A New Game in Town: Competitive Higher Education

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November 2000

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Competition

"Competition" in higher education has traditionally had rather genteel connotations. We compete with other similar instititutions on the athletic field, and for faculty, students, donors and grants. While some of these competitions can be longstanding and quite passionate (Notre Dame and USC in football, for example), they are not designed to force fundamental changes in the institutions involved. Indeed, much of the structure of higher education is designed to prevent these types of ordinary competition from forcing any significant structural changes. However, the sheltered status of institutions of higher education is changing. New types of for-profit and non-profit organizations are beginning to provide competition in targeted segments of higher education. I will argue below that this competition, although rather minimal at the moment, will be ultimately more pernicious from the standpoint of traditional higher education than generally understood. In addition, the hitherto rather slow evolution of this competition will be speeded up immensely by the arrival of internet mediated distance learning (DL). Internet mediated distance learning will enable these new competitors to access easily many of the traditional constituencies of higher education. Equally disruptive, it will allow the institutions of higher education to access each others constituencies in new ways, leading to new kinds of competition among the traditional institutions. Intense competition as it is known on the broader economic scene is coming to higher education.

It is important to recognize that competition can produce results that are both good

and bad, both desirable and undesirable. Increased competition will provide more options for students, and students will respond by maximizing benefits to themselves as individuals. The sum of these individual decisions will not always lead to global changes that are positive. Simply saying that certain consequences of competition are negative will not stop them from occurring, however. Many of these negative consequences can be mitigated by appropriate responses by higher education, but the face of higher education ultimately will be altered by this new competition in multiple ways.

Most of what is discussed here will have applications broadly across the many segments of higher education. The impact of the new competition will not be uniform across the diverse face of traditional higher education, however. Many of the new competitive forces are aimed initially at students of the type currently served primarily by community colleges and colleges and universities that are not generally classified as "prestigious". For those institutions, the challenges will be immediate and serious, but relatively direct and obvious. For the more prestigious colleges and universities, on the other hand, the impacts will not be obvious so rapidly, but are likely to be more subtle, more complicated , and in the end, perhaps more revolutionary.

I will focus on the impact of this new competition on a very small but highly influential component of higher education, the research university. During most of the 20th century, the face of higher education was influenced in a major way by practices and values of the research universities. Faculty reward structures, disciplinary frameworks, and belief in the value of research spread from the research universities into universities and colleges of all types. This spread was perhaps inevitable, since the research universities

produce almost all of the future faculty in almost all of the components of higher education. It is contended by many that this group of research universities will be relatively immune to the new competitive forces because of its prestige and great success in carrying out its multiple missions. I will argue, to the contrary, that research universities have perhaps the most complex challenges to face in this new environment.

Institutions of higher education collectively value highly their stability and their ability to survive for long periods of time without revolutionary change. The value structure that has evolved for research universities is one that creates very high barriers to entry for new players, and numerous barriers to rapid change. These barriers are primarily related to cost, but there are other types of barriers as well. Paradoxically, many of the structures and practices that serve to provide stability in the current competitive climate will be those that put the research universities at greatest risk in the coming competitive era.

Because of this critical paradox, it is important to begin by reviewing some of the organization and structure of research universities and how those aspects provide stability. I will follow this with a discussion of some of the "external" competitive forces now facing traditional higher education and their importance. I will then show how the new DL can both strengthen these external forces and introduce new types of competition within the university community itself. I shall then consider ways in which these new competitive forces can work to destroy the stability of research universities. Finally, I will propose ways in which universities might respond to this new competitive situation

Stability in the Research Universities

Research universities have succeeded to a remarkable degree in integrating several functions that in many other countries are not considered necessarily to be organically linked. Research, broad and varied educational opportunities at both undergraduate and graduate levels, credentialing, and a highly evolved social infrastructure are melded together into a distinctive offering. The research component itself plays a complex role, since it serves both the educational mission of the institutions and the needs of the broader society. This highly integrated structure is very expensive and involves considerable cost shifting and sharing between the components. I will discuss three elements of this structure that serve to provide considerable protection against traditional forms of competition: quality and the cost of producing it, credentialing, and physically imposed size limitations.

Quality of the educational experience and its cost

Because undergraduate education is the largest part of the educational component of universities, it plays a key role in the form the integration of functions takes. Following the highest aspirations of education, universities focus much of their rhetoric and efforts on providing an undergraduate education that will prepare the student for a lifetime of achievement and successful adaptation to change. That is, much of the focus is not on skill development for the first job, but on aspects of a liberal education such as critical thinking, love of learning, curiosity, judgement, etc that prepare the student to be a lifelong learner. As valuable as these attributes are, they are very hard to measure. Consequently, a undergraduate university education becomes somewhat of a credence good in economic terms (Darby and Karnia, 1973). That is, a good whose value is very difficult to quantify

by analysis of data or even by experiencing it. In such cases, various surrogates are used to value the product. Using a somewhat circular argument, the cost of the product is often one of those surrogates – the more it costs, the higher its quality must be. This phenomena is well known in higher education. A university that increases its tuition by an amount large compared to the increases of its peers will almost always see a significant increase in student applications. The existence of this response has a great effect on the price and cost structures of universities, and acts against many efforts to hold down price.

Another surrogate for the quality of an undergraduate university education is the quality of the faculty. In the research university, it is the research productivity and visibility of the faculty that primarily defines faculty quality to the general public. The importance of having the people who are actively creating knowledge teach students has been widely propounded by the research universities for decades, and is now widely accepted by the public. Thus assembling a star research faculty is imperative for the university that wishes to ascend to, or remain in, the first ranks.

Research, however, is a very expensive enterprise. It requires very costly facilities – libraries for the humanists, laboratories for the scientists, computers and networks for everyone. It requires a large infrastructure of accountants, grants specialists, compliance officers, and technicians. The direct external cash flow to cover the research function of the university comes primarily from grants and contracts from government, foundations, and corporations. However, most of these grants and contracts will not cover the complete cost of the research, and implicitly or explicitly require the university to share costs. In addition, competition for the faculty who do the best research is quite intense, and they are

expensive to hire. Thus the revenues attributable to the research component of the university are not so great as its costs. As a consequence, the research component of the university requires considerable internal subsidization.

