Teetering between eras: higher education in a global, knowledge networked world

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Abstract

Purpose – *The purpose of this paper is to describe the major influences shaping higher education today and how they will transform higher education over the next 20 years.*

Design/methodology/approach – *The paper is based on research and observation of the higher education system in America. It uses LaGuardia Community College, a large, two-year college located in Queens, New York, as a signpost for the anticipated changes.*

Findings – *There are three fundamental and monumental changes that will profoundly alter the field of higher education in the next several decades: the globalization of higher education; the impact of technology on changing definitions of students, faculty and knowledge; and the impact of the marketplace on the basic ''business model'' of higher education. The paper describes how each of these three forces will reshape higher education, while identifying factors that may accelerate or inhibit the impact of these influences.*

Originality/value – *This paper draws on the knowledge, experiences and insights of two leading higher education leaders, who regularly interact with countless faculty, administrators, students and policy makers.*

Keywords *Globalization, Higher education, Knowledge management, United States of America*

Paper type *Viewpoint*

LaGuardia Community College would hardly strike some as a ''typical'' institution of higher education. Housed in old factory buildings in the Borough of Queens in metropolitan New York City, LaGuardia serves over 65,000 students. As we write, about 17,000 students are pursuing an associate's degree leading to credentials as diverse as an occupational therapy assistant to a liberal arts degree in philosophy. An additional 48,000 individuals come to LaGuardia for a set of educational objectives that are even more far flung. Students in the College's continuing education program may be seeking intellectual skills and hands-on training that range from taking enough ESL courses to become a maid in a New York City hotel to entrepreneurs learning how to prepare a $300,000 application for a small business loan or hospital executives learning how to improve their company's cultural competency to improve medical delivery. To make it more interesting, two-thirds of LaGuardia Community College's students were not born in the United States, hailing from over 160 different countries and speaking over 100 different native languages.

Yet LaGuardia is also a typical community college, and the way we conceptualize, deliver and evaluate academic programs varies only slightly from what one might encounter at any two-year or four-year college. We design our courses informed by our faculty's research and scholarship, sensitive to making sure our curriculum is fresh and will allow our students to travel with their credits. Our courses are taught using a variety of teaching modes, increasingly turning to online or a hybrid mixture of in-classroom and online learning. We rigorously hold periodic performance reviews of departments to assess student learning and competency, while relying on various tools to evaluate faculty teaching and scholarship. The College participates in numerous self-evaluation and external evaluation programs to

give us greater insights on how we perform, often looking at a peer group of similar urban, large, two-year institutions.

In this essay, we want to think beyond what occurs right now, and imagine higher education and ourselves in the future. We believe that there are three fundamental and seismic shifts that will profoundly change the field of higher education in the next several decades:

1. the globalization of higher education;
2. the impact of technology on changing definitions of students, faculty and knowledge; and
3. the impact of the marketplace on the basic ''business model'' of higher education.

But let us start with a LaGuardia student story that reflects some of the shifting forces impacting higher education. Ken (not his real name) grew up in a working class family in Quingyuan, a medium-sized city in the Guangzhou province of Southern China. With a poor high school education, Ken did not have a shot at a top grade in the highly competitive, high stakes examination that allows entry into China's colleges. Ken knew that his real and maybe only opportunity would be to immigrate to the United States, but he also knew that he was low on the list of those from China who might be given a visa. So, Ken and his brother traveled to Venezuela, where he worked, learned Spanish, and then, through a family connection, came to Queens. He was able to attend LaGuardia Community College because the entrance requirement is a high school diploma, but needed to take a non-credit English as a Second Language class, considered a ''remedial'' class. After mastering English, he entered into a business major, and garnered such high marks that he became the Vice President of the Honors Society. He earned a full scholarship to an Ivy League college, where he will pursue a degree in international business. But before that, he met a member of the College's foundation board who works in wealth management for a large, international bank. Enamored with his drive, and his ability to speak English, Chinese and Spanish, she arranged for Ken to have an internship with her bank, where he helps train newly hired MBA's, often from elite universities, become greater assets to her bank.

