

The Synchronous University in an Asynchronous World

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Abstract

The purpose of this presentation is to outline five trends emerging in U. S. universities with respect to technological change and present data regarding educational uses of technology in the university. Universities have long served as the repositories of knowledge and culture. Western universities were born from religious orders passing down oral and written rules and stories. As the needs of society began to dictate a broadened view of study, the universities through today serve to perpetuate their point of origin and enhance the society around them. Just as the availability of books allowed greater access to information by the public, and thus a changing role for the university, the rapidly emerging digital information systems will require adjustments of higher education towards more market driven institutions.

Introduction

There are at least five trends (Papalewis, 1999) that need to be considered with respect to the role of the university:

The first trend is the rapid expansion and infusion of technology into all aspects of society.

The second trend is the technological transformation of higher education.

The third trend is the changing professorate.

The fourth trend is public private partnering.

The final trend is leadership in the global education arena.

Trend One: The Rapid Expansion and Infusion of Technology

Into All Aspects of Society

Just as with the Gutenberg press centuries ago, the wonder of technology has progressed with a multiplicity effect that is mind-boggling. Electricity was the 20th century's foundation moving us from an agrarian society to the factories and homes of the city. Technology expansion will be the permanent undergirding of the future.

Some of the terms that now describe labor in the workplace: there is flextime, telecommuting, and the anytime/anyplace worker. These new ways of working will forever change the nature of leadership. Leaders, be they supervisors in an industrial setting or professors in a university department, will no longer be able to manage by relying on old techniques. Homemakers of today order groceries for dinner, shop for toys for a daughter's birthday, and check their banking statements all on internet.

Trend Two: Technological Transformation of Higher Education

Asynchronous learning has become common language in many higher education journals. Simply put, the term defines a learning exchange that does not take place concurrently, that is, instruction and reception do not occur at the same time. Most commonly, the term relates to computer mediated learning, where the teacher and student are separated spatially and meet only by exchange of information over an electronic medium. Asynchronous learning defines a breathtaking change in the possibilities for education. Technology has taken learning out of the constraints of the classroom. No longer are student and teacher bound by geography or even time. They can meet in a new manner, at their own pace, and from the location of their choice.

This is a dramatic development for the education profession. In the past, we all worked as teachers out of the same general setting: the

classroom. Early classrooms had a chalkboard, seats, and textbooks. Soon we added technology like overhead projectors, a television screen, and perhaps a telephone. With the 1980's came the entrance of the computer. Even then, though, the setting was the same. True, the computer allowed us to teach in different ways, but the general scheme of the teaching and learning experience was very familiar. The advent of communicating independent of the classroom is a watershed event that will reverberate through higher education long into the future.

Why is this technology so significant? Let's take a tour of the prospective college student's environment. Most college students are electing to go to traditional postsecondary institutions; that has not changed. However, new options are emerging quickly. Private proprietary schools have catered to non-traditional students that were not so well served by the conventional university setting. At these alternative schools, nontraditional students found classes at night, an academic calendar that made sense for people working full-time, and a focused vocational program. In this way, a population of students formerly inhibited by the rigid structure of higher education has been able to pursue an academic program with much greater ease. A similar event is now occurring with the traditional college population.

Even now, college students do not have to rely on traditional university education to acquire a degree. There are a handful of programs emerging that allow a typical 18-22 year old to acquire a complete degree over electronic media from their homes and at their own pace. That is a remarkable event. Many of these programs, require some residency time, but often this is limited to short summer sessions or a single semester culminating experience. Think of the implications of this shift. The advent of asynchronous learning disconnects college education from its traditional geography. Students are no longer bound by dislocation to distant schools.

Students are no longer bound to full-time, highly inflexible programs. Learning, such a vital component today over the life of the individual, can now occur virtually anytime and anyplace. That flexibility is the hallmark of a new age in education.

