

## **The Future of Distance Education: Research, Conceptual Development and Practice**

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### **Introduction**

Distance education is at a critical point in its history. The field has experienced an unprecedented growth in the past decade. However, an analysis of its current status in this presentation will raise some critical questions about the field, and if it can sustain its growth in the foreseeable future.

In the last ten years, distance education has had the support of state governors and information industry leaders. Almost all institutions of higher education have created high-profile programs for distant learners. A new eLearning industry has emerged. And the federal government is in the process of making dramatic changes in laws that affect the practice of distance education. Further, new revolutionary technologies are introduced on a regular basis that will make distance education even more appealing and enticing.

At the same time important questions have remained unanswered. For example, introduction of technology to most institutions have decreased the cost of services, except in education. In the past decade, billions of dollars have been invested in technology infrastructures in higher education, and K-12 schools but the cost of education keeps increasing. A close look at institutional structures in higher education and K-12 schools shows that certain organizational cultures, arbitrary rules, and federal laws are among the factors that are inhibiting cost containment, thus threatening future growth of distance education.

### **Growth of Distance Education**

For those of us who have been involved in the field of distance education for more than two or three decades these are interesting and exciting times. Our field, since 1990, has moved from the periphery of practice to the mainstream both in higher education, and K-12 schools, as well as in business, and government. Between 1995, and 1997-98 academic year the number of distance learners in higher education grew from 754,000 to 1.6 million (U.S. Department of Education, 1999), and is currently estimated to be more than 3 million. What's more, the field is growing at a rate of 41% among 75 randomly selected institutions of higher education that were surveyed by the Primary Research Group. Nevertheless, distance, or as it is called in some institutions, "distributed learning" has touched the lives of only 8% of undergraduate students, and 10% of graduate students. (U. S. Department of Education, 2003).

Although reliable statistics are lacking about the involvement of faculty in distance teaching, it is estimated that between 2 to 12% of faculty are engaged in some form of teaching via technology beyond the campus proper in various institutions of higher education. This estimate is based on Rogers' diffusion of innovation model. The model indicates that some "innovators," (2.5%) and "early adopters" (13.5%) have joined the ranks of distance faculty, but we have a long a way to go to reach the levels of the "early majority," (34%) let alone "late majority," (34%) and the "laggards." (16%).

At the same time, a new industry has developed that provides so-called eLearning services to private corporations as well as to public institutions of education including K-12 schools. Despite the demise of

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the dot-coms, companies involved in distance education and so-called eLearning are thriving and growing everyday. In 2003 the size of eLearning business is expected to reach a healthy \$11.5 billion. The use of distance education in the government sector including the military services, and law enforcement agencies has increased too. All branches of the military and most law enforcement and government agencies rely on some form of distance education, although hard data about these sectors are sorely lacking.

### **Increasing Cost of Education.**

Despite this growth, and investment of billions of dollars in infrastructure, the cost of education keeps increasing. We have invested heavily in developing the Internet, and now Internet2, and making the system more robust by laying millions of miles of fiber optic lines. This worldwide network is supported by supercomputers in its nodes, and thousands of servers the majority of which are put to work by institutions of higher education. Nevertheless, we have experienced Fordism in reverse in education. The cost of enrolling in college has increased from 5 to 15% in the last decade on a steady basis. Some institutions are increasing tuitions by 35 to 38% this year. And given the financial status of most of the states the outlook does not indicate any improvement in the foreseeable future. California, for example, has a deficit of 30 billion dollars, and will have to increase college tuition too make ends meet. It has already doubled the cost of enrolling in community colleges this year. Although the cost of enrolling in a course in a community college in California is still very reasonable, doubling the tuition in one year is an unprecedented move in the last two decades. In its April 2003, *BusinessWeek* magazine called this situation a "crisis." Referring to higher education, the author said "...this cornerstone of the U.S. economy is threatened by escalating costs, diminished revenues, and a troubling inability to manage the crisis." (Symonds, 2003).

