to remain cognizant of the state of the industry and the competitive forces within it is a requirement for leadership (Porter 1980). Unfortunately, universities tend to exhibit little effort at such external scanning (except for watching the top-ranked schools). In a recent report on the future of higher education in England (Huisman et al. 2012), for example, little acknowledgement was made of what is today the largest university in that country. To the authors' credit, they do not point to any specific institution. But the study is based on a Delphi method-based survey of experts and senior practitioners concerning developments in English higher education. The emergence and rapid growth of The Open University's (United Kingdom) impact in the industry appears to be unsuspected. [For more on The Open University's impact, see Rix and Twining 2007.] With over a quarter million students, The Open University ranks first in enrollment in the United Kingdom. Topping the list in the United States are The University of Phoenix with an enrollment of over 300,000 followed by Kaplan University with close to 80,000 enrolled students (this ranking does not include state university systems) (MatchCollege.com 2013).

This lack of awareness is mirrored in the United States, where for years traditional institutions of higher education ignored the emergence of Phoenix, Kaplan, Capella, Western Governors, and others. The conventional wisdom on college campuses held that these for-profit, non-traditional, and typically online operations were not the stuff that higher education should be made of, and such models would never pose a real threat to the high quality, rigorous traditions of the established and hallowed ivory towers. One of the most glaring differences between the two approaches is that the for-profits target the learner and emphasize this learner-centered approach in program and course design. Many of the traditional institutions also emphasize the learner-centered approach, but unfortunately implementation of it is limited to their advertising.

The traditional institutions are steeped in a culture supportive of a faculty-centered approach that harbors faculty who become "protective, rigid, and inevitably irrelevant" (Demillo 2011, p. 21). Although an argument has been made that for the elite US universities and colleges, a faculty-centered culture may be extended well into the future, for those institutions not carrying "elite" status their value to students will continue to erode, putting them at a competitive disadvantage. This

places university leaders caught in what Christensen describes as the "innovator's dilemma" where targeting success strategies of the past leads to failure to perform in a future that does not resemble the past (Christensen 1997).

Not only should universities act in entrepreneurial ways, but they should also provide a springboard for learners to (1) develop and enrich the skills sets and attitudes required for inculcating a genuine entrepreneurial drive (Rosenberg 2009; Florin et al. 2007) and (2) enhance their ability to meet the challenges of the future in innovative ways (Sanchez 2011). In much the same manner that universities have been challenged to take a leadership role as hubs for next-generation networks (Lennett et al. 2012), it is time that universities help learners prepare to construct innovative approaches to face societal challenges. Examples of successful programs that incorporate student entrepreneurship have been demonstrated at the Aspen Institute and Net Impact in the United States, at Oikos in Switzerland, and at AIESEC (Association Internationale des Etudiants en Sciences Economiques et Commericales) – originated in France but is now an international student-run association that provides entrepreneurial and leadership opportunities around the globe (Herrndorf et al. 2011). These programs provide social, economic, institutional, and environmental challenges with change and sustainability issues blended in pragmatic applications where students learn to fully appreciate and promote such initiatives in their universities.

Entrepreneurship may well be the key driver needed to support the transfer of new knowledge to tools for addressing these societal challenges. As Eric Schmidt (former CEO of Google) suggested following the 2008 financial collapse, "We are going to have to innovate our way out of this thing and our great research universities will have to lead the way" (Ryssdal 2009, n.p.). In fact, only a handful of "great" research universities exist in the US, amid approximately 200 "research universities" in the US. Most of the 4,500 institutions of higher education in the US are categorized as comprehensive universities, 4-year colleges, community colleges, and for-profit institutions (Bok 2013). Schmidt's position on the source of leadership may have been somewhat myopic, as other institutions of higher learning can and should participate in targeting our socio-economic challenges. Many of the middle ground (non-elite) institutions were founded as a result of a "partnership between an academic, often a humanist, and an entrepreneur" (Thorp and Goldstein 2010, p. 6). It is time for academics to come to terms with the entrepreneurial orientation and seize the opportunity to bring more relevance into their practice.