Trend Three: The Changing Professorate

The Information Age transforming our world is founded upon one defining element-speed. The traditional hierarchy of the past, with its time-consuming processes for decision-making and implementation, has become debilitating. Soon, that hierarchy will be altogether archaic.

The future of university professor's and the disciplines they espouse are directly tied to marketability. Leadership is shared and increasingly determined not by hierarchy, but by the needs of the task at hand. An individual in charge one day will be subordinate the next as the organization adapts in a dynamic, speed-driven environment. Leaders are more likely to be mentors and coaches rather than traditional "bosses." This trend toward team-based management is fostering a growing movement toward shared leadership in organizations. Because information flow is best managed collaboratively, collaboration will continue to be a landmark in management style. For the professorate, that reality brings a number of truths. As managers of the educational enterprise, we will no longer find scholarly detachment a beneficial response. Collaboration requires involvement at an intimate level some of us may find obtrusive. I think that involvement will be obtrusive certainly to the old ways of working, but I again hold out the hope that the resulting change in our perspective will reinvigorate the university. We will be more involved in the direction of our departments, we will be more involved in the broader debate about the function of education, and we will be more involved with the students that we teach. And to be relevant to the students that we teach, we will need to be involved in partnerships related to external agencies, corporations, and international universities.

Some of the most perplexing and challenging issues facing the professorate right now are curricular ones. In an age of rapid change in methods of knowledge transfer, how are we to design the curricula that are the blueprint for our work? How, for example, does one manage a virtual curriculum? How does a department track professors and students increasingly reliant on communication that is not always classroom-bound? How do we revisit the academic calendar in order to establish timelines for academic programs that are both sensible and responsive to the changing demographics and expectations of students? These questions are not easily addressed, but it is precisely these kinds of issues that present us with the opportunity to make good from the prospect of change. The curricula of tomorrow are going to be very difficult to outline, but we must begin to address closely these questions

Issues pertaining to the increased use of the Internet will dominate the next evolution of the professorate. Pertaining to students: how to determine student overuse of the information found on the Internet; plagiarism; critical analysis of the enormous information; and, developing skills needed to translate the information in coherent primary source research knowledge. Likewise, pertaining to professors: how to ensure faculty have the skills to navigate the web, critically assess the "research" that both students and they use for research, and their ability to develop web based courses for students around the world.

The new professorate will also have to adjust to a new climate of assessment. Outcomes-based thinking will dominate how new academic programs are shaped and implemented. Students and policy makers are already looking at education in light of a skills-based rubric. Schools and universities will need to reassess their detachment from the vocational viability of their students. Again, this highlights the need for market awareness and the skills needed by faculty to meet changing economic needs of ones country.

Trend four: Public/Private Partnering

The current educational system in the U. S. has been compared to the health care system of twenty or thirty years ago. Dominated by public and voluntary organizations, the healthcare industry was then a fragmented, high cost, technologically lagging industry. Few business partnerships developed because healthcare was thought to be innately unprofitable or even inappropriate for profit-seeking organizations. Today, the healthcare industry has been dramatically changed through business partnerships. It is tightly organized into sectors, is more efficient, has a deep technological infrastructure, and enjoys strong growth. The education industry is second only to health care in size-and is now undergoing a revolution of a similar nature for similar reasons.

International Data Corporation estimates that the 13% share private industry currently has in the education market will double in the next two decades. As with the healthcare industry, the revolution in private industry involvement is being driven by broad trends, primarily technological advance and demographic change. In the new knowledge economy, information is king. Business depends on knowledge-transfer now more than ever. Being the traditional distributor of knowledge, the education industry has become a prized economic arena.

The business sector is increasingly asking for and receiving changes in education. The demands of the market for certain professions, as well, the skills needed for tomorrow's workforce are areas the business sector is focused on and quite determined to have met.

