
Educational Ideas and the Future of Higher Education: The Quest for a New Business Model

Edward Clift, Vic Liptak and David Rosen

Abstract

In the world's rapid change over the last fifty years, education has become both a local and an international business. New conceptual frameworks for education, new global and local populations seeking education and new technologies that can aid education intersect with more traditional national and private economic interests. How a new educational model—the Global Cloud University inaugurated by the Carl Benz Academy—positions itself in this mix of forces and opportunities is the subject of this book. The authors address this problem by taking an historical look at some of the goals of education, some of the constraints placed upon reaching those goals, as well as existing educational models, focusing on three in particular: transnational education, corporate colleges, and on-line and virtual delivery. Finally, the article highlights key issues in the development of an effective new model.

1 Introduction: History, model, and questions

It is useful to begin by viewing education as a ritual that helps produce the type of adults that a society needs. As the number and differences among those whom we include in our “society” has grown, that ritual has changed in scope to become a transnational system that creates world members who can work locally but con-

tribute globally. This means that we must find ways to share the world by using common sets of standards, like a common gauge for rail lines that connect distant places. We have lots of people to haul along this route, and we cannot afford to determine *a priori* who gets to ride.

The twin imperative of connectivity and access that faces the world today was a problem that the United States faced more than one hundred years ago. And so it may serve as a model for understanding the current global situation.

The central government of the United States, not wanting to rob the individual states of their quasi-independent sovereignty, set down rules of play among them, as well as some superordinate principles that they needed to share to be part of the U.S. When laws regulating the interstate commerce of goods and of ideas were implemented to facilitate the development of a common market identity, education was left alone for the most part. While it eschewed regulation, the federal government considered education important enough to help the states establish universities that would conduce to both local and national prosperity. In 1862, President Abraham Lincoln signed the Morrill Act, which donated federal land to the states in order to

teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life (Morrill, 1862, Chapter CXXX, section 4).

With the goal of filling positions in industrial and professional practice, educational and business leaders also found it important that students who came to college should be fully prepared. As a consequence, standards for admission, i.e. graduation standards from a secondary institution, had to be uniform within the state, as well as between states, and those who graduated, regardless of where they were educated, had to demonstrate those skills required for their industry or profession, regardless of where they were employed. In 1885, the New England Association was founded as a private organization to validate or accredit standards for colleges and universities according to these criteria. It became the first of six regional accreditors that would work to create uniform standards for higher education across the US.

There were other private forces similarly at work to create transnational standards in order to assure uniform quality. The Carnegie Foundation for the Advancement of Teaching was one of them. An organization for educational improvement founded in 1905 by industrialist Andrew Carnegie, it established and then controlled the retirement funds of educators, today called TIAA-CREF, and used

the gentle cudgel of economic persuasion to get colleges to adopt a standard unit to measure learning. Adopted in 1910, the Carnegie or credit hour stipulated that in order to achieve a diploma, students must accumulate at least 120 of these hours.

Following the introduction of the Carnegie hour, a host of national standards specific to industry were strongly promoted by the industries themselves. Philadelphia industrialist Joseph Wharton and industrial efficiency expert Frederick Taylor, who believed that a scientific approach to training managers was important for the country and its businesses, founded the first collegiate school of business in the US in 1881 (University of Pennsylvania's Wharton School). By 1916, with the number of business schools growing, the American Association of Collegiate Schools of Business (now the Association to Advance Collegiate Schools of Business) was founded to unify standards nationwide along industry-specific lines (Thomas, 2013, p. 10).¹

When the first principles for standardization of education were being established in the United States, the number of college-goers was small. In 1890, only 1.7% of 18 to 24 year-olds in the US attended college. In 1900, it was only 2.3%. But that percentage climbed steadily over the 20th century, from 7.3% in 1930, to 14.2% in 1950, to 25.5% in 1967, and 34.6% in 1990 (El-Khawas, 2001, 26). Through the last decades of the twentieth century the demand for college-educated students continued to rise while the supply of traditional college-going populations began to decline. Non-traditional college-goers arrived to take their place, coming from less affluent strata and being more diverse by race, gender, and ethnicity than in the past.

In the midst of this shift in population and overall demand, Margaret Spellings, the Secretary of Education from 2005 to 2009, created a Commission on the Future of Higher Education, comprising leaders in higher education, industry, business, and policy. The result of their inquiry was a publication entitled *A Test of Leadership: Charting the Future of U.S. Higher Education* (Spellings, 2006). With a mandate to educate more students and given wide differences in students' readiness for college and socio-economic backgrounds, the Spellings Report, as it is often called, reached three exceptionally important conclusions:

1. Access — every child must graduate from a secondary school with the skills to enter a post-secondary school and there must be sufficient places for them somewhere in the educational system.

1 Belgium-based EMFD's EQUIS accreditation, UK based AMBA and AACSB have been working to create an international standard (Thomas, 2013, p. 26)

2. Affordability — every college student, regardless of financial means, should be able to attend a college.
3. Accountability — every college must be able to assure that a graduating student has achieved a common and minimum standard of learning outcomes.

As every nation grapples with the momentous changes wrought by new technologies, changing demographics, and increased global competition they will need to satisfy these three aspects of education—access, affordability, and accountability.

Finding a new business model for education anywhere in the world is complicated by the fact that education operates differently from other goods and services. In part, education is a service good but within that domain it has a special place as a *post-experience good*. That is, a graduate can only gauge the effectiveness of a program after (and sometimes long after) graduation.

From the standpoint of the industries that will acquire the resulting graduate, education more closely resembles a manufacturing process. They are expecting a graduate to be a product that they can put to work immediately with good results and they expect that product to be, much like our current high tech products, upgradeable (and thus useful for long periods) or cheap and disposable. Given the social investment and embedded expenses of education, creating a graduate whose skills are easily recognized, certified and malleable or upgradeable has become vitally important (See Corner Office).

While those realities create important considerations in finding the right business model, the nature of the current learning industry poses a problem. Universities view knowledge as proprietary capital that is the source of their revenue generation. So knowledge is something traditionally they have been unwilling to share or jettison in favor of new knowledge. In addition, those whose methods produce the best result in learning are not only unwilling to share their trade secrets but have also managed their processes in ways that cannot be reproduced (See Brewer, 2002). Take a medallion institution that not only picks among the most likely candidates to be successful but also can choose those who have already distinguished themselves by success. These students, when they graduate, will have the additional advantage provided by a network of successful well-placed classmates and alumni who increase their own value by helping each other succeed.

Can we disrupt such a system? Is it worthwhile to do so?

Maybe not, but the production of these “luxury” graduates will not be sufficient to run the world economy nor even likely to provide the new insights and innovations capable of guiding the economy of the future.

So, what is being done? To put the promise of a Global Cloud University in context, we need to understand the various educational experiments around the

globe and what they tell us about what we require for a new business model for education.