Ph.D. programs are a perfect example of the integration of the research and educational functions of a research university. However, educating a Ph.D. student is among the most expensive forms of education ever invented. It requires an immense amount of faculty involvement and university infrastructure. The value system in place generally dictates that the Ph.D. student should not pay for this education, and indeed, should receive some support from the university to defray costs during his or her studies. Although some portion of the cost of educating some of the Ph.D. students is covered by grants, most of the total cost must be covered by internal subsidization.

The social infrastructure of the contemporary university has become highly evolved, and this too has become a surrogate for quality of the undergraduate educational experience. For students who come to the university immediately after high school, the university is a place of great social growth. Students are exposed to new situations, different ideas, and people from widely different backgrounds and social classes. Universities have created a complex infrastructure to help channel these potentially disruptive experiences into productive outcomes. Residential colleges, social organizations, intercollegiate and intramural athletic teams, cultural events, student counselors and student unions are all components of these infrastructures. This, too, is a very expensive infrastructure. It is, however, of greatest importance for the traditional undergraduate, and of significantly lower importance for non-traditional undergraduates,

and graduate and professional students.

The breadth of offerings is yet another surrogate for the quality of the undergraduate educational experience. This leads most universities to sustain numerous majors that attract very few students, yet require a significant investment in faculty and departmental infrastructure. Similarly, excellent academic physical plant – classrooms, teaching laboratories – and state of the art electronic infrastructure are yet more surrogates for quality. All of these components, taken with the relatively high cost of the excellent quality faculty found in most research universities, mean that the undergraduate educational function itself must also be internally subsidized.

To create and sustain a research university that is of high quality, then, is a very costly enterprise. Student tuition and research funding do not cover these costs, and so a variety of other major sources of income are required. Among the most important are endowments and gifts, and, for public institutions, taxpayer support. In addition, continuing education in its many forms is a very important source of revenue for many institutions, and commercialization of intellectual property is rapidly becoming more important. Without these multiple sources of income, the research university would be unable to maintain its multiple interlocking activities.

The high cost of research universities presents a tremendous barrier to entry for any new competitors seeking to compete on the same basis, thus providing stability against new competition. In addition, most of the sources of revenue that support this cost change only slowly, thus providing stability to the competition between existing research universities. For example, increasing total tuition revenue by increasing the number of

students requires first increasing the costly social infrastructure, and increasing research significantly first requires major investments in facilities and new faculty. Increasing donations typically requires years of cultivation of potential donors. Thus the cost structure of research universities has provided a high barrier to entry by new institutions with a similar mission, and a brake on rapid change in competitive position among existing players.

Credentialing

The credentialing function of higher education has also created barriers to entry and thus provided stability. A component of credentialing resulting from accreditation has legal ramifications. Accreditation by a recognized regional accrediting agency or professional accrediting group is required in order to receive many types of federal funding, and for the licensing of graduates in many professional areas. Accreditation is also an important part of the credentialing power of institutions of higher education, for it provides external evidence that they are of sufficient quality that they can in turn attest to the quality of their graduates. However, accrediting standards have also been used to frustrate, or at least delay, new forms of competition. For example, the Western Association of Schools and Colleges refused to accredit an upstart non-traditional California institution, eventually forcing it to move to Phoenix, where it was accredited by the North Central Association of Colleges and Schools under the name of University of Phoenix. The American Bar Association currently refuses to accredit J.D. degree programs taken through distance learning. Consequently, it has refused to accredit the Concord School of Law, an on-line venture of the Kaplan Corporation, thus saving law

schools from competition from a non-traditional source – for the moment.

An even more important component of the credentialing power of universities, however, is reputational. The degree or the certificate from a highly-ranked prestigious university is a statement that the holder met very high entrance standards and was able to pass the rigorous courses required by the program. This form of certification that the holder of the credential is among the best of her generation and has learned some useful skills is of great value to employers, which in turn makes it of great value to prospective students and their parents. As more very highly qualified students want to go to the highly ranked university in order to gain the desirable credential, this further increases the value of the credential. This non-linear system is an example of a winner-take-all situation (Frank and Cook, 1996). The reputation required to provide credentialing of value takes decades (or centuries) to build, however. This means that a new entrant to the university market holds a very weak credentialing power, and a has a correspondingly weak attraction for the best students. This clearly discourages new entrants into the market.

Geographic limitations

One final but quite important stability-providing component must be mentioned. Traditional research universities exist primarily in one physical location, with perhaps a few professional schools (e.g. the medical or agricultural school) located at other sites. There are limitations to the number of students who can be enrolled in this single primary location while still maintaining the image of quality education. These considerations provide a physical limitation on the number of students who can be served by a single university. This limitation mitigates competition between universities of comparable

quality for good students. There is not the physical capacity in a single university (or a small number of universities) for the winner to really take all, even though many characteristics of the competition (e.g. as discussed in the Credentialing section) would otherwise favor this result.

The New Competition

Within the shadow of these stability-providing barriers, American research universities have reached levels of excellence admired around the world. Research critical to the economic, social, and political well-being of the country is produced by a cadre of faculty of international visibility. Graduates of these universities are disproportionately represented in positions of visibility and influence. However, new forms of competition are appearing that can circumvent the barriers that have thus far provided stability. In this section, I will describe several of these that are completely external to the research universities – for-profit colleges, non-traditional non-profit colleges such as the Open University, and new alternative credentialing agents.

Although the direct impact of these organizations is as yet minimal on traditional institutions, I will argue that they have the characteristics of disruptive technologies (Christensen, 1997), and have the potential to grow to have major direct and indirect impact on the research universities. A disruptive technology (or business model) is defined by Christensen as one that initially provides a product that is inferior to the mainstream product, but that brings a new and desirable set of values. The new product appeals initially to a set of "fringe" customers who are offered more than they need or are willing to

pay for by the existing mainstream product. Over time, improvements in the new technology (or the new business model) lead to significant increases in product quality. This improved quality in conjunction with the desirable values of the new product then enables the new product to displace the mainstream product. In the following section on DL, I will attempt to show how DL will increase the disruptive potential of these organizations.