LaGuardia Community College is already being buffeted by the major forces of globalization, technology and the shaky business model of higher education. In this article, we will discuss the power of these factors to re-shape higher education into something quite different from its centuries-old structures. We start with Ken's story to place a human face on the changing definition of who attends college, what constitutes a pre-college and college-level education, how international educational policies and international market realities impact college attendance, and finally, on the incongruity of a student with a newly minted associate's degree teaching MBAs how to provide value to their companies. Throughout the article we will come back to LaGuardia to ground the theoretical changes outlined in this article to the concrete reality of one institution looking toward the future.

Where in the world are the colleges and universities?

The colleges and universities in Europe dominated the nineteenth century, while US higher education institutions were generally seen as preeminent in the twentieth century. The realities of an information-based economy and the global movement of human resources and capital will pose new realities and challenges to China, India, the Middle East, Malaysia, Indonesia, South America and all parts of Africa in the upcoming decades. Everywhere, countries are developing or expanding traditional ''Research I''-type universities. The sheer growth potential in those countries, both from increasing demand from students and weight of the size of the population, is exponential. For example, China now exceeds the USA in the number of students in its higher education system, even though it only enrolls about 15 percent of traditional age-eligible students to the USA's almost 50 percent (Altbach and Umakoshi, 2004). But China's billion person population, with growing aspirations, and who understand that education is key to a successful economic future, will inevitably press for greater numbers of traditional student enrollees, to say nothing of the non-traditional or adult learner who will increasingly ask China for re-training or advanced education. As demand

from this group increases, the potential for the development of community colleges will also rise.

Right now, many universities in the USA and Europe, capitalizing on the shortage of home grown higher education institutions, are trying to lure great students and faculty to teach and learn outside of China, or to set up alliances or campuses in China. This will probably continue, but China's own plans to expand and create colleges and universities, and the needs and potential opportunities in her economy for her faculty and graduates will soon place such arrangements in direct competition with China's own universities. A similar pattern can be envisioned in India. Together with China, India has almost one-third of the world's population, yet currently enrolls slightly more than 10 percent of traditional age students. The growth in these nations' higher education institutions will not ignore the past. History will play a role in the unique development of each system, as China's century-old tradition of a highly competitive and test-centric university system contrasts with India's, which still harbors the legacy of British colonialism.

Population size and potential college enrollment growth are certain to produce change. What remains in question is whether growth of new systems in places like Brazil, China or India will foster quality educational offerings, rigorous research, and success in knowledge discovery and application (Hays, 2008). For example, Farrell and Grant (2005) estimate that fewer than 10 percent of Chinese college graduates would be suitable for work in an international company in occupations such as finance, engineering, health sciences, accounting or quantitative analyses.

Smart growth in the continents of Africa and South America should probably be less focused on the development of ''Research 1''-type institutions than on community college-like institutions, for different reasons. In Africa, the economics of developing elite institutions, although holding immense prestige appeal, is not an effective way to move millions of very undereducated individuals toward a skill set that would promote a viable, long-term economic development strategy (Mellow and Katopes, 2009). The ''middle-skilled'' jobs, those requiring post-secondary but less than baccalaureate education, will grow throughout the world faster than the need for baccalaureate training (Grubb, 2002). Thus, growth of community colleges or similar institutions of higher education will be seen in South America and Europe as a viable response to the educational and social needs of the countries in those continents. While the number of community colleges in the USA are unlikely to grow, the total enrollment is likely to maintain its upward sweep, with almost half of all undergraduates now attending community colleges, and an additional five million taking a variety of non-degree education courses (Business Roundtable, 2009; Mellow and Heelan, 2008).