2 The current Educational Field

History to this point has shown that there exists a benefit for making knowledge and skill portable and open, a need for providing access, affordability and accountability to create greater inclusion to meet growing demand, and a requirement for preparing graduates of university for work and for change. How is tertiary education, education at the collegiate or university level, currently meeting these benefits, needs, and requirements?

The value and necessity of tertiary education appears to be well established, according to Organisation for Economic Cooperation and Development (OECD), the 34-country organization founded in 1961, which issues a yearly report on the state of education among its member countries. The OECD identifies types A and B institutions within tertiary education. Type A is primarily theory-based and three or four years in duration, and B is primarily vocational and shorter in duration, usually two years. In 2012, the OECD's annual Education-at-a-Glance estimated that 58% of young adults across OECD countries would enter a type A program over their lifetimes, and 18% of young adults would enter a type B program over their lifetimes (source 2). Between 1995 and 2012, tertiary A entry rates increased 20 percentage points on average across OECD countries (with 4 percent loss since 2010, presumably due to the worldwide recession), while tertiary B rates were stable. The United States followed seven other OECD countries and Latvia in type A entry rates for 2012, with Russia following close behind.

President Obama was not exaggerating in his January 2015 State of the Union address, when he noted that “eventually, the world caught on and the world caught up,” as he built his argument that the US had to reclaim its position as education leader (“Remarks by the President on America’s College Promise,” 2015), pitching two years of free community college as part of strengthening America: “America thrived in the 20th century because we made high school free, sent a generation of GIs to college, and trained the best workforce in the world. But in a 21st century economy that rewards knowledge like never before, we need to do more” (“Remarks of President Barack Obama – As Prepared for Delivery State of the Union Address”). For him, as for many world leaders, the economic race is global and will be won by increasing the number who are educated and the level to which they are educated.

Sounds easy, but presently tertiary education distinguishes itself from primary and secondary in ways that are complicating. First, it is generally considered to be non-compulsory and its students are generally considered adults and thus capable of making their own decisions and being responsible for them. In many countries it provides choice with respect to focus of study (though in some fields and in some countries secondary education systems may be the first step in focusing study), and it prepares its students for intentional entry into the economy and society as a responsible, contributing agent. This entry is often deemed to mark a new, more mature stage of life.

Tertiary education has a multivalent relationship with national interests. The authors of OECD's *Education-at-a-Glance 2014* note that "the belief that skills acquired through higher education are valued more than those held by people with lower educational attainment stems from the perception, both real and feared, that 'routine' jobs can be performed instead in low-wage countries or mechanised, and from the growing understanding that knowledge and innovation are key to sustaining economic growth" ("Organisation for Economic Cooperation & Development, *Education-at-a-Glance*," 2014, p. 331). Yet even in those countries with strong governmental oversight or regulation of higher education, engaging in it is a choice rather than an obligation. Given the dual role of the university as the provider of tertiary education and the developer and guardian of knowledge, information, and integrity in inquiry, the power of the academy can at times threaten the political establishment. Yet higher education has historically played a crucial role in developing and sustaining an elite class, which can only exist in contrast with the non-elite. The promise of higher learning is innovation and change; higher learning both confers status and challenges the status quo. International or global education, then, is a balancing act for partner nations and the production of educated global citizens is desirable while at the same time risky.

As we increasingly embrace the 21st century as a global effort to advance human potential and create sustainable systems, we will have to approach post-secondary education as an accessible, affordable and attainable need of every contributing global citizen. Tertiary education providers, exist, then, to make education or training available to some subset of education seekers. Identifying the subset (or market) would then set the parameters for access, affordability and attainment. The relationship between the identified subset, these parameters and the provider's mission is one of the factors accreditors weigh in evaluating a provider's accountability.

Offerings in tertiary education range widely across international categories and within a nation. Efforts are underway to make transparent and transferable the outcomes and the credentials associated with the most common levels of study,

especially the bachelor's and master's degrees. In Europe, the Bologna Process, begun in 1999, seeks to ensure "comparable, compatible and coherent systems" in higher education across nations that have signed on to the endeavor ("European Higher Education Information"). In the United States, the "Degree Qualifications Profile" developed by the Lumina Foundation, the National Institute for Learning Outcomes Assessment, and the Institute for Evidence-Based Change seeks to provide a framework for what it means to study at the associate's, bachelor's and master's level in the U.S. ("Degree Qualifications Profile").

Any overview of offerings in tertiary education must recognize the framework it uses for categorizing. An inventory might be based on duration of study, usually correlated with a level of achievement, where longer duration indicates a higher level. The US associate's degree requires less time in study (credit hours) than a bachelor's degree, for example, with the former corresponding more or less to OECD's type B tertiary and the latter to OECD's type A tertiary. The inventory might be based on the type of provider. Many countries have both public higher education systems and private institutions offering similar courses of study. In some countries greater prestige is associated with study at public institutions. Because public education tends to be subsidized and lower cost, there can be stiff competition for entry. Private institutions can serve the market that did not gain entry to the public institutions. They can also develop reputations for excellence and begin to compete in the market for high-achieving entrants. Private institutions can be associated with a religion or industry (or neither), as well as not-for-profit or for-profit, depending on national educational policies. Universities and colleges are often categorized as either research or teaching institutions, again describing not the course of study but the environment in which courses of study are offered and the focus of those charged with engaging the student in study. And an inventory of offerings might be based on the mode of delivery of the educational experience, with some of the important divisions being residential, where the student lives at the place offering the course of study; commuter, with the student traveling to the place of study; online, with the student engaging the study via the internet or other electronic means; or hybrid, which could be a combination of any of these or other modes but which often means a combination of online and in-person study/learning experiences.

Post-secondary offerings have long been categorized by the disciplines of study or fields of practice (careers) served. Early universities educated the clergy; military institutions trained a country's future military leaders. The land grant universities cited above were created to support agriculture and the mechanical sciences, with the legislature understanding agriculture and engineering as pillars of the American economy.

Fields of practice can be institutional, such as the clergy, the military, civil service; they can be professional, such as medicine, law, engineering or architecture; and they can be specific to prevailing job opportunities. Career-training has often been strongly practical, with shorter duration and highly focused skills programs. Woodbury University, for example, one of the partners in the Carl Benz Academy, began in 1884 as a business college training young men and women with the skills to meet Los Angeles's growing need for secretaries, clerks and bookkeepers.

Today, post-secondary career training is offered through country-specific systems. In the US, community colleges (public) and trade or technical schools or career colleges (private, often for-profit) provide such training; European countries are engaged in an effort parallel to the Bologna Process called the Bruges-Copenhagen Process, to agree on common reference levels for vocational education and training ("UK Guide to the Bologna Process"). Australia meanwhile has developed the Australian Qualifications Framework, a national quality assurance program for education that covers post-secondary vocational offerings ("What's New").

