Transformation of University Organizations: Leadership and Managerial Implications

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ABSTRACT

Technology and globalization are forcing higher education institutions to transform themselves. This paper aims to contribute to a better understanding the leadership and managerial implications of recent developments for higher education. Reviewing unique characteristics and the fundamental changes shaping higher education, the paper examines the need for organizational transformation and the major managerial implications.

Keywords: Globalization, technology, educational transformation, management, e-learning.

INTRODUCTION

We observe many interrelated developments are forcing our higher education institutions to transform themselves. New learning environments based on networking, increased need for lifelong and just-in-time education, emerging technology-based distance education providers, improved global reach through cheaper communication and permeable national borders are some of major compelling reasons for system-wide change. As Inglis, Ling and Joosten (1999:14) suggest, the current era is a period marked by restructuring and transition, in which social institutions -including education - are undergoing dynamic transformation.

An ever-increasing number of universities are moving to adopt alternative modes of delivery, variously known as distance education, open learning, distributed learning, online learning or virtual education. They are doing this in pursuit of access and equity, for purely commercial imperatives and to value-add their on-campus teaching and learning. It is vital to have a broader perspective of the way in which these developments impact the environment. For this reason, the paper begins with a review of the underlying changes shaping higher education, then examines the need for organizational transformation and the major managerial implications and concludes by discussing the contribution that the literature can make toward resolving such issues.

UNIVERSITIES AS UNIQUE ORGANIZATIONS

For the leadership and managerial approaches to be effective, the characteristics of the universities must be taken into account. Universities are unique organizations with very special characteristics such as the division of power between faculty and administration in all governance structures and processes, the lack of agreement on and ambiguity of the institutional goals, the fragmentation and disintegration of different groups and the lack of overall strategic direction and consensus (Sporn, 1999:35). Birnbaum (1989) distinguishes

the difference between a typical business organization and a typical university by characterizing the latter as having:

- > Less specialization of work activities (assistants and full professors essentially do the same things)
- > Greater specialization by expertise ('unnecessary' history professors cannot be assigned to teach accounting when enrollments shift).
- > A flatter hierarchy (fewer organization levels between the faculty 'workers' and the chief executive).
- > Less control over inputs (i.e. non-selective student admission).
- > Low accountability (because the administrative hierarchy and control system are less involved in directing goals).
- > Less visible role performance (faculty usually carry out their professional teaching responsibilities unseen by either administrators or other professionals).

Different approaches peculiar to academic organizations have developed in the literature. Depending on the focus, these differentiate between structure and authority concepts leading to bureaucratic models; the importance of professionals in the collegial model; power groups and interest representation emphasized in the political model and in the concept of 'organized anarchy' and elements, connections and environments described in the concept loosely coupled systems (Sporn, 1999:35-6). In a loosely coupled system, relations among various hierarchical levels, exchanges among various operational units, decisions about initiatives to undertake, and interpretations of events occurring internally and externally, are marked by indeterminateness and ambiguity, even though ties holding the organization together certainly exist. By virtue of loose coupling, an organization is not obliged to react to every change that occurs in the external environment. It can adapt to an unusual situations without being entirely captured by them, while preserving the identity, uniqueness and insulation of each of its parts (Strati, 2000:19).

Table: 1 Different Perspectives and Understandings of Faculty Members and Administrators Management's problems with academics

Academics' problems with management

- Lack of understanding of academic imperatives; denial of specialist expertise
- Interference with the right to work autonomously; excessive supervision
- Rejection of collegiality and the right to open decision-making
- Pressure to lessen commitment to an 'invisible college'; rise of corporate culture; individual rights needs ignored
- Less time to do core tasks due to increased administrative load; larger classes; less able students; low morale
- Softening of key distinction between academic and support staff
- Increasingly intrusive quality processes
- Erosion of core values of commitment to discipline and professional control

• Self-indulgence; lack of relevance; denial

- of managerial competence
- Attempts to challenge proper administrative authority
- Excessive emphasis on discussion and due process; time wasting, inefficient meetings; unwillingness to take responsibility
- Poor departmental and institutional cohesion; marginal loyalty to work unit and university; lack of entrepreneurial
- Unwilling to share burden imposed by tighter budgets; negativism; culture of complaint and accusation
- Inability to accept blurring of roles in the modern university
- Lack of accountability
- 'Over-professionalism': narrow, excessive specialism; slowness to change to accommodate new external demands

Furthermore, there are significant differences in the perspectives and understandings of faculty members and administrators with regard to key organizational issues. Ramsden (1998:27) describes the differences between academic and university management perspectives in the Table below. Familiarization with these differences will help to make the tasks of management easier and more effective.

