INTRODUCTION

This article describes research undertaken at the Scholarly Communications Lab of the College of Information and Computer Science at Long Island University in the area of higher education e-learning market in the United States. It is organized around three topics: a definition of e-learning and distance education; a description of the size, growth, and future outlook for this market; and the identification of some of the key growth drivers both historically and for the future.

The distant education market is now a mature market and has been around for a long while, with its antecedents established decades ago. The market has grown substantially in the last 10 years, and will continue to grow significantly, with an estimated market size of over $17 billion in 2010, representing a penetration rate of over 30% of the total higher education market in the United States. Many institutions of higher education have embraced some type of online programs, with 96% of universities with enrollments of 15,000 students having some e-learning programs. Major new entrants from the for-profit sector are now active in this marketplace. With the combination of new entrants and new technology advancements, the opportunities for value creation have increased while the nature of competition has intensified substantially.

BACKGROUND

According to Western Governors University (USA), distance learning and e-learning is simply:

Education that takes place when the instructor and student are separated by space and/or time. The gap between the two can be bridged through the use of technology—audio tapes, videoconferencing, satellite broadcasts and online technology, just to name a few—and/or more traditional delivery methods, such as the postal service. (WGU, 2004)

As communications and computer technology evolve, the definition of distance learning continues to develop. Asynchronous or time-delayed computer conferencing has given institutions the capability to network groups of learners over a period of time, allowing students in distance learning programs to be taught in groups rather than as individuals (Gunawardena & McIsaac, 2003).

Distance learning, before it evolved into primarily e-learning, has been around for a long period of time. It began in the second half of the 19th century with the exchange of print materials, assignments, and feedback by mail. Over the course of the 20th century, the development of radio and television made the delivery of additional materials (lectures and demonstrations) by electronic means possible. The 1950s saw the growth of a number of video projects that sought to identify expert science, math, and language teachers who could spread their expertise to students across a region or across the whole country. In 1989, Congress enacted the Star Schools legislation, intended to deliver quality instruction to largely rural or underserved areas. Among the Star School projects were three courses designed for adult learners, two of which used a studio teacher providing regular classes on topics ranging from job-seeking skills to skill-building needed to qualify for the GED. (www.ed.gov/prog_info/StarSchools/).

CURRENTLY CHANGING DEVELOPMENTS

More recent technologies have expanded the number of communication channels available to distant educators. Email and computer conferencing began in the early 1970s as part of the government sponsored ARPANET (Advanced Research Projects Agency Network) (Harasim, Hiltz, Teles, & Turoff, 1995). Although scientific work groups quickly adopted these communicative tools to advance collaborative activity at a distance, they were not available to educators and off-campus students for another decade. In education, these tools could permit learners to exchange and debate
ideas. But only in recent years have educators recognized the potential of these tools to support a different model of distance education, a model built on more constructivist principles of learning. Over the 20th century, the technological possibilities have changed, although the pedagogical model has not (Tolmie & Boyle, 2000). Most distance courses that use the modern information handling technologies are still built on a transmission model in which instructors create material to be consumed by learners, and learners are given exercises and tests that they submit to the instructor demonstrating their mastery of the material; that they understand it, remember it, and can apply this knowledge in testing situations (Askov, 2003).

In the 1990s, new tools became available to the scientific community: the Internet and the Web. By the mid 1990s, these were made available to the broader public. Educators recognized the potential of these technologies immediately, and a few distance educators began to recommend a new model of education that emphasized the qualitative improvements in learning itself, if learners had ready access to a variety of electronic materials and were supported in examining and discussing these materials with other learners. These educators sought to distinguish this form of distance learning from more traditional forms by using new terms: distributed or flexible learning. (Bates, 2000) It is estimated that by the year 2012, schools and colleges will routinely use “computerized teaching programs and interactive television lectures and seminars, as well as traditional methods” (“Emerging,” 2003, p. 8). Videoconferencing and other technologies will also help enrich media and provide many benefits of face to face instruction (Wonacott, 2002).

In 2003, the first in a series of annual reports by The Sloan Consortium on the state of online learning in U.S. higher education, “Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003” was released. The initiation of this annual study emerged from a search for an authoritative answer to the question: “How many students are learning online?”

Market Size estimates. The answer determined by that first study was that for the fall 2002 term, slightly more than 1.6 million students took at least one online course at U.S. degree granting institutions. This same study asked institutions to predict the rate of growth (or decline) in their online enrollments for the following year, and respondents projected an average annual growth rate of 19.8%. This number was substantially above the annual rate of increase in the overall population of higher education students, whose annual growth has been estimated as between 0.8 and 1.3% (Allen & Seaman, 2006). It is evident that higher education administrators have been both optimistic and aggressive in their views of the growth of online learning in the U.S. This view of the marketplace has been validated, and significant investments into this market for e-learning courses have followed consistently. For example, the second annual study, “Entering the Mainstream, The Quality and Extent of Online Education in the United States, 2003 and 2004,” found that the overall growth in the number of online learners actually exceeded the optimistic projections of the previous year, increasing at a 22.9% rate, to reach 1.9 million online students for fall 2003 (Allen & Seaman, 2006).

The strength of this market in terms on new students, new courses, and new entrants continue unabated. In 2003, the yearly increase of about 360,000 new online learning students was matched by the results of the 2005 study, Growing by Degrees, Online Education in the United States, 2005, with more than 2.3 million students taking at least one online course during the 2004 fall term. Despite a lower percentage increase reported in 2005 of 18.2%, as there is an increasing larger base population, there are more and more students taking online courses and further there are increasingly more students taking online courses for the first time. This trend was further illustrated in the results the fourth annual Sloan Consortium study showing there has been no leveling in the growth rate and strength of this market. During the 2005 term higher education institutions taught nearly 3.2 million online students, an increase of about 850,000 and a growth rate of 35%. 2005 marks both the largest increase in the number of online students and the largest percentage increase since these tracking surveys have begun. In 2005,

Table 1. Students taking at least one online course—Fall 2005 (Source: Allen & Seaman, 2006)

<table>
<thead>
<tr>
<th>Undergraduate</th>
<th>2,621,713</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Professional</td>
<td>39,350</td>
</tr>
<tr>
<td>Graduate</td>
<td>443,827</td>
</tr>
<tr>
<td>Other for-credit</td>
<td>75,159</td>
</tr>
<tr>
<td>Total</td>
<td>3,180,550</td>
</tr>
</tbody>
</table>