Post-secondary professional education often develops a mutual dependency with the professional bodies that represent and recognize appropriately qualified practitioners. The profession depends on recognized education providers to replenish its ranks of practitioners, while the same education providers depend on the profession's recognition of the validity and quality of the education. These relationships can be formalized through professional accrediting bodies and processes. Examples include ABET (Accreditation Board for Engineering and Technology, Inc.), which accredits technical and engineering programs in the US and abroad; AACSB International (Association to Advance Collegiate Schools of Business), which accredits schools of business, and NAAB (National Architectural Accrediting Board), which accredits professional architecture programs in the US.

Another familiar framework for post-secondary education relies on established disciplines of study which are sometimes divided between theoretical and applied or performative, and often broadly associated with a specific science or art (and by extension, a field of practice). In addition to the careers and professions noted above, these areas of disciplinary study include the broader categories of the natural sciences, the social sciences, the humanities, and the fine arts.

A distinction is often made, though not always precisely, between a professional education and a liberal arts education. The latter provides its students familiarity with the arts and sciences disciplines cited in the previous paragraph, and depth and breadth in developing the ability to learn, synthesize ideas and information across categories, and communicate critical positions. The tension between valuing education for the intellectual development and lifelong skills and aptitudes it provides or for its career preparation characteristics and employability drives

much of the argument about the future of higher education, at least in the United States. A January 26, 2015 article by Dan Berrett in *The Chronicle for Higher Education* decries February 28, 1967, as “the day the purpose of college changed” from “learning for learning’s sake” to preparation for a job (Berrett, 2015). Berrett says that on that day the relatively new governor of California, Ronald Reagan, discussing how to address state budgetary shortfalls, claimed he would not harm the state’s highly regarded educational system while noting that “there are certain intellectual luxuries that perhaps we could do without.” Berrett goes on to trace a decades-long rise in the percentage of students identifying “being well off financially” as a primary motivation for going to college, coupled with a simultaneous decline in “developing a meaningful philosophy of life” as motivation, to a growing focus on individual economic power over other measures of a successful life.

But perhaps this is a false dichotomy, and perhaps we can consider the future of higher education not as belonging to one realm or the other, but valuing both as dimensions of opportunity. This position is outlined by Kevin Carey, the director of the Education Policy Program at the New America Foundation. In a BrightSite-Group video (“Kevin Carey – BrightSight Group,” 2014), Carey proposes that we think of the problem of higher education’s future as one of finding appropriate and sustainable relationships among, not the disciplines of study, not the level of study, not the provider’s prestige nor the professional versus liberal arts focus, but among these four dimensions: scale, distance, cost and quality. He relates them all to the promise of new technologies to make higher education accessible, affordable and attainable. Using these dimensions as determinants of form for higher education (post-secondary) offerings, we can ask to what extent a provider can scale their offerings, how they might mitigate the downside of distance by employing technology to provide a rich and meaningful learning experience through which the students can find academic success (wherever they may be sitting), how technology can be leveraged so that the costs of learning and providing learning experiences are manageable for the market the provider is serving, and to what extent the quality of the education is recognized where the student needs it to be recognized, whether that is globally or locally or, as is likely, both. It would seem that the Global Cloud University offers such a model.

With continued imperatives at the transnational level to agree on the qualifications conferred by of-a-kind educational programs (associate’s or bachelor’s or master’s degrees, for example), with transnational efforts to allow education to be a service covered under free trade agreements (“EUA Developments in the Transatlantic Trade and Investment Partnership (TTIP) talks”), and with technologies supporting education that are ubiquitous and affordable, the crafting of new multiple approaches to higher education offerings, such as those by Global Cloud

University, promise a stimulating future of economic and intellectual opportunity for a large part of the world's population.

3 The Drive toward Multinational Education

It is commonly assumed that “global and multinational universities are very new phenomena,” like the Global Cloud University (Van Rooijen, 2003, p. 3). However, international knowledge exchange has a long history. The various European renaissances brought together wisdom of many countries. In the sixteenth and seventeenth centuries, for instance, Britain imported historians from Italy, musicians from Germany, politicians from France, and painters from the Netherlands. If their scientists had not embraced the writings of the Polish Copernicus, they would never have advanced discoveries and applications that created the first industrial revolution. In a world of conspicuous display of power, knowledge was not only the tool for advancement but it also conferred a prestige that was recognized abroad.

Missionaries, whether religious or political, understood the power of transnational education and opened schools to inculcate their core beliefs and competencies in order to create new markets for their goods and ideas. So to believe that what is going on in the world is new misunderstands that the globe has always been flat more or less, but the reasons for connecting across vast differences, the modes of doing so, the challenges, and even the rewards are significantly different. This is what is new.

We should also recognize that international collegiate study has a long history, dating at least to the gathering of artists from across Europe and the United States at the various European academies in the nineteenth century and the establishment of the American School of Architecture in Rome 1894, with Columbia University and the University of Pennsylvania serving as partners. Quite a number of US colleges began developing campuses in Europe, starting in the 1960s and 70s, but these were primarily for US students on short-term visits, especially those who had matriculated at the institution hosting the campus, and focused on courses, not degrees.

The relatively new phenomenon of the international branch campus (IBC), however, focuses on degree offerings. These entities are typically owned and operated by a foreign education provider (FEP) and involve “some face-to-face teaching; and provide[] access to an entire academic program that leads to a credential awarded by the foreign education provider” (“Branch Campus Listing”). The oldest IBC appears to be Johns Hopkins’ graduate programs in international relations, offered in Italy in the 1950s (Lane, 2011, p.6). Before then, but perhaps only 20

years earlier, American universities had offered courses to US military service personnel stationed abroad. In the 1970s, however, IBCs began to spread quickly. They have proliferated from the 1980s to the present day, facilitated by the ease of global communication and travel, the rise of transnational finance, and the growth of the knowledge-based economic sector.

In January 2015, the Cross-Border Education Research Team (C-BERT) reported that institutions from 31 countries operated 218 IBCs, a growth of 35 campuses since 2011, with 23 more either planned or in development. The largest provider was the US (82), followed by the UK (32), Australia (17) and France (16). Sixty-six countries now host these campuses, the largest numbers being housed in the United Arab Emirates (33), China (30), Singapore (13) and Qatar (11).

The large number for the United Arab Emirates is not surprising since it is well known for having initiated seven ambitious “educational hubs.” Educational hubs are “intended to attract foreign investment, retain local students, build a regional reputation by providing access to high-quality education and training for both international and domestic student, and create a knowledge-based economy” (“Educational Hubs”). Operating in a manner similar to the so-called “innovation centers” in the United States, UAE’s educational hubs include Dubai Knowledge Village/Dubai International Academic City, Dubai International Financial City, Dubai Health Care City, and Dubai Silicon Oasis (“Educational Hubs”).