Organizational theory has a great potential for assisting university administrators in dealing with challenges in a turbulent environment. In fact, the literature on higher education is very rich in terms of the resources that address management and organization issues of universities. Many researchers have studied different aspects of organization theories and management applications employed extensively in businesses (Sporn, 1999:57-72).

However, incautious and inappropriate utilization of the concepts and approaches have caused some contradictions. For example Gumport (2000:73) criticizes employing business related concepts and principles in higher education:

In many ways, adopting business rationales with strategic management principles has become *de rigueur* for repositioning higher education organization to compete within new economic realities.

Its worth noting that leaders of public colleges and universities today are expected to demonstrate some willingness, if nor enthusiasm, to consider market forces and demands for relevance, or else risk losing some legitimacy. However, in this conception, there is no attention to what is stake in short sighted adaptation to market forces: or is there a provision for public good that may exceed the market's reach.

Applying business concepts and approaches and ignoring the unique characteristics of the universities will not make sense. Adaptability and feasibility of the concepts and their application must be examined thoroughly before using them in the context of higher education.

An organizational theory which is related and adjusted to the educational environment and sound business practices is most likely to provide a valuable and coherent knowledge base on which university administrators can base their judgments and decisions.

FACTORS SHAPING TODAY'S UNIVERSITY CONTEXT

Words such as *volatile*, *uncertain*, *dynamic*, or *complex* are commonly used to describe the environments that many private and public organizations find themselves in today due to extensive changes and transformations.

The higher education environment is no exception. While change, according to Farnham (1999:4-5), has been incremental throughout the history of higher education, it is currently on a steadily accelerating trajectory.

In essence, higher education is shifting from an elite, introspective and relatively stable system which has been traditionally producer-led to a mass, open and unstable one which is increasingly being driven by the sometimes contradictory needs of its 'customers' or 'clients' - governments, employers and students. Figure: 1 depicts the relationships between the major change drivers and associated changes in the higher education.

Figure 1. Effects of the Major Changes in Higher Education Context

Major Change Drivers Globalization-related drivers Technology-related drivers

Emerging advanced technologies (e.g. voice recognition, virtual reality, etc.) Advancement in ICTs (e.g. more powerful, smaller, faster and cheaper devices)

Increasing economic competition among countries

- Rise of market-related values
- Fall of communist regimes and end of the Cold War
- Loosening national boundaries
- Massification of higher education
- Privatization of higher education

Major Generic Changes

Changes in the Higher Education Context

- Cheaper and effective communication connecting people around the world
- Explosion in the generation of information and knowledge
- Shortened life cycle of information
- · Faster capital flows among countries
- Education and training demands of newly emerged employment categories
- Rapidly changing nature of works and associated constant training demands of employees
- · Search for new potential markets due to shrinking markets and revenues (e.g. education market

Increased demand for frequent, any time, any place education

Highly diversified student body Increased international competition

Emerging e-businesses and e-companies as educational providers

New, more interactive learning environments (i.e. e-learning)

- Customization and individualization of programs and courses for highly diversified student body
- Convergence of distance and face-to-face education Increased interest for open and distance education
 - Increase in the number and types of educational products (e.g. hardware and

Increased government intervention and rise of accountability and quality concerns

Changing nature of university and academic

profession

teaching and differentiation of knowledge areas

Increased partnerships with business firms

Commercialization of university research and

 Universities as 'wealth creators' Rise of market-centered values Shrinking government funds

- Emerging new types of technology-based distance education providers software)
- New forms of applications of open and
 - distance education
- Need to find new markets

Need for effective university management due to emerging complex organizational structure

The New Higher Education Context

- Increased instability and complexity due to:
- market share and resources; many new national and international players;

increased competition for

- unfamiliar, untested new markets new learning paradigms;
- changing role of higher education institutions;

 new educational technologies;

bureaucratic organizational structures. oversize, slow and

Similarly, Gumport argues (2000:70-1) that public higher education has been moving from the idea that higher education is a social institution toward the idea that higher education is an industry.

Alexander (2000:426-7) observes that the government-higher education relationship has evolved from one of authoritative oversight to one of active involvement in financial arrangements and economic decisions. This evolution represents a significant change in governmental expectations of higher education.

Under new arrangements, governments are simultaneously devolving more control over programs and budgets to individual institutions while directly intervening in higher education systems in order to ensure greater economic efficiency, quality of outcomes, greater student access and accountability.

Among other factors effecting change, technology and globalization have been especially influential on higher education for the past several decades. These may be termed 'change drivers' since they have greater impact than the others and in turn trigger many other changes.