Due to the multi-disciplinary collective nature of an entrepreneurial orientation, it should assimilate well into the multifaceted approach that is the supposed grounding of most universities. As suggested by Howard Gardner, a diversity of strengths, or "minds," is needed to attack the most complex issues today. Pursuing such issues single-mindedly is ineffectual. An entrepreneurial orientation at the university level would support Gardner's five tenets – disciplined, synthesizing, creating, respectful, and ethical (Gardner 2006). The leadership and faculty at most universities are comprised of individuals who excel at using a disciplined mind that is very good at solving traditional problems but less adept at targeting the permanent whitewater conditions displayed in today's tough challenges. And, due to the departmental structure, universities rarely support the type of multifaceted approach needed to fully address these challenges.

2.3 How Do Universities Structure Their Reward Systems?

Largely because of the departmental and discipline-specific boundaries, most universities are steeped in a culture that directly opposes the entrepreneurial spirit. Faculty reward systems typically emphasize individual output or research that is published in top tier journals. At most research universities, teaching assumes a lesser importance. The author's experience across dozens of research universities concludes that research seminars tend to outweigh faculty discussions on teaching by about ten to one. Research universities have been encouraged to redefine the metrics used to assess scholarship to include companies founded, public service, and impact on societal problems (Thorp and Goldstein 2010).

Leaders who move in this direction will expand the value proposition for their institutions to provide greater benefits to their communities and the broader society. The concept of taking knowledge gained via academic research and applying it to a real issue typically is not included in the design of the research life cycle. Yet it should be. This longstanding debate first surfaced during the founding of the very first university, the University of Padua, in 1222. Many research faculty members are fully convinced that performing work to be applied to existing world problems is of less value than the pure pursuit of knowledge.

Traditional universities charge fees and compensate faculty based on seat hours of students. One metric that is used for accreditation of business schools, for example, is the number of seat hours of instruction assigned to full-time faculty – greater value is ascribed to classes conducted by full-timers than is credited to part-time adjunct faculty members (frequently represented by professionals in the field who provide insights into the workings of theoretical constructs as they are applied in practice). Yet many business school faculty members, particularly at elite institutions, do not consider theirs a professional school like medicine, engineering, and law, but prefer to view them as more akin to the ephemeral appeal of economics or other "hard" sciences. Such faculty members believe they must defend the august nature of their disciplines and protect against a "training and development" approach to teaching business skills. Unless universities and their departments begin to value the development of applied skills as much as they value pure and applied research, they will remain limited in their drive toward impacting the future.

2.4 How Do Universities Handle Risk?

The old adage – that the only institutions that resist change more than government agencies are universities – tends to be true. At most universities, persons occupying tenured and/or chaired positions are quite comfortable. Professional schools such as business and engineering attract adjunct faculty and executives in residence, many of whom are retired or nearing retirement, having made their mark in industry. One executive-in-residence faculty member commented that although he really enjoyed teaching, "it is clearly a much slower-paced existence than my time in industry."

Adjunct faculty members are not encumbered with research and publication requirements, their sole focus being their classes and their students. Although the majority of US research universities require faculty to demonstrate excellence in teaching, research, and service, most of them place premium value on the research (and publication) output. The greatest uncertainty and risk for junior faculty members concerns tenure status, which, although sometimes shrouded in legitimacy, is most often a highly political decision. Junior faculty members in the US typically have between 6 and 10 years, depending on the institution, to prove their worth on the tenure track. As one scholar related, progressing beyond the tenure gate is important because after that point you can "begin to do more meaningful work."

Much of the risk at universities is experienced initially at the individual full-time faculty member level. In order to meet the tenure requirements a young scholar must develop a productive research platform and publish in the top tier academic journals. A junior faculty member is often provided with a light teaching load of one or two courses each year with little expectation for significant time spent in university service. It is believed that the faculty member will be more productive with research if unencumbered otherwise. Once tenure is within reach these faculty members typically become more engaged in governance and service activities. Once tenure is received some of them devote time to enhance the teaching performance of themselves and others. But the main focus of most senior faculty remains on their research; and often they invite junior faculty and often they invite junior faculty members in order to elevate their publication potential.

2.5 Why Is Tolerance for Ambiguity Important?

The focus of entrepreneurial activity, as with most leadership activity, is on making judgments with incomplete, imperfect, and often inconsistent information. Mintzberg (1973) refers to this leadership activity as dealing with "messy" problems. Leaders at universities face similar challenges as they grapple with budget shortfalls, enrollment declines, unproductive faculty (especially post-tenure), demanding students, and accreditation reviews. But one of the differences between businesses and universities is that whereas businesses attempt to meet challenges head-on, universities support a veil of correctness and a tyranny of expertise. Universities use the veil and tyranny with grounding in theoretical constructs and a timeline that frequently extends beyond the lifespan of the challenge. Businesses, in a solution-seeking mode, tend to apply a logical pragmatism in search of a timely response.