Likewise, in the health care industry, partnerships with faculty in departments, as well, entire departments are being contracted with to research, and develop products for the specific company. Research for the sake of pure research is a luxury that is increasingly falling by the wayside. The university of the future will not look at all like the university of today.

Trend five: Leadership in the global education arena

Complacency during times of change must be avoided. Today, with the pace of change in education, one would be foolish to assume that nothing of importance has happened during the day simply because one did not see anything of consequence out the office window. The influences affecting our landscape are numerous, persistent, and gaining momentum. Little revolutions are breaking out daily in the once seemingly stable empire of education. To ignore them would be perilous.

Perhaps the most unique element of this era of turmoil for the educational empire is the sheer scope of the change that is occurring. The influences affecting education are not just local, regional, or national. They are, without question, also global. At no other time in history has there been such potential for genuine global influences to assert themselves in as dramatic and rapid a fashion.

Globalization, for our purposes, describes influences that are causing customary cultural, social, and geographic borders to disappear as we move into an age dominated by rapid, seamless information transfer. Governments often like to use the term to explain why the public educational universe is being dismantled. In this respect, the usage is more a shirking of responsibility than a description of international influences bearing down on the educational arena.

The loose usage of the term globalization is significant for the educational leaders of tomorrow. Again, change is going to occur regardless of our personal desire for it. How that change occurs, though, is where we, as educational professionals, have a genuine say. Globalization is altering the educational enterprise. However, that does not justify an emerging policy of abandonment. Globalization, like the advent of business partnerships, is a force that will profoundly reshape both the university and public education. As such, globalization has great potential value. We, as stewards of education, must assure that potential is realized.

Since education is a social phenomenon, and because education is under the influence of globalization, the broad social health of the world becomes important. We must now look at some challenging social trends with a global eye. Here are some sobering ones that will challenge higher education in the future:

- The world's 200 richest people together have more money than the combined wealth of 40% of the world's population.
- Canada, Norway, and the United States are the richest countries in the world; the poorest twenty-two countries all occur in Africa.
- An average American worker could buy a computer with one month's salary; an average worker in Bangladesh would require eight years of salary for the same purchase.

Globalization brings to education monumental challenges. As our arena expands inevitably toward an international scope, how should we adapt to best serve our country and our students?

Technology Use in the University

Given these trends, evidence of technology in current instruction suggests, very modest, but growing utilization. For example, at the authors' campus, a 7% increase in faculty participation in instructional technology workshops has been observed. While the numbers of participants is still small (approximately 150 faculty out of 900), there is movement. The approximately 20% of faculty corresponds with national figures.

It is important to note that in a system-wide survey in the California State University, over 70% of the faculty report the use of

technology in their teaching. Details on that use indicate that their use is for developing print material (word processing) on the computer (55%), video tapes (24%), overheads (21%) and encouragingly, e-mail (24%). The category of never used technology includes audio conferencing (69%), video conferencing (68%), interactive media (57%), power point (49%) and e-mail for asynchronous discussion (50%).

A 1999 survey in the university system indicates that 80% of students had access to a computer at home for class use and that they felt skilled at using it for their classroom needs. Over 60 % said their most frequent uses included word processing, Internet, email and library access. Use of spreadsheets, presentation graphics and databases were reported by 12 to 20% of the students.

Conclusions

Three main forces dictate the new reality for the educational leaders of tomorrow: technology, globalization, and adaptation. The leaders of tomorrow's educational arena will have passion, will have innovative ideas about instruction, will have a deep sense of ownership in the emerging university, and will be dedicated lifelong learners tied to the realities of economic endeavors. Professors can no longer be the "sage on the stage." The illiterate of the 21st Century will not be those who cannot read; they will be those who cannot learn and relearn in a constantly changing environment.

Leadership requires us to have vision, adaptability, and a dedication to lifelong education. We must be prepared to constantly reinvent ourselves at a moment's notice. We must embrace true partnering with a variety of agencies and corporations, both national and international.

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