For-profit educational institutions

For-profit publicly traded colleges have been around for many years. Among the largest and best known of these are the University of Phoenix, the DeVry Institute, ITT, and Argosy. Traditional higher education has generally given this sector little consideration, considering it to be a provider of lower level skills to a non-traditional set of students, primarily working adults. If these institutions have been viewed as providing competition, it has been with two-year colleges and the lower end of the four year colleges where there is some overlap in mission and student demographics.

While this view still has considerable reality, these colleges are now moving aggressively into some of the areas normally thought of as belonging to the traditional non-profit sector. Many are now regionally accredited and offer bachelors degrees, with some offering master's and doctor's degrees as well. Among the students enroled in four-year undergraduate programs in for-profit universities, more than 47% are now "traditional" in the sense that they entered the programs directly from high school (Phipps, Harrison, and Merisotis, 1999). Part of this motion reflects evolution in mission, part increased quality as the model is elaborated. Most important from the standpoint of the

research universities, these colleges use strategies that are quite different from those used by most of the non-profit sector, and correspondingly offer students a distinctly different value structure.

The most obvious difference in the approach followed by these for profits is that they focus on only the educational component of the mission of higher education (Niklin, 1995; Strosnider, 1997; Kartus, 2000). The expensive components of research and social infrastructure are almost non-existent, leading to a very different cost structure. Facilities are often rented rather than owned, and generally contain nothing other than faculty offices, teaching laboratories, and classrooms. Student facilities such as dormitories, athletic facilities, and elaborate student unions are nonexistent. Capital costs are correspondingly quite low in comparison to those of a traditional institution of higher education.

There are, however, other equally important differences. Convenience for the student is a major emphasis. Most for-profits offer their classes in multiple accessible locations, and classes are offered at times appropriate for working students. They also emphasize an education that is career focused, meeting the needs of employers. Advisory boards and focus groups of business people give constant input into an ongoing and rapid (by normal university standards) process of curriculum development. Many have introduced general education into their curricula in response to input from these groups (Kartus, 2000), thus moving their product more out of the "trade school" model and into greater overlap with the model of traditional higher education . However, while the research university emphasizes at the undergraduate level learning that will be a basis for

future intellectual growth, these for-profits primarily focus on preparation for the next job. In effect, they have embraced an alternative concept of lifelong learning – students are simply expected to return for additional courses as job opportunities evolve. As a consequence of the close coupling between curriculum and job opportunities, the graduates of these institutions have a very high probability of finding work in the area of their training (Merrill Lynch, 1999; Strosnider 1998; Kartus, 2000).

Curriculum in the multiple campus for-profit colleges is usually centrally controlled so that the educational experience will be very similar from campus to campus, and from semester to semester. Course materials are prepared by experts in specific areas, and generally taught by faculty who have had practical experience in the area. Significant financial resources are put into the development of new curricula. Evaluation of the faculty is quite rigorous, and focuses primarily on one dimension – teaching effectiveness. Most institutions spend heavily on skill training for faculty in order to build and maintain that effectiveness in the presence of rapid curricular change. The predictability of course quality level and coverage possible in such a system is impossible in the research universities with their traditions of academic freedom in teaching, and their necessity to evaluate faculty on a multidimensional grid.

This predictability of quality level, focus on near term benefits to students (jobs in area of study), and relatively low requirements for capital investment provide marked contrast with the situation in research universities. These characteristics make this approach highly scalable. These institutions can expand enrollment in a region, or enter a new geographic market with relative ease. In addition, the emphasis on near term

educational benefits makes it much easier to quantify the value of a degree or certificate from one of these for-profits than for the research universities. Value surrogates are not required when value is defined by the quality of the first job after graduation.

Although not major players overall in the graduate arena, there are some areas where the non-profits already have a significant presence. For example, almost 10% of the doctorates in clinical psychology awarded in the US are awarded by the Argosy Education Group (Kartus, 2000; Blumenstyk, 2000). Many of the for-profits are quite active in the MBA arena. Only about 4% of the Masters level business degrees were awarded by for profit-universities in 1997, but the percentage is growing. The University of Phoenix accounted for almost 2/3 of that number (Mangan, 1999).

These institutions appear to be on the first steps of a path in the business world that is described by Christensen (1997) as a disruptive technology (or business model). They have identified a set of potential customers who were overserved by the existing providers - in this case, working adults who found little value in the socialization and research aspects of traditional higher education. They then provided an educational product having values that appealed to this set of potential customers – student-centric and focused on job-related education. From the perspective of the research university, these institutions provide an incomplete, inferior product. However, from the perspective of the students of the for-profit colleges, they provide an alternative value structure that nicely fills a real need. This is reflected in enrolment growth rates for the industry in the range of 10%-20% a year, and in the striking result that the University of Phoenix is now the largest private university in the United States in terms of enrolment. Quality of the approach has

improved over time as the model is refined. The business history of other similarly defined situations would suggest that, over time, this continuing quality improvement and the alternative benefits and values that this approach brings will lead eventually to increased penetration into the markets of the traditional suppliers. That is, the for-profits increasingly will provide a viable option for all students to consider for some portion of their education. One should expect that an increasing number of students will consider this option in circumstances when they are uninterested in the social and research aspects of research universities, and weigh more heavily the quantifiable value measures and convenience of the for profits. As I discuss below, the advent of internet-mediated distance learning is likely to greatly increase the rate at which the for-profits enter into the traditional markets.

Even before they improve to a point that they can effectively enter the markets of the research universities, however, the for-profits can have a significant impact on the universities They provide an increasingly visible alternative metric that the public can use in evaluating educational approaches. The for-profits have a very different business model from the research universities at almost every level, and a radically different model of valuing education. The more successful and visible they become, the more the public may question the integrated model of the research universities with their associated high costs, and traditional arguments for valuing education.