Rather than seek the "right answer" to the presenting dilemma, entrepreneurs often seek information from a variety of resources. The objective for an entrepreneur is frequently not to find the correct answer but to ask enough questions. One of the academic programs facilitated by this author used the following quote (attributed to John Steinbeck) as the program motto: "We are often searching for better answers, when we should be developing better questions" (Stinson 1994, n.p.). The value of

the motto was to raise awareness that our graduate students were entering a world of permanent whitewater – not a world in which everything could be placed in a proper row and column.

This quote provided an introduction to the reality awaiting these students once they left their "safe" zones on campus. We used that statement to encourage an inquisitive and unrelenting quest for better questions, rather than a search for quick-fix answers. Students grappled with experts who would not provide them with definite answers. No one was pushing everyone to acquire the same values. The "teacher" nurtured greater inquisitiveness rather than providing more answers. Vague assignments were handed to students with insufficient information, making the complexity of the problem somewhat unbearable. Although support mechanisms were in place, students soon learned to seek resources and to adopt a problem-based approach by pursuing answers to their questions on their own (Savery and Duffy 1995; Stinson and Milter 1996; Duffy and Raymer 2010; Milter 2002).

Now is the time for university leaders to practice what at least some faculty members are teaching with regard to preparing professionals for the organizations of the future. The ability to tolerate ambiguity plays a large role in successfully navigating new business development. Such tolerance is required for university leaders as they attempt to take their institutions to the next level in providing relevant learning experiences.

2.6 How Should Leaders Navigate for Change When Prevailing Winds Support the Status Quo?

> It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in those who would profit by the new order…This arises partly from the incredulity of mankind who do not truly believe in anything new until they have an actual experience of it. (Niccolo Machiavelli, *The Prince*)

Leadership at a university has been compared to herding cats and described as the practice of authority without power. As a former provost once exclaimed, "my job is one of ultimate persuasion; there is not much I can expect from demands." Most deans and chairs have similar experiences. Yet change without support from leadership is rarely realized; and there lies the conundrum. Universities need leaders with the vision and passion to move the needle forward on the innovation dial in order to keep pace with the rapidly expanding learning landscape.

But in order to truly lead toward innovation, leaders in higher education are required to push against the very systems and structures that elevated them to their leadership positions. This paradox calls for new approaches from leadership as well as an openness to support new practices by faculty. One direction involves the recruitment, composition, and direction of governing boards, with members who must support key visionary and administrative leadership at universities (Mitchell 2013). A related element pertains to the ability of leadership to maintain open lines

of communication with the board members so that their support remains visible (Puglisi 2012).

This picture differs from the experience enjoyed by leaders in corporate settings where many top-down change initiatives, when introduced in an open and inviting manner, are taken on by delegates who share the passion for the change. Not all corporate leaders position themselves to enjoy this process; unfortunately, some are "protected" from reality by their "handlers" who serve in subordinate roles with the unwritten goal of making the Chief Executive Officer (CEO) look good. Such tactics are aptly reported by Michael Roberto's 2005 book, *Why Great Leaders Don't Take Yes for an Answer*.

Other leaders make a push for innovation but are met with apathy or resistance by subordinates still in protectionist mode while seeking to climb the corporate ladder. This author recalls an experience in which a CEO made an evening presentation to business students with the message that their organization was seeking to hire creative thinkers who challenge the status quo in order to continually update the company's ability to compete by remaining adaptive. The same day recruiters from the company reveal that their objective is to hire employees who will "fit in" with the organization. This "fitting in" runs quite contrary to the composite profiled by the CEO. However, most recruiters are fairly new to the organization and their experience includes attempts to "fit in." This anecdote demonstrates that most companies have a split personality regarding organizational culture. The cultural norms established at executive levels are often different from those that are exhibited in the ranks below.

Part of the strategic emphasis for university leaders is aided by the fact that the faculty carries most university innovation forward, although administrative leadership may introduce it. The cultural norms at universities are typically shared throughout the organization. This makes implementation of innovation more readily achievable, at least on the surface.

2.7 Does "Adapt or Die" Hold for Universities?

In a word, yes. It is of vital importance that universities, especially those in the middle ranks (not among the "elite" group), take immediate action to make substantial adjustments to their strategy and operations or plan to begin boarding doors and windows.