Of course, the IBC model has not always succeeded in the long run. It is expensive and can be difficult to manage. Since 1999, twenty-eight IBCs have closed their doors. Among those are two of the first IBCs. In 2004, University of La Verne, which started its program in Athens in 1975, closed the doors on 3-days notice before the fall semester began after accruing a \$3 million debt. Boston University, which had been one of the major providers of military education since 1964, kept its Brussels campus after it failed to receive a renewal of its military contract in 1993. After celebrating 40 years of operation in 2012, it closed its doors in 2014.

The IBC is just one of a multitude of forms that transnational education takes. There are many different definitions of transnational education. In 2002, UNESCO and the Council of Europe adopted this one: “all types of higher education study programs, or sets of courses of study, or educational services (including those of distance education) in which the learners are located in a country different from the one where the awarding institution is based” (Harvey).

The World Trade Organization in its “General Agreement on Trade in Services” identifies four educational cross-border exchanges, based on modality, location, supplier and consumer:

- Travel for delivery — international students matriculate or study at a foreign location;
- Virtual delivery (e.g. on-line) — the foreign university has no physical presence in the country of the consumer;
- Third-party delivery — programs are “franchised” for a foreign university and delivered by a local provider;
- Physical delivery — the foreign university is physically present (Harvey).

These characteristics are sometimes parsed in ways that reveal the great complexity of forms and formats currently in place for higher education. For instance, “travel for delivery” can include, besides matriculation at a foreign institution, short-term travel and academic and student exchanges. “Third-party” and “physical delivery” can include so-called “twinning” programs “based on credit transfer agreement between collaborating institutions where courses taken at an institution in one country are recognized and easily transferred to the collaborating institution in another;” “dual degree programs,” in which students study at two or more higher education institutions and receive a separate degree certificate from each; and “joint degree programs” in which students study at two or more higher education institutions and receive a single degree which is conferred by both institutions (Choudaha, 2011; Clark, 2012).

The definitions are messy, but that confusion arises in part from the rapid experimentation in business models within this growing market for transnational education. According to UNESCO, in 2009 the number of internationally mobile students studying abroad was 3.5 million, up 75% from 2000 (Coughlan, 2011). Recruiting international students has become a big business worldwide. In 2014, the United States had 886,052 international students, which was 4.2% of the total number of US students. This number represents a growth of 57% over the last ten years, compared to a much smaller 23% growth for total US students (“Fast”). And while in 2013-14 the United States was the top destination, pulling about 18% of international students into its institutions, the UK, France, Australia and Germany also received large proportions (“Global Flow of Tertiary-Level Students,” 2014).

China attracted 2% of international students and has plans to bring more international students to its universities (Maslen, 2012). However, China has a shortage of college-educated adults in China and capacity issues that impede educating more at the current moment. And while China is expanding higher education institutions, it struggles to keep pace with global quality standards (Coughlan, 2011). As a result, China seeks to place 500,000 students abroad each year. In 2013, over 440,000 Chinese studied abroad. Approximately 78% of all Chinese parents surveyed said they would prefer to send their children to study overseas even if the

total cost of tuition and living was over \$40,000 per year (“Chinese demand for overseas education remains strong despite worries about jobs,” 2013).

India, which runs a handful of IBCs, has a growing number of people seeking education abroad, as well as foreign universities educating students inside the country. In 2000, the Association of Indian Universities (AIU) had reported the number of foreign education providers operating in India as 144 (Chhopia, 2013). By 2010, AIU reported the number had grown to 631 foreign education providers. The forms these took, however, are instructive. At least 440 appeared to be engaged in short-term study for their own students where India was the classroom, while another “60 had programmatic collaboration with local institutions, [and] 49 were operating under twinning arrangements” (Dhar, 2012).

Aggregation of data, as in the case of India’s foreign education providers, can sometimes occlude the real picture but often it reveals something more startling. Take the UK. According to the UK’s Higher Education Statistics Agency, in 2011 the UK had 428,225 international students in UK universities, which was a large percentage, about 16% of students in the UK. On the other hand, the UK enrolled 503,795 students in its overseas programs. Put together, the UK had 932,020 international students or 30% of the whole UK college population. Those studying outside the UK did so in the following ways: 22% in online courses; 58% in partner programs; and only 2% at branch campuses. Roughly 75% of these were undergraduates (Clark, 2012). By 2014, nearly half of those studying for a UK degree “were doing so outside the country” (Kono, 2014). The implications of these numerical breakdowns are rather staggering.

Rahul Choudaha of World Education Services has created a terminology that distinguishes between students staying in their home country to pursue a foreign degree, which he calls “Glocal,” from those who travel out of country for their degree, which he calls “Global” (Choudaha, 2013). According to Choudaha, the number of glocal and global students are split 50-50. “Both ‘glocal’ and ‘global’ segments will grow in the medium term, but the ‘glocal’ one is expected to grow at a faster pace due to an insatiable appetite for foreign education, an expanding middle-class in emerging economies, and technological innovation” (Choudaha, 2013). But here is the rub: “Glocal” students seem more likely to have the lowest academic achievements, a characteristic that also makes them most likely to fail in a virtual format. They are also in many cases place-bound because of finance, which makes it difficult for them to pay for face-to-face education from a reputable vendor.

We are seeing a world that will shortly be transformed by international education, forcing us to recognize the various ways that international information exchange has already shaped the modern university and educated classes. The

case of the educational hubs developed by the United Arab Emirates offers a clear understanding about what some countries hope to gain in global education—creating a doorway into knowledge, skill, method, and mindset that cannot always be created from the tools found in one’s own country. Massachusetts Institute of Technology provides another example since as much as 40% of its graduate students come from abroad (Irvin, 2008). In choosing its students, MIT’s goal goes beyond polishing its escutcheon of excellence in front of the world. MIT seeks to infiltrate the world and draw new ideas from it. Only then can it maintain its place as a premiere institution in the global context.

The designers of Georgia Tech’s international programs put it well:

Our vision is to “define the technological research university of the 21st century and educate the leaders of a technologically driven world.” To achieve our vision, we believe our institution has a leadership responsibility to address global issues where we can make a difference (Irvin, 2008).

The challenge that the rise of a global, knowledge-based economy has on forms of education is enormous. It offers an opportunity for colleges to satisfy an international need to compete and to innovate (Mok, 2013). But it also creates a strain in the competitive field, where any institution or educational provider must demonstrate on the world stage that it has the history and tradition to make it a player. In this next phase, it must also forge a new history and tradition if it is to sustain its position in the face of change. In the case of Georgia Tech, because “reputation and brand come from more than 100 years in Atlanta” (Irvin, 2008), maintaining educational pre-eminence in a global marketplace will require “leveraging our strengths in such areas as energy, the environment, security, public policy, and health” on the international stage.