One area in which the for-profits already are directly challenging the research universities is continuing education. Continuing education provides one of the important revenue flows that enables research universities to support their expensive integrated education. Loss of continuing education revenues could therefore have a significant impact

on many research universities. It is obvious that many of the for-profits compete directly with traditional schools of continuing education in terms clientele, subject matter, and quality. That is, they provide recreational and skills enhancement courses and certificates to individual working adults. However, several also compete with continuing professional education programs in schools such as business and engineering in offering degree and certificate professional programs to employees of corporations. For example, the University of Phoenix has an "educational partnership with AT&T to provide graduate and undergraduate degree and certificated learning programs to 200,000 AT&T employees worldwide." (Apollo Group, 1995) Jones International has similar contracts with Ball Corp. and AT&T Broadband Internet Services (Michaels and Smillie, 2000). DeVry lists on its website (www.devry.com) , among others, GTE, National Data, Nortel, and Sprint as companies for which it has provided professional development programs in management, electronics, and communications. Although many of these programs focus on lower level professionals that traditionally would not have been of interest to university programs in continuing professional education, others are increasingly moving to higher level professionals that once would have been the exclusive realm of universities It is also increasingly common in this dot.com world to hear of young graduates of the most prestigious universities turning to the for-profit sector for some just-in-time continuing education focused on job-related needs rather than returning to a university for a traditional postgraduate degree. Thus, strong and meaningful competition in the continuing education area is already a reality, and will only increase with time.

A different non-profit competitor: The Open University

The Open University in England provides an interesting alternative model that is in many ways intermediate between the for-profits and more traditional higher education (Blumenstyk, 1999: Palattella,1998). It is a highly successful non-profit university that now enrolls one of the largest number of students in the world -- over 160,000 in 1999. It has several hundred regional centers that serve as sites for tutoring and associated activities. Its curriculum is centrally designed, as are the multi-media course materials that are the core of the asynchronous instruction it provides. A relatively small core of quite traditional research faculty – about 900 – create this curriculum supported by numerous outside experts. Very significant resources – $2.5M-$3.3M per course – are committed to producing the highest quality educational programs.

While courses in the for-profits discussed above typically involve lectures given by adjunct faculty following scripts prepared centrally, the course material in the Open University is presented entirely through the centrally prepared multi-media materials that are accessible to the students asynchronously. This enables the Open University to focus its interaction time on tutorial sessions. Groups of roughly 20 students are assigned to tutors who both grade centrally defined assignments and provide tutorial sessions.

This combination of a small cadre of research faculty creating advanced curricula, significant resources dedicated to producing effective asynchronous courses, and the intimacy of tutorials has made the Open University a very effective institution. A recent study of 77 English Universities by the Higher Education Funding Council ranked the Open University tenth in the quality of teaching (Palatella, 1998). As reported on the Open University web site (www.open.ac.uk), objective measures of research performance

collected by the British government put the Open University in the top third of all UK universities, indicating that the research faculty does indeed fit traditional definitions. While not yet a competitor for Oxbridge or the other very top tier universities in England, the Open University has clearly become competitive on both teaching and research levels with a number of highly regarded universities in England. In doing so, it has demonstrated the potential for an alternative approach to higher education to create a recognizably high quality product.

The Open University has recently started the United States Open University This new enterprise will modify some existing Open University programs for an American clientele, and develop new programs specially designed for this market. It expects to pay particular attention to the executive education market. One should expect that this new entity will provide serious competition for many segments of American higher education in the coming years.

Institutions providing alternative credentialing

Credentialing has, in the past, been effectively defined through the awarding of a degree. Within the set of degree-granting institutions, those that are accredited have had by far the greatest credentialing power. New organs of credentialing are appearing, however, that focus on certifying that candidates posses a well defined set of skills (Adelman, 2000; Irby, 1999). Because they focus on certifying specific skills, these certifications have considerable value for employers.

These credentialing agencies, which do not seek traditional accreditation, can be of many types. Among them are: vendor corporations, such as Microsoft and Cisco;

industry organizations, such as the International Information Systems Security Consortium and the Certified Financial Planners; and government agencies, such as NIH and the USDA. At present, most of these agencies work in the area of information technology, but the model has been, and probably will increasingly be, extended to other areas. These alternative credentialing agencies can work with all of the forms of new competition, and thus provide strong competition in certain areas to the more traditional credentialing of the research university.

Distance Learning: Enabler and Catalyst for Competition

"The next big killer application for the internet is going to be education"

John Chambers, CEO of Cisco Systems

The institutions discussed above have the potential to increase competitive pressure on traditional higher education through more vigorous application of well known approaches. Internet mediated distance learning, on the other hand, will bring a new and potentially explosive kind of competitive pressure to bear on traditional higher education. Through distance learning (DL) the traditional institutions will compete with each other in a manner in which many previous size and geographic limitations on competition will disappear. For-profit entities will enter the competition both as partners of individual institutions and as direct providers, and alternative forms of credentialing will take on a new power. All areas of the teaching function of universities will be impacted.

Distance learning becomes a new and powerful educational technique when combined with the communication power of the internet and the computing power of the

desktop computer. Access to DL courses is no longer restricted to a location, as are traditional university classes, or to a time, as are traditional classes or televised DL courses. Instead, it becomes global and asynchronous to provide maximum flexibility and opportunity for the student. Traditional classroom lectures follow a linear learning approach in which the student follows the pace and path of the professor through the subject matter. The new DL allows nonlinear learning approaches based on cognitive learning theories, permitting the student to move at her tempo with an organizational structure that responds to her comprehension of the material. Flexibility to respond to different learning styles is increased dramatically compared to the traditional lecture.

The current model being used to create nonlinear approaches leads to a very different faculty role from that found in universities at present. Traditional teaching is "vertically integrated", in that one individual chooses the material to be covered in the course, then teaches the material, and finally evaluates the learning of the students. Nonlinear DL courses more typically have one or more subject specialists who define the course material, experts in pedagogy who map that course material on to the nonlinear medium in the most effective manner, and testing experts who devise the evaluation materials. The "unbundling" of the faculty role in nonlinear DL is similar to that already found in many of the for-profit universities discussed above.

This new DL has the potential to be highly scalable, that is, to be extended to larger and larger numbers of students without significantly changing the basic approach. This removes the limitations on size that have mitigated competition between institutions of higher education. Most students still will not be able to go physically to one of the most

prestigious colleges or universities, but they will be able to take courses and degree programs from them. The scalability also increases the potential for creating significant profit, thus making this a field of great interest to the for-profit world.