Targeting business schools in particular, Robert Strand makes "a plea to business schools: tear down your walls" (2011, p. 213). He warns against teaching that focuses solely on shareholder value and ignores the larger dimensions of a greater pool of stakeholders and the good that can be contributed to society. There is a clear cognitive push against the traditional capitalism platform suggested by Adam Smith and Milton Friedman that bases most economic actions on the profit target. One response is to provide much more emphasis on the principles of humanism. In fact, the Humanistic Management Network provides a set of

articles that address the question, "How can business schools reposition themselves to produce the education needed to deal with the current financial crisis, preventing further economic mayhem, while successfully engaging with the challenge of social and environmental sustainability?" (Amann et al. 2011, p. 4). The answers offered by the contributors are grounded in a humanistic approach to management education that advocates an economic system demonstrating wealth and value creation for human flourishing.

When university presidents in Canada were asked what key issues face their university over the next 10 years, they responded overwhelmingly that besides enrollment and student participation, one of the most urgent issues was the relationship and relevance of the university to society and to the local community (Wright 2009). At Johns Hopkins University the president takes great strides to consistently acknowledge the institution's commitment to the community by promoting increased connectedness with the local community and expanding programs that foster positive growth in the city of Baltimore and beyond.

Along with providing more bridges connecting universities to communities, academic leaders must enhance their adaptability as they perform across three major action targets: (1) push for learner-centered approaches, (2) leverage technology in the learning process, and (3) accept the leadership challenge. Each of these action targets will be more fully described below.

2.8 Push for Learner-Centered Approaches

In the United Kingdom in the mid-1980s business leaders and educators developed a plan to reform education that resulted in a report titled "Education 2000." Out of that report, a project was created to shift the balance of teaching to learning; to provide a greater variety of learning experiences, and to make clear the responsibility of the learner for active participation in the learning process and for achieving successful outcomes (Milter 2000).

With this shift comes acknowledgment that it is the individual learner who must claim responsibility for his or her own learning. No longer should institutions take on the claim for learning behavior in others. Innovative educational programs attempt to provide an environment where a learning community (Knowles 1995) can thrive – an environment where answers are not as important as questions; where getting to the answers is more important than the answers themselves; where the concern for learning outweighs the desire to imbed specific facts into the brains of others.

When the Education 2000 report mentioned above was published, knowledge was calculated to be doubling every five years. Today, experts suggest knowledge is doubling every 13 months (Schilling 2013). It seems silly to claim we as educators can provide the requisite information for an individual's future needs as a professional or as an aware citizen. Innovative educational programs push for knowledge discovery, but not without also pushing for recognition of ways to apply knowledge

and the importance of continually seeking ways of updating the knowledge specific to the types of challenges facing the individual.

Although there exist pockets of learner-centered approaches at most universities, rarely is the method found in the majority of the classrooms on their campuses. We have witnessed the popularity of the Kahn Academy and flipped classrooms, but these innovations seem to have more traction in the Kindergarten-12th grade (K-12) movement than in institutions of higher education. This may be because in the K-12 world, the primary content focus is on subjects targeted at more base levels; and it may be easier to construct online learning tools for these content areas. But it may also be the case for an entirely different reason. There tends to be more innovation at the K-12 level because those educators are focusing on students and learning – not research and publishing. What gets rewarded gets done. The "main event" at research universities is not classroom instruction, but research and publication. Such values are reinforced throughout the life-cycle of a university professor, so that the message is clear. Faculty members often speak of their teaching "load" and research "opportunities."

While attending the 2013 American Educational Research Association (AERA) conference in San Francisco, the author located a special section of *Science* that featured an interview with a Nobel Prize-winning physicist-turned-educator, who claimed that, "The way most research universities across North America teach science to undergraduates is worse than ineffective, it's unscientific" (Mervis 2013, p. 292). The article describes how Carl Wieman, "doesn't understand why institutions of higher education would disregard decades of research showing the superiority of student-centered, active learning over the traditional 50-minute lecture." The article goes on to detail the strides Professor Wieman has taken to raise awareness for the need to change the way classes are managed and "giving reform a chance" (Mervis 2013, p. 293). If leaders and educators at universities were to place some emphasis on learning models and facilitation methods, perhaps they would not be guilty of using unscientific approaches in their classrooms.

