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ON-LINE EDUCATION: DEVELOPING COMPETITIVE ADVANTAGE

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В статті розглядається еволюція університетських on-line програм у США і описуються провідні стратегічні можливості, що пропонуються сучасним університетам. Програма пропонує можливі оперативні плани для університетів, зацікавлених в отриманні конкурентної переваги у міжнародному дистанційному навчанні в цілому світі.

This article examines the evolution of on-line university programs in the United States and *describes the key strategic challenges this new technology offers for existing universities. It suggests possible strategic plans for universities interested in gaining and sustaining a competitive advantage in the world of international distance learning.*

Introduction.

The development of the Internet and the ability of information technologies to process and transmit information across the world at very low costs has had a significant impact on the economics of almost every field of human activity, in almost every nation. Higher education is no exception. This paper examines the increasing use of on-line distance education among higher education institutions and attempts to forecast some strategic outcomes for the trend. It explores the possible impact on the institution's market share and future competitiveness as well as suggesting some general strategies for universities and future research directions.

By examining experiences with on-line business in the United States, as well as exploring current trends in on-line education, it is possible to see a probable future for on-line higher education worldwide. The lessons learned from the first rapid business expansion on-line – with its many failures and surprises, is used as a tool to help higher education avoid those surprises and gain the full benefits of this new technology for teaching and learning.

Higher Education and On-Line Learning.

Like business, higher education must face significant economic as well as technical challenges associated with distance learning and other information technologies used in the classroom. Using technology does not just make colleges and universities more productive or allow them to reach more students. It also changes the way in which education is valued and understood by students and teachers.

In the United States, in the late 1990s and early 2000s, business experienced a "Dot.Com" boom of new internet-based businesses. These were new businesses attempting to tap into the power of the Internet and global digital information access to create economic success. By 2003, most of these new businesses had gone bankrupt or been acquired by other businesses. The Internet had not proven to be a welcome home for many businesses that depended on the technology for their existence.

Higher education in the US has also embraced the Internet as a delivery vehicle for distance learning. According to the US Department of Education's National Education Statistics office, by 2001 56% of all US degree-granting institutions offered distance education courses and over 3 million students were enrolled in on-line higher education courses. Forecast growth rates of students in DL programs average 19% annually, with an estimated 18 million US students taking on-line courses by 2013 [1]. This boom is not directly comparable to the disastrous boom in businesses, but the two effects may have some elements in common.

The number of on-line students in US higher education has been growing much faster than total enrollments and there appears to be no end in sight. In 2005, 17% of all US students were in on-line courses. While on-line students are somewhat more likely to be older than the average, they

generally resemble the demographic profiles of other students in their same institutions. In spite of projections that on-line enrollment would level off, 2005 (The last year for which complete data is available at this writing) marked the largest absolute and percentage increase in on-line enrollments to date [2].

Research into technology trends in classrooms suggests this will continue for the foreseeable future. Research into student usage patterns in on-line courses shows that more experienced on-line students are more likely to make better use of on-line programs, while instructor experience allows them to be more effective in on-line teaching as well [3]. Student responses to technology in classrooms may be initially mixed, but experience rapidly overcomes resistance [4]. As on-line experience continues to grow among students and teachers, it should reinforce interest and success in on-line classes, fueling the cycle further. Some research in Canada suggests that, while some teachers in the secondary school level may be resistant to adopting new technology in the classroom, their students have no such resistance and readily embrace technology [5]. These students will be the higher education students of the next few years, arriving at universities with a ready acceptance of on-line learning and other information technologies in education.

Similar research among accounting faculty in the United States showed that, when faculty do adopt technology, they tend to do so aggressively, using it heavily once it has been mastered. Social factors are also significant among faculty. Once a single faculty leader has adopted a new technology, such as on-line teaching, other faculty members are more likely to adopt the technology as well [6]. This suggests that on-line technologies will continue to be adopted by new faculty entering higher education.

While some faculty continue to express concerns over the technical limitations on current on-line learning programs, new technology continues to improve the on-line experience and extend its benefits to new disciplines and teaching approaches [7].

If students and faculty are becoming enthusiastic adopters of on-line learning technologies, school administrators appear equally enthusiastic. In 2006, 62% of all surveyed chief academic officers reported their on-line programs as being "As good or better" than similar courses in the classroom while 58.4% said that on-line programs were critical to the long term strategies of their institutions [2].

The primary barriers to success were identified by these chief academic officers as being; the need for increased student discipline (63.6%), the greater time and effort required of faculty to teach on-line (31.9%), and a lack of acceptance by faculty (25.9%) [2]. If faculty and student acceptance and success does grow with usage, as research suggests, then the primary barriers to the adoption of new on-line programs will fade with time.

This continuing growth in on-line higher education appears to mirror the growth of business activity in earlier years. Like the businesses, universities are investing heavily in on-line courses and programs in response to perceived customer (student) demand. The expectation is often that the investment in on-line education will be repaid by an increase in the number of students served, bringing additional tuition revenues. In fact, many administrators are convinced that their on-line programs are already attracting new students [2].

This may be true, but as the share of on-line courses continues to increase faster than the total student body, the number of available "new" students must shrink steadily. Eventually, the investment in on-line programs must see a diminishing marginal return as competition among on-line programs increases and the market saturates.