Because of all of these attributes, the new DL itself is likely to be both a sustaining and a disruptive technology. It will be used by universities to better serve some of their existing constituencies, such as alumni and students, and to access constituencies currently served by other universities. The former application of DL is called sustaining by Christensen (1997), while the later is another application of a disruptive technology. In addition, DL will be used by alternative providers as a disruptive technology to accelerate their penetration into the marketplace of the traditional higher education providers.

The alternative providers discussed in the section above have already demonstrated that there is a large set of potential customers who feel overserved by the research universities with their bundled products. DL extends significantly the convenience factor highly valued by those students, and removes geographic and space constraints that even a multi-site for-profit experiences. It is not surprising, then, to find that the for-profit colleges discussed above are moving heavily into the new DL. For example, the University of Phoenix online courses are showing an annual increase in enrolment of almost 45% (Brainard, 2000), and its parent Apollo group has joined with Hughes Network Systems to form another DL company. DeVry has recently won accreditation for online Bachelor's programs in business and information technology (Blumenstyk, 2000, August 16). Other established corporations in the education field such as Kaplan and Sylvan have also moved into DL. Kaplan recently has purchased Quest Education Corporation largely because of its

presence in DL (Blumenstyk, 2000, June28), has started an online law school, Concord, and offers a wide variety of other on-line programs through kaplancollege.com. Sylvan provides online courses to businesses through its Caliber division. In addition, many new for-profit DL corporations such as Unext, notHarvard, Hungryminds, and University Access have appeared and many more will certainly be created. In many, if not most, cases these new corporations are hiring prominent university faculty as providers of course content. Many of these new for-profits are also striking up partnerships with universities directly. For example, a for-profit corporation and a business school may team up to provide executive education for corporations, with the for-profit providing the marketing and production support, and the business school providing the course content and desired level of credentialing.

Of course, DL is not yet of the quality that it is a significant competitor to the classroom experience offered by the research universities. However, the for-profit colleges are showing that there is a very considerable market for internet mediated DL among their students even at the current levels of quality, and many universities are experimenting with DL for targeted groups of their traditional student bodies. If the evolution of other new disruptive technologies is a guide, it is likely that within these growing markets the technology will be improved and elaborated until it becomes competitive as a learning experience with traditional forms of classroom teaching.

The Nature of the Threat from the New Competitors

All of these new forms of competition significantly increase options for students at

all levels- certificate, undergraduate, graduate, and professional levels. They focus on a single aspect of the complex role of the research university – education as reflected in the teaching function. To the extent that some set of current students of universities who are primarily interested in that teaching function are "overserved" by the additional services offered to them via a bundled price, these competitors can make inroads into the current student base. They will do so by offering new benefits such as convenience, flexibility, ability to take courses from a more highly ranked institution, focus on job-related skills, and lower cost structure.

By focusing on a single component of the bundled structure of the research university, all of these modes of competition manage to bypass the barriers that have provided stability in the past. To the extent that they can funnel off some portion of the teaching revenues of the research university, they make unstable the bundled whole. The situation is potentially similar to what is occurring in medical schools. Missions of medical schools have traditionally bundled together teaching of medical students, research, and provision of health care. The revolution in health care has introduced a fierce competition into the health care part of the mission, and many for-profits have moved into markets once held by the faculty practices and university hospitals. (Not surprisingly, the HMO is identified as a disruptive technology by Christensen(1997).) The resulting decreasing cash flows into faculty medical practice have produced fewer revenues that can be transferred to the other functions of the schools, and have put great pressure on many faculty to increase their time devoted to the practice mission. Many faculty now must spend so much time on their practices that they can no longer devote sufficient time to their

teaching and research functions. As a consequence, the clinician-scientist seems to be a disappearing model. At present, the pressures are so intense that it is not clear how the traditional vision of a medical school can be maintained. For the university as a whole, the tuition (teaching) revenues play a dominant budgetary role similar to that of clinical revenues for a medical school. Once those revenues come under attack, the entire integrated system risks collapse.

As the teaching function is partially stripped away from the university of matriculation and moved to alternative providers, pressures will be transmitted to the other components of the functional bundle. Students who spend less time at the university will contribute fewer dollars to the fixed costs of the social infrastructure. Some marginal costs will disappear, but the fixed costs will be hard to decrease in a timely fashion. The football team costs the same no matter how many students watch the game; dormitories are difficult to convert into other uses when the student body shrinks. The cost of expensive research faculty, previously carried roughly equally by the research and teaching functions, will be moved further on to the research function. Should this happen, in all but the very best endowed institutions, faculty in areas where research grants are plentiful will be forced to move more of their time and salary to the soft money that such grants provide. Research in areas where grant support is very scarce will likely decline.

It is also likely that as the teaching and research functions separate, the research activities of the faculty will play a decreasing role as a surrogate for quality in the pricing of education. As students take more courses from alternate providers, they will take a smaller fraction of their courses from research-active faculty, thus weakening the

perceived relationship between teaching quality and research. As a result, salaries that relatively highly paid research faculty are paid for their teaching activities will appear to the public to be too high.

Attention by the general public to the price/value relationship will be increased by continuing growth of the for-profits with their very clear, one-dimensional value equation - immediate placement in appropriate jobs. Universities should therefore expect to see growing attention paid to the success of their graduates in their first jobs. Although not an inappropriate concern, this will put pressure on the universities to readjust the balance between long and short term goals of their education.

The effective legal credentialing monopoly of traditional higher education has already been broken by the for-profits that have achieved accreditation and the alternative credentialers that have created valuable certification without accreditation. Further serious inroads into the credentialing monopoly of universities will probably occur as more for-profits are drawn into this area, and as yet unimagined business plans are unveiled.