### **New Challenges**

As we celebrate this historic growth in distance education, increasing costs in all sectors of education should give us pause, and we should become cognizant of challenges that are on the horizon. A promise of the application of information technology to education was to increase revenue, or at least decrease costs, as it has done in other enterprises. Since the dramatic growth of the field cost of education has increased. How practitioners in distance education could explain, and justify this increase in cost?

One explanation is the lack of any structural change in educational institutions as compared, for example, to business and industry. In the early 1990's when business and industry employed information technology to meet the challenges they were facing as the result of the economic recession, they went through a process of re-engineering their organizations. Hardly a day went by without newspapers, and business magazines running stories on how various businesses from insurance companies to auto manufacturers were right-sizing, down-sizing or re-engineering their management systems. No matter which euphemism they chose to use, the main message of these stories were clear. Adoption of information technology was only justified, if it brought the front-line worker close to the decision making process. No longer, the front-line auto worker was separated from key decision makers of the corporation by the mid-level managers. In fact those mid-level management positions were by-and-large eliminated in many progressive companies.

### **Stagnation in Education**

Nothing of the sort happened in education. While educational institutions in all levels were investing in information technology by millions of dollars, their organizational structures remained the same. It is not suggested here that schools or universities should have followed patterns of re-engineering that were implemented in business or industry. However, as management experts, such as Peter Drucker argued at the time, adoption of information technology requires some organizational change, if the organization is

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going to receive any benefit from it. Investing millions in computers and fiber optic lines, and conducting business as usual would simply increase the costs!

### **Cultures of Education**

A broad look at education indicates that there are three cultures in each institution that work along each other. These cultures are very different and work in parallel to each other without the synergy that would make them more effective.

The Pre-Modern Culture of Faculty – Faculty live in a pre-modern environment as craft persons. They are in charge of their course in the sense that they create the entire course, design it, deliver it, and evaluate the results. They are in charge of managing the whole process. There is no division of labor required for what they do, as modern organizations may require. Technology is not required either. Faculty, in general, can do business with a light bulb, a piece of chalk and a blackboard. Any additional technical devices or technological processes, such as instructional design, would simply increase the cost and complexity of what they do.

The Modern World of Administration – Administrators in schools and universities live in a modern environment as defined by a bureaucracy. They are responsible for education of hundreds, if not thousands of students. They work in organizational structures that are developed around division of labor. They use technology to the point that enables them to sustain the bureaucracy and uphold its operations.

Post-Modern Entities – Certain groups of professionals work in post-modern structures. They not only benefit from division of labor and technology, but they use these techniques to develop new solutions that would meet the needs of learners with flexibilities, and efficiencies they would expect in a post-industrial society. Professionals working in continuing, extended, and independent studies, distance education and virtual libraries fit this category.

### **Parallel Universes**

Faculty, administrators, and distance educators work in parallel universes within the framework of their respective institutions. Their cultures of work are very different, and are based on assumptions that are incompatible with each other. For example, while instructional designers are trained to work in groups and understand the necessity for collaborative work, faculty work as individuals. They do not have a compelling need to collaborate with anyone to do their work.

Administrators might use mainframe computers to keep track of records of thousands of past, current and future students but they may not see the urgency for streamlining these operations to the class room level via course management systems, and extending access to students.

Limitations imposed by these cultural differences over the work of distance educators inhibit them to develop critical mass in student populations to meet requirements of economies of scale, while meeting individual needs of students. In fact, developing efficiencies of scale is viewed by faculty as making education impersonal. Administrators by responding to such pressures from faculty, or other sources set arbitrary rules to prevent distance educators to meet the needs of students for flexibility or efficiency in the name of keeping education personal, thus keeping unknown number of students out of reach of educational services. Education anywhere, anytime, under such rules becomes education sometimes, somewhere.

