

## **GLOBAL ACCESS TO E-LEARNING:**

### **BARRIERS AND INEQUALITIES**

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For many of us in higher education, the dawn of the 1990's found our campuses inadequately wired and our computer systems behind the curve. The majority of our institutions had few if any courses being delivered via electronic technology, and very few leaders in education even dreamed of the phenomenal impact of the technological revolution on what we now call e-learning. As a result of that unprecedented growth, the International Data Corporation (IDC) projects 2.2 million enrollments in distance learning courses in 2002 -- up from 718,000 enrollments in 1998, and approximately 85 percent of all two and four-year colleges are offering such courses.

Merrill Lynch recently reported that market forces are providing a catalyst for radical changes in the way education is delivered on a worldwide basis. The Merrill Lynch research into these market forces identified six megatrends -- technology, demographics, globalization, branding, consolidation, and outsourcing -- that are playing a significant role in this transformation. While these societal trends are precipitating a significant and global transformation in the teaching/learning process, the overwhelming majority of the world's citizens are being left behind as this revolution occurs.

To be specific each individual megatrend brought positive results that facilitated growth in the e-learning environment and, at the same time, exacerbated the disparities for poorly endowed educational systems. We shall analyze each of the six megatrends and comment on the real and perceived barriers and inequalities.

#### **MEGATREND #1: TECHNOLOGY**

Today, sophisticated web sites take billions of hits each year. Internet 2 is up and running, and a third generation of the Internet is well underway. New and improved computer systems are constantly coming on stream, and complex wire and wireless systems are booming in the marketplace. Multi-modal systems that include advanced videotaping, CD ROM, video conferencing, digital satellite uplinking, and on-line delivery allow educational institutions as well as corporations to increase dramatically their e-learning offerings. Among the latest technologies being tested are the delivery of hologram-like images over high-speed Internet connections, which result in learners receiving life-size images of their teachers in the distant classrooms wherever they might be located, as well as artificial intelligence and computer simulations being developed for the creation of adaptive, web-based courseware that will feature "pedagogical agents" or software "with personality."

But on the downside, perhaps the most disconcerting outcome of this spectacular high tech growth is the emergence of the “digital divide.” We are not providing access to this technology for the millions of those who could benefit enormously from its use but who have no access to it. In the United States, “three-quarters of households with incomes over \$75,000 have a computer, compared to one-sixth with incomes below \$15,000”. At a time when technical skill and the ability to communicate effectively are increasingly critical to economic success, it is tragic that 15 percent of 18 to 24 year-old Americans do not even have a high school diploma, one third of all adults have not gone beyond high school, and only 24 percent of Americans 25 years of age or older have a bachelor’s degree. Thus in regard to this megatrend, our increasing reliance on technology confers both advantages and disadvantages. For those who “have,” the benefits are ubiquitous and palpable; but for the “have-nots” the elevated emphasis on technology actually widens the gap with the “haves,” and thus exacerbates the inequalities of access.

## **MEGATREND #2: DEMOGRAPHICS**

Focusing on the United States alone, there are 76 million aging Baby Boomers who are planning to retire from the workforce in the near future, leaving the next generations to fill their shoes and support them in retirement. Educational achievement has trailed the demand for knowledge-based skills, and thus the gap between the haves and the have-nots has been widened. In an effort to span that chasm, the federal government established a “Title I program that allocates \$8 billion each year to try to help disadvantaged children get access to teachers and computers.” Yet “although secondary schools had a third of the country’s more impoverished students, only 15 percent of the Title I money went to these schools.” And to compound the effects of the digital divide, a recent report showed that “teachers’ aides rather than qualified teachers were teaching many students in Title I schools.”

We are hopeful that over the next decade more private corporations and progressive educational institutions will offer non-traditional, high tech programs to attract adult learners from all levels of educational attainment so that a record number of persons may become technically skilled employees. The problem abroad is even more profound: “less than 2 percent of the world is actually” on the World Wide Web, and “if we subtract the United States and Canada, the number is less than 1 percent”. Unless we mount Herculean efforts to modify dramatically our efforts to reach those without access to the Web, we will consign a huge proportion of the world's citizens to permanent exclusion from the rapidly burgeoning high tech jobs.

### **MEGATREND #3: GLOBALIZATION**

This trend implicitly acknowledges that our world is smaller than it ever has been; therefore the educational and economic opportunities before us are unparalleled. In the United States our post-secondary educational institutions are arguably some of the best in the world, and we have been preoccupied with meeting the needs of our students -- including international students -- in America. But if we wish to offer to students throughout the world, the ideas and practices that make our economy and democracy so powerful, we can't expect all of them to migrate to our shores: our education and training programs need to be delivered in multi-lingual formats with truly global accessibility. Otherwise countries that cannot educate highly skilled knowledge workers will continue to see skilled, high paying jobs lost to other nations.