The foregoing focuses on public universities and colleges, not the private or for-profit entities. In China, India and other developing economies, the private and especially for-profit higher education sectors see tremendous opportunity (*The Hindu*, 2009). The same is true of the for-profit sector in the USA, where the growth of entities such as the University of Phoenix and Kaplan University (and the over 650 for-profit US colleges), have surprised many with their ability to serve large numbers of students in targeted demographics (Morey, 2004). The for-profit model appears to bring several important changes to the higher education sector. Perhaps most stark is the dramatic lessening of full time faculty and the role of faculty as scholars/researchers. For-profit colleges do not seek to advance the frontiers of science, technology or the arts. Rather, they focus relentlessly on delivering undergraduate and graduate education in sectors where investment in faculty, facilities, libraries and laboratories is minimal but the potential return on investment is great.

The largest of the for-profits are emerging as national colleges as a result of their centralized curricula, something the USA has never seen. And their investment in high impact curricular strategies, common student learning outcomes, use of peer and cohort organizational structures, and use of professional development to standardize faculty classroom behaviors have provided them with an interesting edge in the accountability movement so prevalent in US government and philanthropic foci. For-profit colleges have often developed advanced

course-level diagnostics, with an ability to identify and track learning goals for each class and individual student success for competencies within those classes. The investment for shareholders of for-profit colleges is clear – they have made millions for many. Stocks of for-profits have outperformed companies on the S&P 500 by about 40 percentage points for the last two years (Wilson, 2010). The investment for individual students is less clear. Graduation rates at for-profit colleges remain quite low. For example, the University of Phoenix, Kansas City's six year graduation rate is 8.8 percent (Education Trust, 2009b). By comparison, University of Missouri, Kansas City has a 42.5 percent six year graduation rate (Education Trust, 2009a). And the students who attend for-profit colleges do so at a great cost. One out of four for-profit BA degree recipients had more than $40,000 in education debt, compared to only 6 percent of public four-year BA degree recipients (College Board, 2009, p. 10). And while for-profit colleges enroll about 10 percent of all US college students, their students make up about 50 percent of all loan defaults (United States Department of Education, 2008).

On the other hand, the for-profit university and college business model is oddly dependent on the private and public sector for the creation of knowledge, the credentialing of faculty, and the maintenance of the public good. For-profit colleges do not educate those whom they find too expensive to educate either by lack of preparation (including a significant part of the community college market) or because of the demands of the discipline (degrees in art, music and chemistry might be grouped in the latter) require investments in faculty and facilities to educate to a high standard. The business model of for-profit education in the United States, therefore, is oddly parasitic. They rely for most of their profits on their ability to segment the ''easiest to serve'' among all student populations, offer degrees in only the ''lowest cost'' disciplines, and yet garner most of their profits from skillful use of federal financial aid. In 2007, 9 percent of students went to for-profits and they received 21 percent of Pell grants and 21 percent of federally subsidized loans (College Board, 2009, p. 12). The University of Phoenix led the nation in receiving Pell Grants in 2008-2009 receiving $657 million (*Chronical of Higher Education*, 2010). In fact, the top five recipients of Pell Grants were for-profits colleges that received a total of $1.381 billion in Pell Grant funding (*Chronical of Higher Education*, 2010).

A stratification of the higher education student market into one whereby for-profits push the country into a higher education system that consigns most high cost education to the public sector and high profit and high productivity education (i.e. educational offerings which can produce many students for low investment costs) to the for-profits would create a fundamental shift in higher education policy, not by policy fiat, but by allowing the forces of an unfettered higher education marketplace to flourish. An interesting parallel is the Humana Hospital Corporation, which started in the 1980s, built facilities at the edge of urban centers, and creamed off the high margin patients from inner city hospitals.

What will influence national and international higher education standards?