Georgia Tech’s ambitions are clear, but its story also illustrates some of the further strains in the model. Georgia Tech is a public university and derives part of the support for its operations in Atlanta from the state government. Those funds have been shrinking. The financial situation of many state-supported universities in the United States required an infusion of international students, who must pay more than domestic students. Even private institutions receive more revenue from international students who must demonstrate that they have the assets to pay and usually require less institutional aid. Educators believed that setting up a campus abroad, where the costs of operation could be lower and the possibility of revenue return high, would enlarge profit margins to underwrite the operations of the home campus. It was thought that these added revenues would not only sustain the university but help it advance and increase its prestige. Such a formula has been illu-

sory. After over 40 years, because of the costs and risks involved, branch campuses “account for just a small portion of global activities” (Kono, 2014), although the numbers of “global” and “glocal” international students continue to rise.

Much of this change is still invisible. The Georgia Tech story should heighten our awareness that the new transnational university challenges our belief that education is “a public good for which the nation state has the exclusive responsibility to safeguard quality standards” (Van Rooijen, 2003, p. 3). The “nation state” should prosper from the institutions inside its borders. By redefining its mission into a global one, is Georgia Tech helping its region, state or country? Is it healthy that nearly half of the UK’s students are not UK residents? Should universities that receive governmental support because they serve the public good continue to do so as they lose their focus on growing local, regional, and national human or economic resources? In the frenzy of growth, the consequences of transnational education have hardly been considered by college presidents or policy-makers.

There is also considerable strain placed on host countries by foreign educational institutions, as the case of Georgia Tech also illuminates. Georgia Tech was planning to open a campus in Hyderabad and Visakhapatnam by the year 2010 and began announcing that plan very loudly as early as 2008. In 2011, however, Georgia Tech pulled out after stating that an appropriate business model had been difficult to devise and implement. An online model was indicated to be a more efficient solution (Mishra, 2013). A foreign education provider (FEP) wishing to operate in India cannot offer its own degree, but must join with a local education provider; and if a foreign branch campus did offer its own degree, graduates who wished to pursue a graduate degree at an Indian institution or enter government service would need to prove their degree was equivalent to an Indian one (Mishra, 2013). Under proposed rules that could allow an FEP to offer its own degree in India, the FEP would need to prove it was among the top 400 institutions in the world and demonstrate that its courses in India were comparable to those at its main campus. Moreover, an FEP cannot transfer any money out of India. The obstacles to an FEP in India are clearly formidable. For that reason, C-BERT lists no branch campuses in India, although India has eight of its own in other countries.

While for institutions of higher education a global presence may be important and while there are some challenges to national educational systems that have yet to be fully understood, the intrusion of a foreign entity in the education system of another country is fraught with the concerns outlined above. It raises issues and questions involving:

1. cultural displacement and disruption, e.g. if India needs to educate more of its population and foreign entities can help, how will that education disrupt the current social and cultural order?
2. impact on local higher education systems, e.g. will a challenge from outside FEPs create a strain on internal programs, not just by siphoning off top-level students but also calling current educational methods and materials into question?
3. economic impact, e.g. how will a foreign company use local resources and generate revenue for itself that should be used and generated locally?
4. quality assurance, e.g. how will consumers know that the quality meets not just the local standard but the standard of the foreign country or, better yet, some international standard, such as those set by the Bologna Accord?

It is clear that the explosion of this new international knowledge exchange is calling into question all the normal circuits of cultural, social, educational, and economic development of the last century. It is also clear that this change arises in part from the growing understanding and reality of the interdependence of the world's natural, cultural, and economic ecologies. The Global Cloud University has emerged as a possible successful disrupter in this environment.

How the international system will eventually work is not clear, however. And there exists space and opportunity for entrepreneurship of the best and worst kind until a disruptive model emerges or evolves to successfully match the changed conditions of information exchange with the changed role of higher education in a global context. Because this is shifting, new models like the Global Cloud University, which are agile, personalized, and accessible, have the best chance of enduring. Technology, which we describe later, will help drive change and select the winners.

4 Business and Industry as Educators

The entrance of multinational corporations into the business of tertiary education worldwide is fairly recent, although there is a longer history of proprietary schools offering education. These events recognize not only that being educated promotes business but also that providing an education offers a business opportunity.

From the beginning, schools at every level were started to aid cultural, social and economic production (and in some cases reproduction).

A university, in fact, does many things. Among them it creates economic prosperity for its region by employing and graduating individuals who drive that pros-

perity. As Sir David Watson writes, in the six and half centuries since the founding of his alma mater, Clare College, Cambridge, “universities have always changed in response to perceived social and economic needs, and they have always remained the same.” By that he means that while maintaining an “independent, deeply ethical side,” colleges have always had “a worldly, ‘instrumental’ side” (Watson 1). Even the notion of “liberal arts,” which the United States historically embraced as the “independent, deeply ethical side” of education, requires that education furnish the graduate means of economic prosperity, so that his or her thought remains independent and unconstrained by financial exigency. It would seem then that the production of graduates and the production of economic prosperity travel along the same route.

Given the greater economic competition, especially at the global level, it is no wonder that businesses would not only invest in education but become educators themselves.

First, if the University is a training ground, a broker, a middleman for industry, why should the young apprentice bother to pay the University for their training? Is it not more effective for the employee to be guided and educated by their prospective employer? Why bother with a University when one could be tutored to fit the employer’s needs, training say, physicists or biochemists at the headquarters of Dow Chemicals, Shell Oil or with defence contractors? (Plessner, 2014).

That is exactly what happened in the early 20th century in the United States. Industry began to feel that it could better supply its own needs than could colleges and universities working on their own. Thus was born the “Corporate College”—a forerunner of the new corporate educational business, but also quite unlike it in essential ways.

The Corporate College is an educational institution owned and operated by a business to create the workforce it needs. The automobile industry in the United States led the way. It had perfected a system of vertical integration that brought under the company’s ownership and control all necessary elements for manufacture—the entire supply chain. The human resource becomes just another element in that chain within this model.

In 1926, General Motors (GMC) acquired The School of Automobile Trades, which had been founded in 1919 to supply workers to the auto industry. It became the first attempt at using education to create vertical integration. Called by its graduates the “West Point of Industry,” what became GM Institute (GMI) taught manufacturing and automotive courses and required hands-on work in the industry as part of the program. As such, it became one of the first examples of co-operative

education. GMI began offering a degree in engineering in 1962 and received accreditation in 1962. General Motors and the institute separated in 1982 and it is now an independent college called Kettering University. The rise and fall of the GMI as a corporate college is not unique. Chrysler also ran its own institute, offering masters of automotive engineering in 1931. It stopped offering those degrees in 1967.