### **MEGATREND #4: BRANDING**

In a society in which loyalty to such highly recognized brands as Nike, Mercedes-Benz, Disney, and McDonalds is abundantly obvious, workers, parents and young people who have a broad array of commitments clearly demonstrate devotion to education brands. Historically, institutions such as Yale, Harvard, and Stanford have commanded brand loyalty. But as education is delivered in a larger variety of forms, new brands of education providers such as Sylvan, Phoenix, Barnes and Noble, or the National Technological University, will compete with the Dukes and Yales for recognition. However, the old brand schools aren't taking this lying down, as illustrated by Princeton, Stanford, and Yale forming an alliance to offer online courses to their alumni, and then recently adding Oxford University to that group. Pam Dixon contends that unprecedented millions of Americans are hooked on distance education because taking courses via electronic means allows them to earn a degree or certificate or license from a "name" institution while keeping a job and/or busy life intact.

Having said that, offering a recognized brand alone will not guarantee success. Companies like Cisco Systems, IBM, Microsoft, and many other corporations are maneuvering to establish dominance as competition and revenues soar. Branded franchises will become increasingly significant, as learners return again and again to the knowledge well.

But the e-learning literature does not show significant references to the "have-nots" on the far side of the digital divide. Brand name companies and established institutions of higher education are doing very little to bridge that gap.

### **MEGATREND #5: MERGERS AND CONSOLIDATIONS**

With e-learning revenues escalating, this industry is undergoing considerable consolidation: Sylvan Learning Systems has acquired a number of education

companies and in 1999 bought a majority interest in the European University of Madrid; then a year later they announced their acquisition of the controlling interest in the University of the Valley of Mexico, as well as a hotel management school in Switzerland. And Kaplan, Inc., a division of Washington Post, Inc., just purchased a chain of 30 commercial colleges.

As is the outcome with branding, so it is with mergers—the products are delivered to the “digital haves,” and the “have-nots” seem to be left farther behind.

### **MEGATREND #6: OUTSOURCING**

With today's emphasis on teams and "business ecosystems," corporations often find it is more efficient and expedient to focus on what they do best, and develop a web of suppliers for outsourcing partners who are capable of providing other resources and expertise when and where needed. Merrill Lynch estimates that almost 90 percent of multinational firms outsourced a portion of their business in 1995, compared to only 60 percent in 1992.

As we consider the future of higher education, our institutions may choose to become more nimble and responsive to our students not by attempting to expand the array of degree programs, but rather by partnering with sister institutions as well as for-profit corporations to develop programs of study -- especially in the domain of distance learning. Peter Drucker believes that is the only viable alternative before us: “With a potential market for continuing adult education thus embracing at least 40 percent of the workforce, conventional institutions no longer suffice. They are too expensive and insufficiently accessible in a physical sense.”

But irrespective of which of these three approaches is used, for those of us based at traditional universities (i.e., those where most of the instruction is based on or emanates from the campus, and includes residential and recreational facilities for students) we must be sensitive to the “tragedy of the commons.” By definition, students who are not physically on the campus are unable to share in the life of the “commons,” such as having a cup of coffee with a faculty advisor and fellow students while sitting in the student union or playing a “pick-up” soccer game on the university quad. But we must make concerted efforts to ensure that as many of the resources as possible of the commons be available to e-learning students as well. Thus financial aid services, career counseling, chat rooms, and concerts should all be available electronically.

### **THE CHALLENGE**

The decade of the nineties left little doubt in our minds: the new technology has changed education forever – whether it be pre-kindergarten, higher education, or professional development programs for working adults. For the most part we are enormously supportive of this transformation that will equal the paradigm shift caused by the invention of the printing press.

The American society, in general has been enthusiastically receptive to the new technology. And many of us have learned to use it globally to seek unparalleled educational and economic opportunities.

Yet, in sifting through the megatrends, we find the persistence of the “digital” divide disheartening. Less than 2 percent of the world’s population is actually on the World Wide Web.

Hence, the challenge. Leaders in both education and business must first become aware of this evolving problem and then begin seeking ways to address it. Obviously, the new technology affords tremendous opportunities for all societies, including those who are currently “have-nots.” We sincerely believe that greater access to educational attainment will lead to more economic success as this technology is accessible to a substantially greater proportion of the world’s citizens.