The definition of what constitutes a college education, and issues of quality, are questions threaded throughout higher education debates in the USA and around the globe. If current trends continue, efforts by non-government organizations will push toward standardization of the US higher education community without the external imposition of standards from the government. For example, actions taken by the Association of American Colleges and Universities (AAC&U, 2010a) to create a broad understanding and consensus about the framework of a liberal education, a set of valid assessments of learning in undergraduate education, and a philosophy that places faculty at the core of those assessments promulgates national standards without so naming them. The increasing number of health and related careers which require college graduates to sit for national certifying examinations, as well as related standards for engineering and technology curriculum, establish a growing nation-wide consensus about degree programs and requirements. Work by philanthropies such as the Bill and Melinda Gates Foundation, the Lumina Foundation and the Carnegie Foundation about curricular structures and practices in higher education all push toward national impact, and therefore national standardization. Some aspects of standardization, especially if it raises overall quality of educational outcomes, could be very

positive, especially for community college students and others who need to move across institutions. Other aspects, including a homogenization of the splendid diversity of subject matter and approaches, could be the death knell of all that is best about American higher education.

In predominantly Western Europe, the set of standards and frameworks commonly referred to as the Bologna Project, whereby faculty set curricular standards that are more interchangeable, modular and portable serve to standardize degree programs across countries. The Bologna process is likely to accelerate the movement of students across national boundaries.

The interesting questions will emerge as large universities in nations, such as China and India, begin to quantify or qualify what their degrees mean. The hiring marketplace will be very influential in this regard. When companies such as Accenture (2010) list 50 different countries where new hires can work on their college recruitment web site it is very possible that the big multinational companies will begin to force a convergence of quality indicators by simply refusing to hire those who do not meet requirements for international work. How global standards emerge will be a fascinating new chapter in higher education. Coupled with expanding variety of college models, the international complexion of higher education may also be marked by a push towards greater standardization of quality standards.

Globalization is already felt in varying degrees by community colleges across the country, since they are most likely to educate immigrant students (Mellow and Heelan, 2008). LaGuardia is at the forefront of the globalization of its student population because of the proportion and diversity of its immigrant students. To see the face of the future, one only has to visit the campus.

More than the changes in immigration, LaGuardia will feel globalization in other ways. Currently, many of LaGuardia's faculty are foreign nationals who came to the United States for graduate education and stayed for American opportunities. As Africa, South America and Asia create greater demand for more faculty to teach in newly created universities, recently minted PhD's are more likely to travel back home. The move toward greater consistency among educational standards is likely to advantage LaGuardia students who wish to move into colleges and universities in other countries. While the associate's degree is poorly understood in Asia, South America and Africa, an articulated set of learning achievement standards will align students' achievements within a framework understood by both international businesses and other colleges.

The technological juggernaut: changing fundamental assumptions about colleges and universities

The most dramatic lever for change in higher education over the next decades will be technology. Colleges and universities were once founded upon their faculty, who possessed the wisdom to transform information to knowledge, and their libraries, which catalogued and documented all specialized knowledge. Technology has begun to alter the relationship between knowledge and the knower, erasing geographical and institutional boundaries, creating new kinds of communities, and underpinning work in completely novel ways. In this section, we suggest how technology may create both new junctures and disjuncture among elements that have long been considered the basic building blocks of higher education, touching everything from the abstract (the structure of knowledge creation) to the concrete (who will possess the authority to grant a degree or define a curriculum as collegiate).

What is college?

America already suffers from a nostalgic misconception of college. The predominant view that colleges consist of a group 17-21 year-olds living in dorms on a college campus being taught by full time faculty is false. Most students are adults, commuting to campus, working a significant number of hours weekly. Almost half of all undergraduates attend community colleges. Adelman (1999) has shown that there is a huge difference in the self-perception of students who are taking the same course load – some think of themselves as students who

happen to work, while others think of themselves as workers who have to go to school. Driven both by the new reality of who goes to college, and the acceleration of knowledge creation and application, the assumption that enrollment in college is something that is done only once and that, upon obtaining a degree is never repeated, may be altered. Colleges in the future may serve a life-long function – a partner in your educational needs throughout life that one returns to again and again as the requirements of your job or participation in your community makes new demands. Concomitantly, the definition of a student will change, moving from relatively short-term and intensively focused toward episodic and iterative. The for-profit trade schools already understand this: at the for-profit University of Phoenix, a student can register in a course that starts every week and generally runs for five or six weeks.