Over the somewhat longer term, the possibility of truly revolutionary change exists. Higher education in the United States is a $240B per year market (Merrill Lynch, 1999), and the world higher education market is estimated to be about $400B per year. The entire market is very highly fragmented, with no single provider having any significant portion of the market. In many dimensions, the market is similar to those that existed in health care and banking not so long ago - markets that now have consolidated into only a relatively few major players. This new DL, because it is scalable, greatly increases opportunities for significant consolidation in the education market. Truly well done DL courses will be

expensive to produce, and it will be necessary to spread initial costs over as broad a student base as possible. However, scalability provides opportunities for large profits once the initial costs are covered if a sufficiently large student base can be reached. In addition, as English becomes increasingly the language of commerce and technology, English language DL courses will increasingly find a world-wide market (Bollag, 2000, September 8), thus increasing the possibility of consolidation on a global scale. American for-profit educational corporations are already moving to establish themselves in this new world market (Blumenstyk, 2000, August 11; Lively and Blumenstyk, 1999). If the educational market moves significantly towards worldwide consolidation, universities will have to devise rather radical strategies to compete.

At present, most of these threats are not serious for the research university. DL is not yet of a quality that it can compete with the classroom experience in most cases. The for- profit colleges cannot now attract many students who would be considered prime candidates for matriculation at a research university. Corporations still look to the major business schools for their upper level professional education, not to the for-profits. However, evidence on every front indicates that DL is improving in quality; that the for-profit colleges are moving into greater curricular and demographic overlap with traditional institutions; and that corporations are hiring the for-profits to do much of their in-house training. Thus, it is likely that these new modes of competition will become much more intense in the near future. DL, in particular, is moving very rapidly, and the competition between universities in this arena is likely to increase dramatically in the near term. Thus far, these new forms of competition seem to be following quite closely the

evolution predicted for a disruptive technology.

Responding to the Competition

Universities will not be impacted uniformly by this new competitive environment. At both the undergraduate and the graduate and professional levels, universities with lower reputation for traditional quality will be effected first, but the impact will rise over time to more highly ranked universities. Within individual universities, all academic areas will not be impacted equally due to variations in such parameters as student demographics (e.g. age, academic achievement), importance of facilities (lab versus lecture courses) and relative economic value of a name-brand degree (e.g. lower for education than for biology). Similarly, responses will vary by field, as universities prioritize within the framework of their own particular situations. In order to compete successfully in this new environment, universities will have to react in many areas. I will discuss four of these areas: mission focus, excellence, organizational change, and distance learning. Mission will need to be well understood and implemented by individual institutions, and its value clearly articulated to the public. An increased focus on excellence will be necessary, as will organizational changes that lead to greater efficiencies. Distance learning will be sufficiently transformational that special responses will be needed.

Mission Focus

A central tenet of the educational mission of the bundled research university is that education and research are inseparable components of an organic whole, and that students gain a uniquely valuable education from this system. Therefore, a key initial response to

the new competitive situation must be an increased focus on assuring that this mission of the research universities does provide real and unique value to the student. At the undergraduate level, the best way to preserve the viability and desirability of the bundled-function mission of the research university is to make sure those functions are truly synergistic.

At present, most undergraduate students at research universities do not participate directly in research. The courses the students take are often very similar to those taught at colleges where the faculty are not seriously involved in research. In fact, in many universities, many of the courses are taught not by research faculty, but rather by adjuncts or graduate students. These self-imposed decouplings of research and teaching functions serve well the interests of external competitors that seek to capture some portion of the teaching function of the research universities.

Some corrective actions for this problem are straightforward but not necessarily easy to implement. Significantly increased participation of undergraduates in research, for example, is more a matter of choice and policy than resources. Teaching undergraduate courses in innovative ways that weave recent research into the course material is difficult only in that it requires more time and creativity than a course that parallels a widely used textbook Both actions add greatly to the value of the research university undergraduate experience, however, and should be a part of the response of every university.

Other needed actions in this realm are more complicated to achieve since they run into existing competitive strategies. For example, for some universities, getting research faculty into the classroom more often is clearly required if the necessary teaching/research

synergies are to be built and maintained. Unfortunately, teaching relief - especially at the undergraduate level - has become a bargaining chip commonly used by many universities in attracting the best researchers. While this is a strategy that is very counterproductive over the long term, it provides a short term advantage that makes it irresistible to some universities. Even in the absence of this special treatment of star faculty, the number of courses taught per year by the average faculty member in a research university has shrunk over the past 30 years in order to enable the faculty to increase their research productivity. Thus there is a real conflict in the balancing of the research and teaching roles of faculty, with both gains and losses to the overall mission of the university to be found with any adjustment of the balance. Persuasive arguments can be made that the balance has swung too far to the research side in many universities for long term stability. However, rebalancing can cause significant internal dissension, and external competitive difficulties. Nevertheless, tighter coupling of the research and teaching functions is almost certain to be necessary in order to preserve the viability of the model of the research university.

In a similar vein, the social structures of the university must be well integrated with the teaching and research functions, such that these structures contribute significantly to the education of the student. Residential colleges in which resident faculty help bring intellectual excitement to the living experience, student organizations that encourage exploration of a profession or development of leadership skills, student research fairs, and similar integrating activities are by now commonplace on most of our campuses. As time goes on , they will become even more important in demonstrating the viability of the model. The days are past when student affairs can be considered to be separate from

academic affairs, and creative new ways must be developed for increasing the integration.

Looking to the future, universities must better define the prospective student body that is encompassed within their teaching missions. For many research universities today, the core educational mission really implicitly applies to students who are able to spend full time on campus. Continuing education of non-resident part-time students is done primarily to make money rather than as part of the core mission. As opportunities arise to provide high quality education through DL, universities must decide whether or not their missions encourage them to embrace the opportunity to extend educational opportunity to a much broader set of students. Whether DL is used to further core mission, to make money, or to defend against encroachment by alternative providers will be important in determining how the individual institutions respond to this new technology.

Excellence

Increased competition in higher education will have the same effect as does competition in the corporate world – excellence will be required for institutional survival. Many of the practices that persist in the still relatively sheltered world of academe must change in order for institutions to compete effectively. Both faculty and administrators must focus on the creation and maintenance of institutional excellence as their highest priority in this new environment.

Because of the strong tradition of shared governance in American universities, faculty must play a key role in creating and maintaining institutional excellence. Certainly this means that faculty must strive to achieve individual excellence in their own research and teaching activities. However, it also means that they have a major role in creating broader group excellence.