2.9 Leverage Technology in the Learning Process

Although universities have often led the way to development of new technologies, they have frequently lagged in response to their full utilization. This is, unfortunately, the case as well in the use of new learning technologies. According to Botkin (1996), the most promising action in reforming education and modernizing learning is to be found not in universities but in the international business community. He attributes much of the reason to the fact that schools and universities still do not have the financial or innovative human resources to carry out the fundamental changes required by the challenges of the future.

Learning for the future requires an ability to incorporate technology-enhanced learning methods. The growing popularity of online learning platforms as both complementary and as product substitutes to more traditional learning formats

("heads in seats"), is another leverage point for using technology to extend learning capacities. Educators can clearly do more with less when aided by technology. Here again, the issue is one of awareness and acceptance on the part of leadership and their ability to move the message through the ranks.

Technology clearly has impacted learning for the general population, but there exist college classrooms in which the use of such tools is prohibited. This author is not suggesting that use of the latest, greatest technology is always appropriate in the learning process. The learning practice should, however, mirror the living practice whenever possible. When engineers began to use electronic instruments to perform sophisticated calculations, schools ceased teaching how to use slide rules. Most schools discontinued teaching the slide rule following the adoption of later technology (TI-30) by practicing engineers. Bottom line here is that today's universities must assume a leadership role in the development and application of new technologies; and that role should clearly carry over into the learning space.

2.10 Accept the Leadership Challenge

Universities, steeped in bureaucracy, tend to be one of the last organisms to experience needed change and often get dragged kicking and screaming into the future. Leaders in universities often become defensive, or non-responsive, in relationships with business people, even though it is business that awaits the products of university programs. The business world is experiencing rapid and constant change. Organizations in both for profit and non-profit industries are learning to cope, or are disappearing. University leaders must realize this fact and take responsibility for the future of either coping to survive or helping to lead our students into the world that is becoming.

Leaders in university settings must begin to appreciate the fact that they do not have a corner on the education market of the future. It comes as a surprise to traditional educators to learn that a growing number of professional educators are at work not in universities but in corporate institutes of education or learning centers (Botkin 1996). It is time (in fact it may soon be too late) for university leaders to seek new ways to bridge learning relationships with educators in these different segments.

By "university leaders" is meant anyone associated with a university setting who is involved in adding value to the delivery of learning programs in the future. By definition, therefore, this would not include administrators busy about the job of keeping the university on a steady state, following outdated mechanisms and teaching methods. It is time that professional educators in university settings act like professionals. It is time to take the mission seriously.

Developing lifelong learners involves programs to insure that they not only know things but that they are also able to act using their intelligence. Being intelligent no longer means scoring high on some quantified psychometric. Being intelligent connotes that an individual has "the ability to learn and to apply what has been learned to adapt to the environment, or to modify the environment, or to seek out or

create new environments" (Sternberg 1997, p. 91). University leaders need to act intelligently as they prepare for their futures and help develop others for theirs.

It is time to question, develop and test new ideas, and reflect on the processes that are used to assist others to learn. It is time to heed the challenge of Don Schön, author of *Beyond the Stable State,* in that "we must become able not only to transform our institutions in response to changing situations and requirements, we must invent and develop institutions that are 'learning systems,' that is to say, systems capable of bringing about their own continuing transformation" (1973, p. 23). In this way educators must realize the importance of the age-old adage to "practice what (they) preach." But first they must reconsider what it is and how it is they are preaching. Only in this way will they be able to truly assist others in their search for learning.

2.11 Conclusion

In conclusion, consider the paradox between the words of William Shakespeare and Nobel Prize-winning Herbert Simon…

> What a piece of work is man! How noble in reason! How infinite in faculties! In form and moving how express and admirable! In action how like an angel! In apprehension how like a god! The beauty of the world! The paragon of animals! (*Hamlet* Act 2 Scene 2)
>
> The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world – or even for a reasonable approximation to such objective rationality. (*Models of Man* (1957))

If university leaders were to adopt the perspective shared by Shakespeare, our students would need only to watch and learn. There is no cause for alarm, for the mere proximity of great faculty surely would provide them with the knowledge and parlance to move with repose into the world and solve problems. If, on the other hand, we adopt the view of Simon, then our plight as educators becomes more serious. Given the limitations of the human predicament, students must be challenged to develop the knowledge and skills to confront the complexity of the world in technology-mediated collaboration with others. Albert Einstein advised against using the same mental logic to solve a problem that was used in its creation. Helping learners to adopt new mental capacities, changing the way people think, and expanding their skill sets becomes paramount for educators.