What is the college community?

The ''town-gown'' divide is also an increasingly uncommon situation for most colleges, since all community colleges strive to be fully integrated with their community, while increasingly four-year campuses have blurred boundaries in order to make a difference to their surrounding community. To be sure, the isolation of many colleges from their local environments still exists, but rare is the college that consciously sets out to limit the community from interactions with the faculty and students. Thus a singular definition of a college community, isolated from the local community and bounded by geography and physical space, is already morphing into something more complex and multifaceted.

Even more powerful is the impact of the internet. As teaching and learning occur online, as students interact with each other on and off-campus through online networks and virtually with avatars on a college's website, and as faculty and students take their intellectual pursuits and create dialogue among a worldwide group of interest, who is a ''member'' of a college community becomes an interesting question. Technology can make a college fluid, defined by multiple dimensions, including geography and the campus, but expanding to professions, research pursuits, pedagogical approaches, as well as the micro-social (friends, classmates, colleagues) linked through multiple points of conversation, interaction, and exchange.

What is a degree and who offers it?

A college degree today represents the accomplishment of mastering a pre-determined body of knowledge typically focused on obtaining a standard degree or certificate. Academic work gets done – through courses, over a semester, within a prescribed sequence, usually with a defined group of people, is text-based and the conferring body is always an institution of higher education, accredited by an external peer body and a government agency.

The entire structure is built on industrial models of production. The internet operates on a completely different set of principles.

As technology accelerates knowledge creation, dissemination and adaptation, it will be difficult for colleges and universities to maintain the expertise in faculty and sometimes in technology to provide the educational services students will need. Right now, colleges compete with each other for faculty, for research funding, for recruiting students and for partner relationships with major corporations. But as knowledge begins to freely roam the world, and as our way of operating in all other sectors from finance to manufacturing to the arts, become more complex and interdisciplinary, higher education may appear and operate in a way that is outmoded and antiquated. Colleges may begin to form transient relationships, perhaps in ''cloud colleges'', which will have the fluidity to bring together experts of scholarship and interested students to create unique ways of teaching and undertaking research, while forming new ways of conferring degrees and certificates.

Who are faculty and what is scholarship?

Colleges and universities now tenure individuals primarily upon the basis of published scholarship and, to a lesser extent, upon teaching effectiveness. The technological accelerant for both new knowledge and innovation may deeply alter the emphasis on

published original scholarship, and increasingly move toward recognition of original synthesis of knowledge from masses of data and on adaptation of knowledge to specific unique situations. Boyer (1990) forecast this change in his seminal report *Scholarship Reconsidered*, where he advocated for expanding the focus of scholarship from discovery to include the scholarship of integration, the scholarship of application, and the scholarship of teaching. As technology, both through online learning activities and increased sophistication of assessment techniques makes possible a clearer connection between student outcomes and faculty performance, teaching effectiveness may gain ascendancy as a criterion for both continued faculty employment but also as a codifiable site for scholarly recognition. There is already extensive work, particularly in Europe, in virtual research environments, whereby researchers from all disciplines work collaboratively by managing the increasingly complex range of tasks involved in carrying out research (for example, www.jisc.ac.uk).

Who defines what is curricula?