The minimal levels of institutional accountability generally admitted by tenure mean that faculty encouragement and faculty pressure become critical in creating high levels of group excellence. However, in many institutions today, most faculty accept, or at least tolerate, colleagues who do not seek to perform with excellence in the core missions of the institution. The concept of lifetime employment that is implicit in tenure leads to a stability of community that has benefits, but also major drawbacks. Among them is that criticism of fellow faculty for not performing at high levels is typically muted as a price for maintaining collegiality in this stable world. The critical concept of "academic freedom" is often misused as the rational for allowing peers to ignore these critical core missions of the institution while following their own interests (academic or otherwise). In order to create the necessary levels of excellence, faculty must take the lead in demanding it of themselves and their colleagues. Tenure, if it is to survive in this increasingly competitive world, must be used to protect the academic freedom of those who are actively seeking and achieving excellence, and not to protect those who have found comfort in mediocrity. Without this understanding, universities will be pushed to a much more clearly corporate mode, in which administrators enforce the growth of excellence through unilateral decisions concerning individual achievement.

Administrators must also focus on creating conditions that allow academic excellence to grow. For example, the for profit universities and the Open University spend very significant sums every year to create new courses. Traditional universities seldom expect to spend more on the creation of a new course than a one course release time for a faculty member. As we move into an era when multimedia teaching becomes the norm, universities will have to devote more of their resources to creating high quality, innovative courses. Similarly, the for-profits spend heavily to

assure that faculty keep their teaching skills up to date, while little of this occurs in universities. More will have to be invested in programs to develop and expand teaching skills, and institutional expectations must be created that faculty will avail themselves of these programs regularly. Facilities are increasingly important for excellence in both teaching and research, and universities that lag in this area will find that they are not able to achieve their aspirations for quality. Administrators, working with faculty, must make the hard prioritization decisions necessary to focus the resources of the institution on the building of excellence.

Greater attention will have to be paid in universities to developing methods of helping faculty remain at their most productive levels throughout their careers. The combination of tenure and lack of fixed retirement age make this a high priority if necessary institutional excellence is to be achieved. Industry generally invests enormous sums to constantly upgrade the skills of its employees in order to maintain a competitive edge. Universities will have to behave in a similar fashion. The effectiveness of sabbaticals in this regard needs to be reevaluated in the light of changing family situations, such as two-earner families. Perhaps there are more effective ways to encourage faculty to broaden their interests and experiences. Internal resources will need to be made available to stimulate new directions of research and creative activity. Fuller recognition that individual faculty members at different points in their careers may want to emphasize different aspects of their university activities can lead to a changing profile against which excellence can be measured. This will enable faculty to better focus their efforts on activities that most interest them and are of most benefit to their institutions.

As teaching takes on more varied forms with the development of distance learning and distributed learning, faculty roles will become more diverse. Some will become content providers

for multimedia presentations, while others will act as facilitators for those multimedia presentations in the classroom. Some may become experts in mapping content onto the new media in a pedagogically powerful way. Yet others will continue to provide more traditional classroom teaching. New standards for evaluating teaching excellence will have to be created in order to properly weigh these various contributions, and to determine appropriate teaching loads.

An even greater emphasis on institutional excellence than exists now will also have the effect of increasing the importance of having on the faculty individuals of great national and international visibility. Increasing emphasis on student satisfaction will require that those individuals of greatest value are also excellent in one or more of the appropriate modes of teaching. This increased focus on a relatively few individuals will certainly increase their market value, and correspondingly, put downward pressure on the salaries of faculty who do not fall into this favored class. In other words, there will be an exacerbation of the winner-take-all (Frank and Cook, 1996) climate in higher education.

Organizational Change

As pressures develop on one or more of the revenue streams that support the integrated research university, it will be necessary to begin to rationalize both the administrative and academic cost structures of the institutions. In doing so, we must note the difficulty associated with price (or expenditures, in a balanced budget) being a surrogate for quality in higher education. For example, US News and World Report, in its rankings, explicitly defines high expenditures per student as a measure of quality. Numerous accrediting agencies carefully monitor expenditures per student, and issue dire warnings if the school is seen to be decreasing the expenditure per student. Thus resistence to significant cost-structure change within the academy will be strong

until the competition has made significant inroads into traditional markets and can no longer be ignored.

Nevertheless, universities will have to become much more efficient in their internal provision of services. Typical university administrative rivalries (e.g.. between academic and administrative computing) that limit performance and create inefficiencies will no longer be acceptable. Increased intelligent use of technology to handle business matters inexpensively and rapidly will be necessary, as will purchasing and construction practices that more closely parallel those found in industry. For many institutions, a more corporate-like clear delineation of administrative and fiscal authority will need to be put into place to enable effective response to rapid change and greater accountability.

In addition, most universities will have to recognize that they cannot cover all academic and research areas, and will have to begin to focus their resources on areas that are most important for strategic reasons. This will mean in some cases closing programs completely, and in others, closing some part of the program, such as graduate studies. This raises both external and internal issues. Higher education has numerous important and powerful external constituencies. Alumni, professional groups, governmental entities, donors-- all feel a sense of ownership of the institutions of higher education. These important constituencies will often put immense pressure on universities to prevent closing or modification of academic programs. Graduates fear that their hard-won diploma will be loose value if the program from which they graduated disappears, and professional groups often feel their profession will be demeaned by the closing of a program that trains people for that calling. Because all universities depend on good relationships with government, donors and alumni for resources, they cannot easily withstand major public

disapproval, no matter how misplaced. It will be necessary for universities to develop strategies that enable them to convince their many external constituencies the need to sharpen focus in this way. It will also be important that universities be able to close out programs in a cost efficient way. Tenure rules in many institutions require that faculty in closed programs be found a new home in another program. Not only does this limit the savings that can be gained by closing the program, but it usually means that faculty find themselves moved into positions for which they are only marginally qualified. These are constraints on resources and quality that will place those institutions at a serious disadvantage in a more competitive environment.