There is a plethora of examples across various industries where an upstart institution served to recreate the main value proposition within the industry. Quest University is an example of an upstart in the higher education industry. This is an institution that has placed innovation in education as the main event. As a small university located in Squamish, British Columbia, the faculty began with a clean slate approach in 2007. The course structure is fully integrated in blocks or series, rather than courses in parallel. Students are challenged to develop a key question, find mentors, perform meaningful background research, investigate the specific

industry by going out to that environment, and compose a final report that rivals a graduate thesis.

A similar approach has for over 20 years been the basis for the education platform at Maastricht University in the Netherlands. This approach has also been implemented with success in an MBA program that was recognized as a benchmark for technology-mediated learning in the United States (Milter 2002). The key to these innovative programs is deliberate and consistent attention to the details of learner-centered practice, appropriate use of technology, and leading into the future. When leaders target these factors as pertinent to the learning environment we can envision a future that offers room for both Shakespeare and Simon. In fact, the world is a better place when we can celebrate both views in open collaboration.

The ability to sustain the value of diverse viewpoints and work in collaborative efforts to address key issues should be of paramount importance to educational leaders. The time is not ripe for digging trenches to stabilize current structures and methods of higher education. It is only via entrepreneurial approaches that leaders in higher education will enable their organizations to remain on a path toward sustainable relevance. It is clearly a time for such leaders to practice what they preach and to preach what they practice.

References

Amann, W., Pirson, M., Spitzeck, H., Dierksmeier, C., Von Kimakowitz, E., & Shiban, K. (2011). Humanistic management education – Academic responsibility for the 21st century. In W. Amann, M. Pirson, C. Dierksmeier, E. Von Kimakowitz, & H. Spitzeck (Eds.), *Business schools under fire: Humanistic management education as the way forward* (pp. 3–18). Hampshire: Palgrave Macmillan.

Baron, R. A. (2012). *Entrepreneurship: An evidence-based guide*. Northampton: Edward Elgar Publishing.

Bok, D. (2013). *Higher education in America*. Princeton: Princeton University Press.

Botkin, J. W. (1996). Creating the future: Perspectives on educational change. *New Horizons for Learning*. http://www.newhorizons.org

Buller, J. L. (2013, May–June). Academic leadership 2.0. *Academe, 99*(3), 28.

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

Coulter, M. (2001). *Entrepreneurship in action*. Upper Saddle River: Prentice Hall.

DeMillo, R. A. (2011). *Abelard to Apple: The fate of American colleges and universities*. Cambridge, MA: Massachusetts Institute of Technology.

Drucker, P. F. (1985). *Innovation and entrepreneurship*. New York: Harper Business.

Duffy, T., & Raymer, P. (2010, July–August). A practical guide and a constructivist rationale for inquiry based learning. *Educational Technology, 50*(4), 3–15.

Florin, J., Karri, R., & Rossiter, N. (2007, February). Fostering entrepreneurial drive in business education: An attitudinal approach. *Journal of Management Education, 31*(1), 17–42.

Gardner, H. (2006). *Five minds for the future*. Boston: Harvard Business School Press.

Herrndorf, M., Mesquita, P., & Beck, K. (2011). Exploring student entrepreneurship – The oikos experience of promoting sustainability at faculties of economics and management. In W. Amann, M. Pirson, C. Dierksmeier, E. Von Kimakowitz, & H. Spitzeck (Eds.), *Business schools under fire: Humanistic management education as the way forward* (pp. 397–409). Hampshire: Palgrave Macmillan.