What is now DeVry University was founded in 1931 by the inventor of the motion picture projector, who designed the school to train people to repair his projectors, a kind of vertical integration of its own kind. Later DeVry expanded to radio, television and all other types of electronic media equipment. In 1967, Bell & Howell acquired the school and two years later it was accredited to offer bachelor degrees. Changes in the industry led to its sale in 1987 to the Keller Graduate School of Management. De-acquisition and re-purposing of these colleges has been a common feature of the history of these types of corporate educational institutions.

The 1980s marked a significant turning point for many corporate colleges. They had expanded significantly up until then but none appeared between 1990 and 2000.

In 2000 a total of twenty-six institutions had been identified as corporate colleges [in the United States]. Their existence was found to be tenuous. A number of these institutions, such as the Wang Institute of Graduate Studies, closed after only a few years in operation: it was created in 1979 and ceased operation in 1987. ("Corporate Colleges," p.1).

This quick cessation is particularly intriguing in light of a report written in 1987 by the director of personnel and planning at the University of Wisconsin-Superior for The Association for the Study of Higher Education that posed the question, "Is Corporate Education a Threat to Higher Education?" (Nash, 1987, p.iii). Ten years later, in 1997, Walter Massey, then president of Morehouse College, speculated that because of rapidly changing technologies, changing management principles and the resulting need for ongoing education, industry could become "a direct competitor" of the university system (Massey, 2001, p.76). In part, Massey was persuaded by the example of Motorola University, which had begun booming just as others declined.

Motorola University (MU) expanded rapidly when it developed its Six Sigma² system in 1986. As this system achieved widespread use as a barometer of perfor-

2 Six sigma is a set of tools and techniques for process management in order to eliminate defects and enhance quality.

mance assessment and continuous improvement, Motorola became a center for training not only its own employees, but those of other industries, Jack Welch made it mandatory at General Electric as well. "Motorola expanded its training operations with the opening of the Galvin Centre for Continuing Education (Schaumburg, Illinois) in 1986 and the Singapore Training Design Centre in 1989" ("Observatory on Borderless Higher Education," p.1). Motorola began to cooperate with universities, such as Kent State and the Kellogg School of Management, to create degrees around its training. In 1993, MU had "partnerships with 21 Chinese higher education institutions (including well-known Beijing University, Tsinghua University, and Nankai University)" and served as the Chinese partner for University of Buffalo's Executive MBA ("Observatory on Borderless Higher Education," p.2). In 2011, however, MU reversed course, stopped its public offerings, and focused instead on its own internal in-house training.

In part what was true for Motorola had been true for the others--industry moved faster than education, even when provided by industry itself. F. James McDonald was president of GMC and a graduate of its corporate college. He oversaw the corporation during the period when the world of business was feeling the upheaval of significant changes (1981-87) in its models of production and sales and in the field of competition, especially from Asia. At International Machine Tool Show in Chicago in September 1986, McDonald talked of the hope for new "technologies that can help us achieve increased production, lower costs, and higher quality" (Hidlay, 1986). McDonald, however, was unprepared for the future because he adhered to the philosophy he had learned: do more, do better, do cheaper. Do different was not in his mindset. A month after his speech, he announced that GMC would close down 11 plants and eliminate 29,000 jobs. As G.M.'s chairman Roger B. Smith noted, "automation will allow the company only to make scrap faster unless it is combined with the right training programs for workers and reforms in labor practices" (Feder, 1986). The GM Institute had failed to meet the needs of a changing world. One way out, according to Smith, was "the right training".

In the same year as his speech about "more, better, cheaper," McDonald did manage to put his finger on the problem facing the industry and connected it correctly with the difficult fit between the desired human resource and company cultures:

As much as we might want to encourage innovation and entrepreneurship, I think we have to admit that not all companies would welcome such attitudes. Also, if we look at the companies where intrapreneurship³ does work, we find that they already have

3 Management within a company that promotes innovation in processes, products and marketing.

a tradition of encouraging employees to be independent and innovative by working in small groups. (McDonald, 1986, p.36).

He ends by paraphrasing a Samsung executive who linked Peter Drucker's philosophy with a Chinese proverb: "If you want 100 years of prosperity, grow people" (McDonald, 1986, p.40). It was precisely the failure to grow the kind of people they needed that caused the failure of both the corporate college and those industries that drew workers from them.

The corporate college declined not simply because 1980-2000 saw a need for corporate downsizing and consolidation. It declined also because the nature of competition was adjusting to a world that was flatter and prone to disruptions from multiple sources (See Friedman, 2005) and, as McDonald indicated, required a different worker and a different mentality.

Part of the so-called e-education bubble and wider dotcom enthusiasm, the boom in corporate universities in the 1990s prompted speculation that this appropriation of higher education nomenclature might spark some form of competition between corporate and conventional universities. As it turned out, the vast majority of corporate universities have remained exclusively focused on the development of in-house staff. ("Observatory on Borderless Higher Education," 2003, p.1)⁴.

Business could not renew and adapt their competencies to meet shifts in the external environment fast enough through colleges that were wed to past models and so unable to provide the needed agility. Even the best methodology, like Six Sigma, appears to be a kludge when looked at from a long historical standpoint. Everything needs iteration and improvement to stay relevant in changing contexts—even the famed Six Sigma system.

Moreover, the nature of the workforce was beginning to change: "Workers no longer sit in an office next to their managers where they can be coached and trained: they now work everywhere and anywhere (i.e. the "flattening of the earth"). HR managers no longer speak of learning and development, they now worry about "talent management" (Bersin, 2007).

4 As the corporate college has failed, the corporate university, which is simply a re-branding of in-service training, has flourished, with over 2,000 companies and corporations currently participating in the US. One of the most notorious is Hamburger University, established in 1961 by McDonald's Corporation, which has about 5,000 students/employees a year learning about restaurant management on its 80-acre campus and purports to have graduated over 80,000.

Finally, the corporate college failed because of the challenge of accreditation, the imprimatur of quality assurance among institutions of learning. Accreditation means loss of direct control by the industry that wants to direct it. The corporate college fails because like colleges and all repositories of learning—whether knowledge or method—it was tempted to hoard the intellectual capital that it needed to spend and invest and so was unable to produce new capital that would keep it agile. At the same time, corporate colleges could not tolerate the sometimes messy work of knowledge-making, especially when it is allowed to follow the inquiries of an unruly but often highly creative faculty.

And yet, what did arise with some staying power were the “partnerships with conventional universities [that] involve intriguing role-reversals, and arguably amount to a healthy knowledge partnership between company and university” (“Observatory on Borderless Higher Education,” 2003, p.2). We can see this model in Sotheby’s Institute, which has campuses in London, New York, Los Angeles, and China and gives degrees in competencies that are at the core of Sotheby’s organization—connoisseurship, art law and art business. It does so through partnerships with the University of Manchester in the UK, which shares Sotheby’s view of the importance of material culture even though the two institutions come at the subject from very different perspectives and with very different goals. It also partners with the Drucker School of Management in Los Angeles and Tsinghua University in China.