The one incontrovertible assertion that can be made for all colleges and universities, except for-profits in the USA, is that the faculty control curricula. For-profit institutions such as the University of Phoenix have begun to erode this control. At the University of Phoenix (2010), faculty members teach courses and use materials that have been developed centrally by a group of professionals brought together to design the course. The independence of faculty members to interpret the necessary learning outcome goals, develop a syllabus, introduce their own research and identify and/or create course materials is gone in exchange for, as the University of Phoenix notes to prospective faculty, the ''satisfaction'' of ''facilitating class discussions'' where faculty can ''sharpen your ability to organize, communicate and lead. We also offer a wide array of assessment and training programs to further enhance your skills.'' What's not clear is whether a University of Phoenix approach – a ''curriculum in a box'' approach – will ultimately gain greater currency, particularly for colleges and universities looking to reduce costs and at a moment when the push for rigid national curriculum is being embraced in the K-12 area.

Technology in many ways promotes an emergent and continuously evolving stance toward any standard curriculum. The future will probably hold curricula that, rather than being defined a priori by faculty, will also include curricula that is emergent and socially derived by dialogue among faculty, students and experts in the field.

How do institutions assess student knowledge and learning?

Those of us of a certain age remember having our knowledge evaluated by college professors as we were handed a blue book, wrote our name on the front, and then writing answers to essay questions. This still occurs to assess student learning at colleges and universities, but the range of assessment tools powered by technology is vastly improved and getting larger. It might take the form of a professor assessing students' learning by evaluating an online business collaborative composed of students from multiple universities in several countries as they establish business plans, trade policies, and profitability in a virtual company. It could be a mathematics professor teaching civil engineering by having students solve a reservoir flow problem using municipal data within an online simulation. As technology enables great authenticity of practice, the lines between teaching and assessment meld.

As assessment of student learning is reframed by technology, so too may other kinds of assessments that are fundamental to higher education. We currently provide federal financial aid and degrees based primarily on ''seat time'' – how long has a student attended a specific class. As interactive authentic assessment of individual student competencies become more common, the ability to assign financial aid based on learning becomes more possible. This might also include highly functioning assessments that take the place of transcripts, and assessments of expanded definitions of competencies – problem solving, interpersonal skills, cultural competency, and initiative – that re-imagine what is measured and how it is represented.

At LaGuardia, technology is infiltrating every aspect of the college experience. With the largest ePortfolio program in the country, over 10,000 students are learning to create their own educational scaffold by customizing an electronic portfolio that includes students' resumes, learning goals, evidence of their best academic work, and reflection on that work. Not only are these ePortfolios creating academic coherence for students whose lives can be fragmented by multiple external commitments and part-time status, but they can also be a portal for families in other countries to view and appreciate a student's work in college. Students are gathering in Virtual Interest Groups to link with student alumni, peers in the same degree program, and faculty members to explore career connections. An eCareer program links the tools used by workforce development professionals to help guide students to think about career development and pursuing an associate's degree and beyond. Faculty on campus is using every manner of online social networking, academic courseware, and online games to link students in multiple countries and multiple colleges together in learning communities. Faculty themselves are sharing research and pedagogical approaches with faculty across the world.

The teetering ''business model'' of higher education

When viewed as selling a ''commodity'' in a market, all colleges and universities look the same. They face escalating market competition, both local and global, confront a changing supply and demand from prospective students, and wrestle with rising and falling revenues. There is an accelerating pace of change in almost every area – from the internal changes in education delivery noted above to increased challenges in areas such as marketing, management of endowment portfolios, selection of energy sources, and coping with complex public health risks. Despite an almost universal endorsement of the ''value proposition'' of American higher education as being a highly productive and coveted acquisition, public dollars for higher education are in steep decline relative to the number of students served, and there is intensifying legislative oversight on both a state and national level. It is possible that the current economic model of higher education in the USA is simply not sustainable over the long term. One can imagine a breaking point where public institutions' funding has been slashed to such an extent that tuition costs are astronomical. And this collapse might occur at the same time as national and international businesses require higher and higher skills for employment.