## Conclusions

While educational institutions have co-opted distance education, their organizational structure is not conducive to the development and growth of the field. The challenge of our field, today, is to respond to the following question: How can distance education as a post-industrial information-based idea survive in institutions that were created to serve industrialized mass education, with faculty who are rewarded to remain crafts men and women and work in a pre-industrial culture?

This is not to say that any of these cultures is superior to the other. Faculty are afforded the luxury of conducting research to publish and share their ideas throughout the academic world. Distance education, in turn, is a student oriented practice and culture. This divergence of interests, and goals is partially responsible for distance education not to yield the results that it should. Under such circumstances, the cost of education increases at current rates. To deal with this situation we are faced with considering several policy alternatives:

1. Find points of synergy among these three cultures; keep the true character of each of them but try to provide an organizational structure in which all three can prosper side-by-side as parallel universes.
2. Split institutions to those that are dedicated to teaching or research. This is a policy consideration that is currently under review in the United Kingdom.
3. Establish distance education operations as auxiliary organizations to the university in the form of for-profit, or non-profit entities.
4. Reorganize educational institutions to infuse the post-modern culture as new instructors replace the increasing number of retirees, when baby boomers leave the work force in the remaining years of this decade.

As you can see each of these policy considerations has far reaching ramifications for us as distance educators, instructors and administrators, as well as other professionals who work in the private sector or the government. We need to consider these choices and perhaps other alternatives that are not on this list and begin to influence our respective institutions to seriously review them and act upon them. Failure to do so would not bode well for distance education. In the foreseeable future an increasing number of decision makers will look at their recent investments in telecommunications infrastructure, media and computing hardware, software licenses, and personnel, as well as operational costs. And they will ask if distance education is a viable option for teaching and learning.

They will realize very quickly that under current organizational structures, distance education is not a viable solution, but has added to their costs, complicated the lives of their faculty and extended services to a fraction of students than the potential would allow. If history has taught us a lesson, they will condemn distance education as ineffective, inefficient, or costly, as they have done so at least two other times during my professional career in the field.

It is incumbent upon distance education professionals to highlight the shortcomings of organizational structures in educational institutions, before distance education is condemned for a third time in recent history. Under current organizational structures that promote an uneasy coexistence among three cultures indicated here, it is difficult if not impossible for distance educators to:

- respond to individual needs of students,
- provide differential starting, and ending points for each student, depending on his or her ability to complete a course of study,
- develop economies of scale through differential staffing of each course, and
- offer solutions such as competency based education, as proposed by the Western Governors University, or other similar models

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Without these and similar measures, distance education is a solution that will not make a difference, but to increase the costs and create a sense of disillusionment. Such disappointment would be similar to when educators rushed to adopt educational television, or later when they applied the use of telecommunications satellites, or cable television to solve educational problems. As in the past, these technologies were applied to existing organizations without hardly any modification in their structures. In short, these early harbingers of post-industrial systems of education were applied to organizations that demanded industrial, lock-step solutions for educating a work force from which it was expected to mass produce identical results.

The future workforce, we are told, needs to consist of independent thinkers and decision makers who can provide novel solutions to situational problems as they may arise. Personalized, technology-based education can offer such a possibility in the form of distance education. But, our field needs to come to terms with the industrial structure of our institutions and pre-modern practices of some of our colleagues in order to prosper and grow in the future.

At this point, I would like to open the floor for a discussion of these options, and other alternative models and point of views.

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### Biographical Sketches

**Farhad Saba**, Ph.D., has presented in research and information sessions, hosted cracker barrels, exhibited, and participated in 16 out of the 19 Annual Conferences on Distance Teaching & Learning. A holder of the Charles A. Wedemeyer Award, he has been involved in the field of distance education for 30 years. He is professor of Educational Technology at San Diego State University, where he teaches courses about distance open, and extended education, as well as multimedia and cyberculture. He is co-founder of Distance-Educator.com, which has been a source of information and inspiration to thousands of professionals around the world, since 1995.

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