We can find a similar but more interesting case in the Carl Benz Academy (CBA), which is sponsored by Mercedes-Benz, but which is delivered by a global partnership involving three institutions: Berlin University for Professional Studies (Germany), Peking University (China), and Woodbury University (US). CBA is not just another attempt to sustain business through the reproduction of a company’s successful proprietary methods. Through its global partnerships, CBA has the world serve as a classroom and allows learning to be tested in multiple global contexts. Moreover, CBA’s curriculum promotes a dynamic view of organizations, which encompasses the relationship between changing external environments and any company’s cultural core. In other words, CBA seeks to harness the capacity of higher education to shape a future rather than simply fill an urgent time-sensitive contemporary need. This promising approach to corporate education has evolved into the Global Cloud University and offers an avenue that allows organizations to thrive for the 100 years referenced in the Chinese proverb above.

For over 650 years in Europe and for nearly 300 in the United States, colleges and universities have created economically productive members of society. Corporate education rose to try accelerate and canalize the production of a labor force to help drive the economy forward. This approach has not yet achieved the success

that the standard form of higher education has achieved. A partnership model such as the one exemplified by CBA provides a compelling route forward by allowing us to combine the best of both worlds to build the workforce of tomorrow. The first question to ask is what the typical worker of the future will look like given the knowledge-rich, tech-enhanced, and rapidly changing world we all inhabit.

Several things become clear from the corporate college experiences: that workers will be competent and innovative, will need to be able to create knowledge and not just receive it, will recognize that what counts as useful knowledge for a particular sphere or activity is often unpredictable and messy, will likely have a better sense than any mentor of what is relevant for the future, and, perhaps most crucially, will be sitting almost anywhere in the world.

5 The Internet Toolbox and other Virtual Platforms

The search for a new business model able to realize the objectives of higher education in today's world has been given new urgency by the rapid development of new communication technologies. The internet and related phenomena such as social media, mobile platforms and virtual reality all promise to have as major an impact on education as changing demographics, internationalization, and the growing presence of for-profit or industry providers. Every aspect of life, including education, has been affected by the momentous shift in recent history away from analog reality and towards computerized technologies based on digital binary codes. The cultural importance of this change is on par with the discovery of linear perspective in Medieval Florence. As first articulated by Leon Battista Alberti in his treatise *De Pictura* in 1435, linear perspective facilitated the illusion of pictorial depth and sparked the representational and conceptual experimentation of the Renaissance.

Digital technology provides a similar impetus to examine the relationship between the world around us and the world we imagine or conceptualize through representation. Just as the Renaissance ushered in the era of the Enlightenment, new digital technologies are reformatting the ways we think about the world and share what we learn with others. The enormous quantities of readily accessible information, for example, already make it somewhat pointless for individual learners to focus on the rote learning of facts. Education can also be viewed as a social endeavor that allows people to glean skills and knowledge from the collective past that may be helpful in facing a contingent future. Informational content has journeyed from teacher to student in analog form via textbooks, blackboards, or lecture notes. The costs to gathering all this accumulated wisdom, however, cannot exceed

the rewards promised to the individual or to society without being questioned. Debates in the United States over rising tuition costs, lack of access, and student debt levels that now exceed \$1 trillion dollars illustrate a growing skepticism around the traditional value proposition associated with the nation's colleges and universities.

Online instruction has inched up at least a percentage point each year such that it now comprises at least 32% of all undergraduate instruction each year in the United States (Allen & Seaman, 2013). Ivy-covered buildings are slowly but steadily becoming outmoded as a result of the greater cost efficiencies associated with online learning. There is little incentive for administrators based on balance sheets alone to maintain the higher-cost model apart from the fact that considerable investments have already been made in the physical infrastructure. Students, for their part, are attracted to online instruction by its flexibility, convenience, and low cost. Many courses, such as a number offered by MIT, are even offered completely free online in the belief that society benefits as a whole from such open access to knowledge.

It was the introduction of Massive Online Open Courses, otherwise known as MOOCs, that truly upended the standard analog approach to higher education. These types of classes gained mainstream recognition in 2012 through the use of digital technologies to enroll, teach, and even to grade tens of thousands of students at a time, thereby sweeping aside the physical limitations of classrooms and the boundaries they had been placing on unmediated instruction. A number of companies sprang up seemingly overnight ready to capitalize on the growing acceptance of the new model both in search of profit and as a way to provide more access to education as a social good. Udacity and Coursera are two industry leaders that were organized along a for-profit model while EdX pursued a nonprofit route. Within a short time, The American Council for Education (ACE) had begun to approve many of these classes for credit and philanthropy organizations like the Bill & Melinda Gates Foundation began studying their potential to improve educational access worldwide (Fain, 2012).

The full-scale emergence of MOOCs in 2012 laid bare all the deficiencies of the traditional business model in meeting the educational needs of a wired generation and society. They challenged the status quo on all four of the primary elements of its business plan including the principal value proposition, its use of organizational resources, the efficiency of its operational processes, and the kind of profit formula to be applied (Christiansen et al., 2011, p. 32). A growing list of firms openly stated their intent to disrupt the traditional business model of higher education. The per-credit tuition pricing structure of the industry came to be characterized as bubble that was artificially supported by hidden discounting, loan subsidies, and rate increases that greatly exceeded inflation. The low-pricing and enormous scale

of the MOOC format in contrast brought to the fore all three elements contained in the Spelling report—access, affordability, and accountability.

It soon became apparent that the transformation of online education into MOOCs had raised the real possibility that digital technologies could raise the productivity of higher education in the same manner it had already achieved in so many other industries. In addition to the introduction of new online platforms like MOOCs, digital technologies allow for faster collection and analysis of data relating to student learning outcomes and institutional efficiency. Business intelligence derived from “big data” adds to the competitive advantages of online education as successful innovations are quickly identified and then scaled up to maximum capacity. Technological changes of this kind will serve to hasten those trajectories previously discussed involving the internationalization of higher education and the growing prevalence of business or industry-led innovation.

Higher education has entered a period of flux as competing business models enter the fray each responsible to a different set of stakeholders. A dizzying array of state and federal regulators, accrediting bodies, parents and families, shareholders, and the general public all have a stake in the outcome. Successful navigation through this period of experimentation leads us back to a consideration of the core purpose of education itself. We simply need to ground ourselves again with an understanding of the social motivation of education to see how it might function more successfully in an increasingly technological world. No matter what delivery mechanism is used in a class, for example, instructors still have to ask whether students are improving their core competencies or simply absorbing content that could have been found elsewhere. Progressive education is only realized when individual learners are able to gain those transformative insights capable of yielding the thoughts and perspectives needed for social innovation to occur.