Osterwalder (2004) identifies the key elements of a business model as typically encompassing market share (who and where are the target customers?), channels of distribution (how complex are the ways in which the commodity is delivered to customers?), partnerships (how networked is the business across multiple other businesses?), capability (how robust is the business' ability to deliver multiple modes or kinds of commodities?), revenue models (how diverse are the streams of revenue?) and cost structure (what is the price per unit?).

When viewed from a traditional business model focus, colleges and universities have great strengths. They have a huge market penetration and greater potential for creating knowledge than any other industry. They possess multiple channels of distribution, and robust capability from the talents of faculty as well as the infrastructure of science, technology, arts and professional studies. Unfortunately, the vulnerabilities in the business model are just as great. Colleges and universities have very limited revenue streams, their cost structure is such that the fees charged for the education do not totally cover the costs of production, and they have been unable to make the case for long term investment by government in their institutions.

The cost models of higher education are slippery. For example, private Middlebury College in Vermont charges its students $50,250 annually, but estimates it costs about $80,000 to educate each student (Liebowitz, 2010). At LaGuardia Community College, where the tuition (without room and board) is $3,150 per year, it spends $13,141 per student each year. In the private college example, private donations and endowments make up the difference between price and cost, while at LaGuardia Community College the difference is mostly made up with public (city and state) tax dollars. Students at all kinds of institutions, including

for-profit colleges, receive federal financial aid and most also receive state-based financial aid.

For-profit colleges, on the other hand, have narrowed the scope of students served and courses offered, while relentlessly cutting teaching costs and aggressively marketing themselves to recruit students in order to offer education at a price high enough to make a profit for their shareholders. Yet the comparison of for-profits vs public and private non-profit colleges must be done with an appreciation for the similarities and dissimilarities of the respective enterprises. For-profit colleges have made wise business choices for their investors. They have driven down costs by offering a limited number of degrees, focusing solely on degree offerings where there is little investment in equipment or laboratories, they do no research to advance the frontiers of knowledge, and they do not support high-risk students. By being strictly utilitarian in orientation, for-profit colleges do not attempt to foster the development of complex thinking skills, nor advance the scope of knowledge broadly through general education.

Most public and private colleges develop degree programs that expect students to not only master a body of knowledge in their major, but to develop a breadth of understanding in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts; to be able to engage with big questions, both contemporary and enduring; to develop the intellectual and practical skills of inquiry, analysis, critical and creative thinking and the ability to synthesize and apply these skills in practice (AAC&U, 2010b). Finally, most public and private colleges explicitly endorse an education that leads students to take personal and social responsibility in civic, ethical, and global concerns. A for-profit college can maintain a streamlined, cost efficient operation because its goal is to offer degrees in areas such as accounting or technology that are narrowly defined. The business model works very well for the shareholders of the for-profit colleges, and for the CEO's who pull down multi-million salaries. The business model works less well for many of their students, as noted above, and potentially will de-stabilize the US higher education enterprise.

Oddly, for-profit colleges base their very existence upon the function of government along with private and public higher education institutions in a parasitic way. For-profit colleges do not produce the faculty who are their instructors, nor the knowledge that is taught. If the American higher education model by some fluke in the future turned totally for-profit, it would quickly run itself and the American economy into the ground. There would be no scientific or technological exploration and innovation, neither creation of new knowledge nor synthesis of existing knowledge, and a grinding halt to the ''content'' of our multimedia explosion from the arts.

Again, with a tip of the hat to the business acumen of the for-profits, they have succeeded in a business model that disproportionately rewards them for educating students. For example, in New York where proprietary colleges educate less than 9.8 percent of all students, they collect almost 15 percent of all state tuition assistance (New York State Higher Education Services Corporation, 2009, p. 33). For-profit colleges are equally adept at getting access to taxpayer dollars, which support their students and make profits for their shareholders. Of the top 10 institutions where federal financial aid in the form of Pell grants was distributed, nine were proprietary colleges (*Chronical of Higher Education*, 2010).