On the faculty side, faculty governance will also need to be reorganized in many universities. For universities to respond appropriately to the changing competitive scene, the faculty must participate actively in determining the responses. Unfortunately, most faculty governance does not work effectively in meeting the challenges of rapid change. Many faculty, for all of their understanding of how much effort is required to become an expert in an academic discipline, tend to think of themselves as experts in all areas outside of their disciplines, whether or not they have actually given that area any thought and study. Much of faculty governance then becomes spirited debate among the uninformed, where political agendas tend to carry much more weight than desire to find meaningful solutions to real problems. The difficulties become even more serious when the important new issues are partially within the academic experience, and partially without. In this more competitive environment, faculty must devise governing mechanisms that provide more rapid, and better informed input if they wish to be heard as a group. Otherwise, administrations will be forced to seek critical faculty input from special committees or from individuals.

Distance (and Distributed) Learning

DL will begin to make inroads into the undergraduate experience, both as a precollege component, and as an external supplement to what is offered at the student's university. Most universities will find it advantageous to create DL programs that represent their particular strengths and approaches. In this way, they can extend themselves beyond their geographic limitations and gain new students and new revenues that can support the core activities. In doing so, they can also hope to more than make up the losses suffered when their own students take courses from competing purveyors of DL. As noted above, however, each university will need to understand where DL fits within its own educational mission.

Once students have experienced effective and innovative DL courses, it will be difficult to satisfy them with traditional lecture courses. Consequently, innovations in on-campus education will have to occur at a more rapid rate than they have in the past. In particular, the teaching methods developed in DL will need to be adapted to on-campus teaching. This "other DL"- distributed learning - will change the way in which many courses are organized and taught, with corresponding redefinition of faculty teaching roles. For example, something more like the Open University model might be appropriate for these courses, in which the basic subject matter is presented in a distributed learning mode, and classroom time is spent in a tutorial mode. For these courses, the vertical integration of the teaching function would cease to be the norm as different faculty assume different roles in the process. With the flexibility of asynchronous methods, distributed learning mediated courses will not need to fit into neat semester long packages, and the classroom will be only one of the many locations where learning takes place.

Universities will have to find a way to accommodate increasing student demands to be

allowed to take DL courses from competing institutions without harming their own credentialing authority. A possible solution would be to allow the students to choose among a restricted set of authorized DL courses that have been found by the faculty to be of appropriate quality. This situation is not unlike what now happens with transfer credits, although the pressure to accept more DL credits than are typically accepted as transfers will be high. Alternatively, students could be allowed to choose among certain competing DL courses as the distributed learning component of the "Open University" type of course described above, thus incorporating the "foreign" DL courses into the course structure in a natural way. Accommodations to this new pressure will have, of course, both financial and academic implications that will need to be carefully considered by each university.

At the graduate and professional level, the changes are likely to be even more dramatic. Here, the bundling of research and teaching is obviously important. However, as remarked above, at this level the primary social structures of the university are generally of much lower importance, and these students are adults who are foregoing significant income in attending school full time. Consequently, many graduate and professional programs will find it advantageous to use DL extensively in order to provide the flexibility that will attract the best students. Brown and Duguid (1996, 2000) have argued that one of the primary roles of graduate and professional programs is to provide a socialization into disciplinary communities, a process that requires a mentoring experience. Although there is considerable variation from field-to-field, it is obvious that major components of most graduate and professional training do require intense mentoring experiences. Consequently, graduate and professional programs that are strategically balanced mixtures of DL and place-specific, person to person interaction are likely to be most effective in attracting the best

students. Creative use of such programs would also enable universities to increase significantly the number of students who could be educated effectively in chosen programs. This could provide important financial and reputational benefits.

In order to compete effectively in the arena of non-degree continuing education, universities will have to pay close attention to the needs of the market, and the innovations of the competition. Anecdotal information regarding recent graduates of prestigious institutions indicates that many are choosing to get needed additional education from non-traditional suppliers (e.g.. on line courses certified by alternative credentialers) for reasons of convenience and responsiveness to specific job needs. The continuing education market of the future will be considerably more varied, demanding, and unforgiving than the market of the recent past.

Most universities will find it necessary to partner with other universities and with a variety of for-profit corporations in building their DL programs. Effective DL programs will be expensive to produce, and it will be counterproductive for all if every university produces the same set of programs. Thus finding the right partners will be critical, and there is clearly a benefit to those universities that move quickly to ally themselves with high quality partners who bring complementary strengths. For-profit corporations will be important potential partners, for they can provide capital and types of expertise not typically found in universities, such as marketing and production skills. All of these partnerships will put great pressure on administrative structures and traditions of shared governance because they will require careful attention to interests outside of the university and faster decision times that usually occur in academic settings.

Universities and their faculties will have to come to grips with at least two DL generated issues that seem from certain perspectives to be relics of the pre-competitive era. Ownership of, or

share of profit from, DL courses is a major issue on many campuses today. In the competing for-profit sector, all ownership of, and proceeds from intellectual property go to the corporation, not the creator. This has not kept that sector from creating valuable intellectual property at a remarkable rate, however. The for-profits can then plow almost all profits from courses back into the creation of new courses. Universities, on the other hand, are being asked to liberally share profits from a course with faculty involved in its creation, thus limiting the institutional resources available to create the next course. In a competitive world, this is a formula for falling behind.

Similarly, many faculty are now arguing for the right to contract individually to create DL courses for corporate entities. These same corporate entities may then enter into direct competition with the faculty member's university using the faculty member's course. In a system that is not strongly competitive, such activity on the part of faculty is not particularly damaging to the university. However, in the competitive world that we are entering, it is contrary to the long-term interests of the faculty member and his university.

Faculty members increasingly will have to recognize that their individual actions can actually damage the long-term viability of their university in a competitive era. Attention to the long term health of the university that provides the job and the tenure will have to become a more important characteristic of the faculty-university relationship in a more competitive world.

Conclusion

It is critical that those in higher education consider changes that increased and varied competition might bring. The system of higher education in the United States is arguably the best

in the world. It is incredibly diverse, serving a tremendously broad spectrum of student needs and aspirations. It encompasses institutions that have achieved a remarkable synthesis of the dual missions of research and education. Overall, the current system serves the nation and the world well, although certainly not perfectly. However, competition often maximizes a narrow, rather than a global, good. Thus, increased competition has the potential to negatively effect the overall strength of our system of higher education. Only by understanding more clearly our core missions and by understanding the ways in which increased competition might effect those core missions will it be possible to respond in such a way as to preserve and increase the strength of our university system.

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