Huisman, J., de Boer, H., Botas, P., & Pimentel, C. (2012). Where do we go from here? The future of English higher education. *Higher Education Quarterly, 66*(4), 341.
Knowles, M. (1995). The making of an adult educator. *Teaching and Learning, 68*, 33–42.
Krogue, K. (2013). What is an entrepreneur? Entrepreneurs. *Forbes*. Retrieved July 3, 2013, from http://www.forbes.com/sites/kenkrogue/2013/07/03/what-is-an-entrepreneur/
Lennett, B., Morris, S. J., & Byrum, G. (2012, April 1–20) Universities as hubs for next-generation networks. In *New America Foundation, Open Technology Initiative*. Washington, DC: New America Foundation. www.newamerica.net
Match College. (2013). http://www.matchcollege.com/top-colleges
Mervis, J. (2013, April 19). Transformation is possible if a university really cares. *Science, 340*(6130), 292–296. doi:10.1126/science.340.6130.292.
Milter, R. G. (2000). Innovation in learning methodologies for adult learners: Implications for theory and practice. *Virtual University Journal, 3*(6), 228–236.
Milter, R. G. (2002). Developing an MBA online degree program: Expanding knowledge and skills via technology-mediated learning communities. In P. Comeaux (Ed.), *Communication and collaboration in the online classroom* (pp. 3–22). Bolton: Anker Publishing.
Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper & Row.
Mitchell, B. C. (2013, May/June). The new rules of engagement. *Academe, 99*(3), 19–24.
Oosthuizen, C. (2009). It takes entrepreneurial leadership to succeed. *Management Today, 25*(7), 30.
Porter, M. (1980). *Competitive strategy*. New York: The Free Press.
Puglisi, M. J. (2012). Advice to presidents of struggling colleges. In A. Brown & S. Ballard (Eds.), *Changing course: Reinventing colleges, avoiding closure* (New directions for higher education (156), pp. 83–92). San Francisco: Jossey-Bass.
Rix, J., & Twining, P. (2007). Exploring education systems: Towards a typology for future learning? *Educational Research, 49*(4), 329–341. doi:10.1080/00131880701717180, http://dx.doi.org/10.1080/00131880701717180
Roberto, M. A. (2005). *Why great leaders don't take yes for an answer*. Upper Saddle River: Prentice Hall.
Rosenberg, N. (2009). America's entrepreneurial universities. In D. M. Hart (Ed.), *The emergence of entrepreneurship policy: Governance, start-ups, and growth in the U.S. knowledge economy* (pp. 113–140). Cambridge: Cambridge University Press.
Ryssdal, K. (2009, July 7). Marketplace. Interview with Eric Schmidt, CEO of Google. *American Public Media*.
Sanchez, J. (2011). University training for entrepreneurial competencies: Its impact on intention of venture creation. *International Entrepreneurship and Management Journal, 7*, 239–254. doi:10.1007/s11365-010-0156-x. Springer Publishers.
Savery, J., & Duffy, T. (1995). Problem based learning: An instructional model and its constructivist framework. In B. G. Wilson (Ed.), *Constructivist learning environments: Case studies in instructional design* (pp. 135–148). Englewood Cliffs: Educational Technology.
Schilling, D. R. (2013, April 19). Knowledge doubling every 12 months, soon to be every 12 hours. *Industry Tap*. http://www.industrytap.com/knowledge-doubling-every-12-months-soon-to-be-every-12-hours/3950
Schön, D. A. (1973). *Beyond the stable state*. New York: Norton Publishing.
Smith, R. D. (2013). University futures. In R. D. Smith (Ed.), *Education policy: Philosophical critique* (pp. 147–159). Oxford: Wiley Blackwell.
Sternberg, R. (1997). *Successful intelligence*. New York: Simon & Schuster.
Stinson, J. E. (1994, July 22). *Improving the quality of thinking in a changing world*. Paper presented at the sixth international conference on thinking, MIT, Boston.
Stinson, J. E., & Milter, R. G. (1996). Problem-based learning in business education: Curriculum design and implementation issues. In *New directions in teaching and learning in higher education* (Vol. 68, pp. 33–42). San Francisco: Jossey-Bass.
Strand, R. (2011). A plea to business schools: Tear down your walls. In M. Morsing & A. S. Rovira (Eds.), *Business schools and their contribution to society* (pp. 213–222). London: Sage.

Tarascio, V. J. (1985, Fall). Cantillon's Essai: A current perspective. *Journal of Libertarian Studies, 7*(2), 249–257.

Thorp, H., & Goldstein, B. (2010). *Engines of innovation: The entrepreneurial university in the twenty-first century*. Chapel Hill: The University of North Carolina Press.

Warren, T. (2012, June 8). 5 essential qualities for entrepreneurial leadership. *Forbes*. http://www.forbes.com/sites/startupviews/2012/06/08/5-essential-qualities-for-entrepreneurial-leadership/2/

Wright, T. (2009). University presidents' conceptualizations of sustainability in higher education. *International Journal of Sustainability in Higher Education, 11*(1), 61.