While the for-profit colleges maintain that they are being responsive to students, with an academic calendar that begins every week with new students, their outcomes are much better for their shareholders than for students. For example, at the University of Phoenix, 9 percent of the student graduate within six years (US Department of Education, 2009), and those same students are among the most likely to default on student loans provided by the US government.

The respected business guru, Bennis and Nikias (2009), has argued that we cannot let the future of American higher education fall prey to the relentless market force of driving down cost, because the cheaper model will undercut all that is powerful about the American higher education model. Arguing that the heady mix of intellectuals in pursuit of knowledge of all kinds at her colleges and universities is fundamental to American innovation, Bennis and

Nikias exhort us to consider colleges and universities as investment centers rather than revenue centers. Will a completely market-driven business model of higher education be permitted to flourish and reframe higher education as a commodity within clearly defined revenue targets, narrowed curricular offerings, limited audiences, and without connection to the larger and complex social and civic issues of our times, or will American higher education public policy once again assert the primacy of a business model based upon investments and long-term horizons? The future of American higher education will depend upon which view prevails.

At LaGuardia Community College, the perennial under-funding of all of public higher education, and of community colleges in particular, make for an uncertain future. As the demands for highly educating a greater proportion of the population accelerate, the ability to appropriately fund these activities is threatened. LaGuardia competes with highly funded for-profit colleges for space on the subway to advertise, and with large, well-endowed private universities for philanthropic support. The investment model of higher education that Bennis and Nikias promulgate is at odds with an annual election cycle of public officials who need to see results now. Adopting business process models that improve efficiency go only so far in a densely human enterprise. And a mission to educate poor students, often disproportionately minority, from public schools with insufficiently rigorous standards requires more money, not less, than other public colleges. On the other hand, LaGuardia's close connection with a specific local community, its strong relationships with employers as a trainer of choice, and its longstanding support of social justice issues provides it with different avenues to funding streams than other colleges.

Conclusion

What is on the horizon for higher education? First, the answer is probably the same kind of transformative change we have seen in so many industries (health care, music recording, and telecommunications). And, as in the case of those industries, much will be determined by how the leadership responds to the changing landscape. If, higher education leaders can bring the wonderful moderating force of the inherently conservative academy, with its caution and custom into productive partnership with models of leadership and scholarship emerging online that are ''powered by a diversity of ideas, prize dialogue over mandate, expertise over authority, and promotes an understanding of context for improving decision-making'' there will be a win for all involved (Woolis *et al.*, 2008).

Second, the world economic and social forces that will change the balance of collegiate power from Europe and the USA to Asia, Africa and South America will happen over time, more rapidly in some countries than others. The impact of these changes on curricular structures, higher education policy, and an emergent globalization of higher education institutions remain to be seen. Technology, already in full force as a lever for change in higher education around the world, is likely to remain the single largest element of impact, with the potential to alter virtually every aspect of the modern college or university. And the emergence of a strong for-profit sector in higher education, especially in the United States with business models focused on the bottom line and shareholder profit, calls into question the traditional mission of higher education. Will American colleges and universities be able to maintain their current mission to broadly prepare current and future generations that is woven deeply into the fabric of a country that seeks to allow its citizens the pursuit of life, liberty and happiness? Or will higher education become one more commodity for sale, with colleges selling and students seeking the highest return for the cheapest cost?

What we do know is that higher education leaders today must ''capitalize on the capacity of technology to facilitate work and equip organizations to respond rapidly and flexibly to both internal and outside stimuli'' (Woolis *et al.*, 2008) particularly the globalization of higher education, the need for new business models, and the vast untapped potential virtual networks. Anatole France has said, ''An education isn't how much you have committed to memory, or even how much you know. It's being able to differentiate between what you know and what you don't.'' The future, dimly imagined but unseen, remains something we do not know.

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