This is consistent with the classic new product adoption curve, as shown in Figure 1. New innovations, such as on-line learning, are first adopted by the Innovator and Early Adopter segments of the market, and are eventually followed by other, less adventurous segments. When shown cumulatively, this curve typically flattens as majority adopters take up the product and the market matures. While the available data does not allow an accurate forecast of when this might happen in the on-line education market, it is clear that saturation will occur [8].
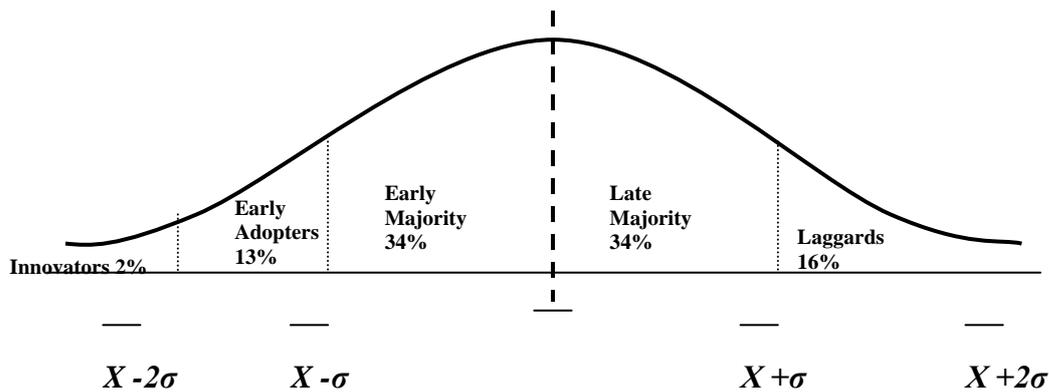
Figure 1

Like the businesses in the Dot.com boom, universities developing new on-line programs may have overlooked the economics of the Internet. With the majority of schools offering on-line courses, each school is forced suddenly to compete in a national (or international) market, rather than the regional market they occupied before on-line courses. A school may gain access to students in other areas, but the schools in those other areas are also able to attract students near the first university. The nature of competition is changed radically.

While the United States is the current leader in on-line education, the phenomenon is becoming global at a rapid rate. A "digital divide" still exists between wealthy industrial nations and less-developed states, but that gap is closing rapidly as even very poor nations gain access to basic internet connectivity [9]. While issues such as language may slow the development of truly global on-line programs, the market for on-line higher education is almost certainly becoming a world market.

As Nicholas Carr has pointed out in his book *Does IT Matter?,* [10] simply adopting new information technologies such as distance learning will not make businesses or schools more competitive. It may make them more productive or give them access to larger markets, but the forces of global competition will ensure that consumers (students) everywhere are the true beneficiaries of these technology investments – not the institutions that make the investments.

Of course, competitive forces do not allow schools to avoid these investments. The school which does not offer competitive on-line programs cannot compete with the school which does. But simply investing in an on-line program does not mean the school will see increased enrollments and additional returns on their investment. How can universities gain the most benefits from their investments in on-line programs, even as the market reduces them to a simple cost of doing business?

The Internet has had surprising results for business and the future is far from certain. Most of the businesses which have thrived on-line have been those that captured a significant share of the on-line market in their field (ebay, Google, or Amazon.com), and could take advantage of large economies of scale, or those with very well-defined niches supported by strong brands and consumer awareness. The on-line marketplace is very unforgiving to businesses without a very clear competitive advantage.

If this holds true for higher education, many universities may find their student base – both on-line and in the classroom, eroded by the on-line programs of larger or more prestigious (or more tightly-niched) institutions. The promise of more students through on-line programs may become a significant competitive challenge.

Conclusion.

Achieving long-term success in the competitive environment of on-line education will require university administrators to rethink the role of their on-line programs and begin to consider the strategic competitive nature of their programs, as well as the purely academic issues. In fact, the competitive nature of all programs – on-line and classroom-based, should be considered when

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planning for the future. The assumption that on-line programs will continue to attract a supply of new student customers must be questioned.

Following the lead of on-line businesses, universities should carefully consider the specific audiences their on-line programs are aimed at, as well as the factors that differentiate these programs in the on-line market. Institutions with very strong national or international prestige – brand recognition, can use this brand power to expand markets on-line. Those without such brand equity (the vast majority), must find other discriminators.

Fortunately, the Internet offers opportunities for almost infinite disintermediation and specialization. Universities pursuing differentiation in the programs will have the opportunity to specialize and use creative partnerships to build competitive programs without making huge investments. Teaming between universities to offer on-line programs in various languages, or with foci on various regions or tailored niche disciplines become possible in the on-line world. On-line educational partnerships also allow universities to more easily out-source expensive or difficult course offerings, allowing them to divert resources to their primary niche. Ultimately, this offers the possibility of "virtual" degree programs where courses are offered by the best faculty from a variety of universities – each specializing in a single area.

The rapid expansion of the Internet and on-line economic and educational activities has left research struggling to catch up. There appears to be little definitive and easily-generalized research available on the long-term effects of the Internet on competition in many fields, including business or higher education. This should be remedied as quickly as possible.

The detailed examination of possible competitive approaches and outcomes is beyond the scope of this paper. Instead, it supports a call for administrators, faculty members, and even students to rethink the strategic role of on-line programs and modify their policies in light of the emerging competitive changes in the market for higher education. It also suggests a future research agenda that includes combing the existing and emerging body of research into on-line business for conclusions and data that can be applied to on-line education as well.

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