Any new business model for higher education will certainly collapse under its own weight if it fails to consider knowledge as a dynamic construct intimately tied to non-cognitive domains like emotion or memory as well as the vagaries of space or time. Meaning indeed crystallizes in an educational setting only when it achieves a resonance and relevance that extend far beyond the cognitive domain. Students in turn selectively respond to the meanings they encounter based on the degree to which they might resonate with their life experience. Relevance is a function of changing contexts and future applications that may or may not be revealed in the initial lesson. Varying the educational process through technology or some other means will allow some set of affordances to prevail over others but we should never lose sight of the magic of transformation that ideally accompanies it.

Education in the end is a human endeavor that gains surplus value through the process of communication as much as it does through the content exchanged. We

need to guard against what Krippendorff describes is an eclipse of open-ended conversation and traditional discursive forms by the incessant calculations and objectivist allure of cybernetic “computation” (2009). He observes that:

[t]oday, we are witnessing the massive translation of discursive practices into efficient computational mechanisms: delegating repetitive work to robotic devices, searching for relevant texts on the internet with search engines, scheduling airplane traffic, letting computers buy and sell stocks, using online accounting for the essential variables of social organizations, and automating whole businesses. (2009, p. 145).

The application of digital technology to the teaching enterprise risks amplifying the normalizing effect of standardized assessment of outcomes. In the face of computation’s metaphorical grip on modern thought, Krippendorff (2009) calls for a self-conscious return to open conversation as the key generator of human authenticity. The digital revolution, in this view, should be circumscribed to protect those areas like the classroom where individual customization, creative transformation and dialogic engagement can occur in a more free-form fashion. It is a subtle shift of perspective from a teacher’s view of the classroom to a learner’s but one that could be responsible for the success or failure of tomorrow’s educational systems.

As the site of the first self-styled virtual world MOOC in 2007, students at Woodbury University sought to initiate an open university concept using the consumer technology known as Second Life. Hundreds of other educational institutions had created dedicated classrooms or wholesale replicas of their real-world campuses. The approach taken by Woodbury emphasized instead the interactive possibilities of virtual avatars as the *primum materium* of a radically new educational approach. It sought to combine traditional features of social presence from the classroom with features of distance education and massive scale later associated with the MOOC phenomenon. Although the site was eventually razed by the platform provider, this experiment in virtual education gained notoriety as a harbinger of future events (Bakioğlu, 2012). In so doing, it demonstrated the possibilities and pitfalls of such specialized technologies within the educational arena. This experiment brought out the tension between “closed platforms” of learning and “open platforms” of learning. A “closed platform” produces a single path for learning, regardless of the learner, and thus reduces the possibility of discovery and innovation in favor of controlling the learning experience. In an “open platform” the pedagogy adapts to follow the learner and allows for greater possibilities of discovery and innovation and thus has a greater potential for disrupting or breaking down traditional learning systems. The former is effective for

business interests because distribution of the same good, regardless of clients' or customers' needs, cuts down on overheads. The latter model, however, in serving the individual learners' interests is much harder to manage and reduce to systems that are either profitable or sustainable.

The overall education sector has adapted to the introduction of new communication technologies before but they were never accompanied by the perfect storm of forces like those detailed by contributors to this volume of essays. Successful institutions in the future will need to figure out how to integrate technology into new and innovative business structures that can still educate the multivariate aspects of our personhood. As technologies of digital representation spread in education and in culture as a whole, we should not lose sight of the somewhat unstructured sense of discovery that powers the quest for knowledge. Our educational experiments, whether online, in tablets, or in virtual form, increasingly take place in a global technological landscape that is itself fast becoming the primary object of inquiry.

6 Conclusion: The Quest of a new Business Model

There is a growing need for a new, effective educational business model that responds to the rising number of educational consumers worldwide, to their diversity, and to the rapidly changing field of economic competition that links the local to the global. We may not know what that specific business model will look like, but we know what it will need to accomplish, some of the assets it can bring to the task, and many of the obstacles it will face.

The new model will need to provide learning that is affordable to the large number of consumers and accessible to them regardless of physical, social or cultural placement. But that will not be enough. In order for a new model to create demand by both industry and potential students, it will need to make students work-ready and change-ready. To achieve this latter goal, the educational model will need to create in students habits of inquiry, collaboration and creativity. It will need to include talent development, as well as knowledge acquisition. Knowledge acquisition is relatively inexpensive and efficient to provide while talent development is more expensive and inefficient because it relies on learner-to-learner interactions and in learner-to-teacher interactions that stress the learner's individual needs. A new model will need to find ways to use savings in one area to offset expense in the other.

Technologies that produce and use deep data will be important in making students ready for work and also preparing them individually. Big data can help understand the trends for what is the most useful learning in general and can also be

used to shape an individual learning path based on each student's needs. Also useful are the technologies that allow face-to-face, real-time distance communication. However, as we have also seen, some learning on the ground and contextualized in a student's immediate experiences will be necessary to achieve the most powerful and sustained results.

Another reality, which was observed in the trends of UK enrollments, is that the majority of students will either be local or glocal, consuming education at home from either a local or global vendor. This means that some alignment of global and local education will be increasingly necessary and even urgent. With alignment, knowledge and skill will be more generally portable and education will become a kind of universal currency.

Several consequences are likely as a result of the drive towards coherence and portability, since the development of accrediting standards will produce common outcomes. By producing those common standards, learning will increasingly be viewed as a commodity so that affordability (cost) and accessibility (convenience) will continue to dominate discussions of business models and disruptive strategies will focus on these. However, improved impact and value added offer another competitive strategy. A new business model that can produce these results while finding a way to achieve lower cost and greater access could dominate the educational marketplace.

Regardless of the model, when students worldwide begin to choose education freely from international vendors, we can already gauge the areas of resistance: national entities will worry that the mobility of educated people will wreak havoc on their human resources and competitive edge. They will see in international education a greater displacement and disruption of social and cultural organization than they find in other forms of international commerce. Finally they will see disruption of their own educational systems that either will not be able to compete or will be changed for the purposes of competition.

Currently world trade agreements that deal with education cover these areas only imperfectly. That is likely to change, because not just individuals and global businesses will be winners and losers in this new world of education, but so will nations. A new business model, if it is to be global, will need to be built in a way that works with current international social, cultural, political and economic realities and is alive to the possible future ones.

The idea of the Global Cloud University is well positioned because it can be a hybrid of the local and global, of technological efficiency and individualized efficacy, derived both from technology and from multivalent interpersonal interactions. How it both uses the assets and skirts the obstacles that the new business models for education encompass will determine its success. Simply as a concept,

the Cloud University clarifies a future that is located in the historical trends and the current position of education in our rapidly changing world.

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