Inglis et al. (1999:16) assert that technology, especially information technology, is the key component of the change that characterizes the current period. Closely interrelated with technology is globalization that inherently demands the breaching of time and space limitations, and thus draws upon information technology. At the same time globalization relies upon technology, technological developments also drive globalization.

It may be hard to establish direct cause and effect relationships or clear correlation between individual change drivers and specific changes because any given change driver may simultaneously create various changes and interact with a number of other change factors. Moreover, the scale and scope of the changes are not universal; rather, the results of the changes may be expected to spread rapidly through increased global interaction and communication and through supranational organizations such as the OECD and the World Bank, the rise of virtual institutions and other forms of transnational and inter-sectoral strategic alliance.

The generic and higher education related changes in turn create an education environment that is very distinctive and radically different from anything in the previous era. The impacts of the changes are so far-reaching and widespread that the fundamental assumptions of higher education are brought into question. For this reason, the technology and globalization issues deserve much closer analysis as the main change drivers.

Technology as a change driver

Information and communication technology (ICT) is one of the five technological enablers, along with genetics, energy, materials, and brain related fields that will shape the world dramatically (Coates, 1998:35-6). No other technology has been growing as fast as ICT, in either technical or commercial dimensions (Gallaire, 1998:48). International economic integration, the transnational nature of modern businesses and global capital markets have been greatly facilitated by advanced ICT systems (Farnham, 1999:5).

Oliver (2000:157-8) sees new technologies as powerful tools in providing learning environments where teachers and learners are partners, and where learners have a wide variety of choice in the nature and form of their learning. Technology-supported learning environments offer many opportunities for both teachers and learners including:

- situated and contextualized presentation and delivery of content and information in flexible modes;
- > interactive and engaging learning settings;
- > communicative elements to support the independent learner;
- > collaboration, communication and co-operation between learners;
- place and time independence for learning.

New forms of access are required to provide time and place flexibility, especially for adults as they adjust to lifelong changes in work and social life. This demand for flexible education stems in part from the knowledge explosion (Inglis *et al.*, 1999:20). The lifespan of knowledge is becoming increasingly short and there is an unparalleled pressure to remain at the forefront of knowledge use and production (Levine, 2001: 255). Owing to rapid changes in technology and the creation of employment categories that did not exist ten years ago, workers and employers must be educated constantly. As the nature of the work has evolved, so have the needs of those in the workforce to periodically upgrade their capacities. This has led to the development of a variety of education opportunities beyond bachelor's degree (Altbach & Davis, 1999:7), including continuing education, professional development, and competency-based programs.

Transferability of the instructional material into digitalized format and the concept of learning objects, whereby instructional resources can be stored in network databases and adopted or adapted by educators and learners alike according to their needs, have led educational instruction to become a commercial product. Moreover, shrinking internal markets and augmented popularity of technology-based distance education programs have resulted from the demand for flexible and life-long learning and have made the higher education industry very popular in the eyes of the private sector. Cheaper and more diversified communication, loosening of national boundaries, faster capital flows among countries, and the privatization or commercialization of higher education make the whole world a potential market. As a result, institutions are increasingly looking to markets beyond their traditional borders, and higher education is becoming in effect a major export business.

Globalization as a Change Driver

Globalization is a widely used term with a number of characteristics attributed to it. There is, however, little agreement on its definition, characteristics, or effects. Dudley (1998: 22-25) argues that developments in communication technologies, together with the post-Cold War 'peace', facilitate and provide a context for processes of globalization. Although globalization ostensibly has cultural, political, and economical dimensions, all of the developments that contribute to globalization processes are structured by a rationality that is principally Western (largely American) and principally economic. Global culture is about mass consumption. Farnham (1999:5) comments that present-day globalization, compared with that of the past, is more homogenized, wider in its influence and deeper in its invasiveness in the international market economy. Globalization has three major elements: the organization of production on a global scale; the acquisition of inputs and services from around the world that reduces costs; and the formation of cross-border alliances and ventures that enables companies to combine assets, share costs and enter new markets.

According to Dudley (1998:25), globalization implies that international markets and money markets, rather than national, social, and/or political priorities, should determine public policy. Such policies, almost without exception, require governments to reduce public spending, deregulate capital and labor markets, minimize welfare provision, and eliminate or privatize as much as possible of the welfare state. The conservative economic policies, pursued by the US, UK, Australia, and Canada in 1980s and 1990s all had the same characteristics (Slaughter 1998:55-6). To regain past successful economic performance or to

sustain prosperity in global competitive settings, these governments shifted public resources from social welfare programs to economic development efforts. Technology innovation programs were the primary mechanism for these efforts. These policies have had farreaching implications for higher education:

- Because of tightened public resources, government funds to universities have decreased dramatically over the years. Higher education institutions are expected to create their own funds in order to be more market oriented and operate as private businesses. Suggested alternatives for public universities to create funds were to promote industrial parks, invest in real estate, conduct contract research, provide forfor-service courses and attract overseas students. Universities were also expected to employ the practices of private business in streamlining and simplifying their operations (Wasser, 2001: 50).
- Higher education has become more instrumental in its aims and purposes. For policy-makers and employers, higher education are seen as a key factor in contributing to national economical growth, providing employable and flexible graduates and being a source of scientific and technological innovation to the benefit of the corporate sector (Farnham, 1999:8). Expectations that research activities in universities will contribute to economic objectives stem in large part from the universities' own successes in increasing the quantity of knowledge, the degree of differentiation between subjects, and the amount of knowledge that can be applied to 'real' problems. The differentiation of knowledge influences academic and non-academic labor markets, and creates pressure for increased competitiveness among higher education institutions within and across national lines (Clark, 1996 cited in Ramsden, 1998:16). While close relationships with industry can motivate researchers to be more practical by exposing them to new instruments and technologies, as Wasser (2001:51) warns, this closeness could restrict the sharing of ideas, delay the transfer of some ideas for commercial reasons and lure the better students away from careers in academia.
- > For the last two decades, the 'massification' of higher education has been a rising trend in many countries. Governmental interest in moving toward the massification and universality of higher education must be attributed to the concept of human capital investment and human resource development (Alexander, 2000:415) in order to be more powerful within global settings. The changes wrought by mass higher education go far beyond larger class sizes, more diverse groups of students, and different student attitudes. These changes have altered management patterns, public perceptions of higher education, and the whole apparatus of professional standards and accountability (Ramsden, 1998:14). Mass systems recruit both more diversified bodies of students and different kinds of staff to the academic profession (Farnham, 1999:9).
- > One of the results of globalization is the rise of 'user pays' approach. Faced with shrinking funds from traditional public sources, universities have to charge users and students for the services they receive to ensure educational quality for expanding student population. In return for growing fiscal reliance on student user fees, governments are demanding far more stringency and accountability (Alexander, 2000:418-9). Students are becoming harder to teach and less tolerant of bad teaching or poor service delivery. If the universities within a particular country do not provide education of acceptable quality at reasonable cost, there are many opportunities through new communication technologies for intervention by international competitors (Ramsden, 1998:16).
- > The effects of globalization on academics are overwhelming. They have inexorably changed from being largely autonomous professionals in indulgent organizations to more like supervised workers in tightly managed businesses. Their earnings relative

to other occupational groups have declined and they report a decline in time devoted to research and an increase in time taken up by 'other activities' - work related to quality assurance, appraisal, staff development, alternative modes of delivery, consultancies, marketing courses and services, etc.. They engender a feeling of reduced control over the organization of their own work and a sense that its integrity has been compromised through fragmentation. Academic staff also feel they are working harder because have larger classes to teach and less time to spend with students. Consequently, trying to use traditional ways of teaching and assessment with larger groups can produce frustration and anger (Ramsden, 1998:19-20).

Universities have become highly bureaucratic and complex organizations because of increases in student numbers, departments and academic and non-academic personnel. Political and economic pressures have encouraged a shift from 'administration' to 'management' in the day-to-day operations of universities, or a shift from coordination and implementation roles to greater directive control through a line-management structure. Competing resource priorities have meant that hard decisions and hard choices have had to be made, often very quickly. At the same time, the increasing size and scope of university business, as well as pressures for accountability have encouraged a growth in the bureaucracy and complexity of day-to-day operations. These trends suggest that both management and leadership have become necessary (Middlehurst, 1995:77).

Pedagogical Results of Technology and Globalization

Changes in the student cohort, learning sciences, technology and globalization have also impacted on the pedagogy. The need is to create high quality, learner-centered, engaging, appropriate, interactive, easy accessible, flexible, distributed, and well-supported learning environments. The Web is increasingly seen as the means of delivering instruction and training (Khan, 2001:5). Numerous names are used to describe Web-based learning, including Web-based training (WBT), Web-based instruction (WBI), Internet-based training (IBT), advanced distributed learning (ADL), online learning (OL), e-learning, to name a few (Khan & Ealy, 2001:355). Web-based courses are characterized by two-way communication media that allow for interaction between the originator of the material and the student, between tutor and student, and between students. The use of the Internet as the delivery mechanism for distance education offers a number of advantages over conventional methods including:

- quick production of course materials;
- quick alteration and up-to-date course materials;
- > interaction with, and feedback from, students;
- > interactive materials; and
- flexibility in study patterns (Weller, 2000:243-4).

These advantages also allow program managers to tailor their course / program offerings to meet the widely spread demands of diversified student body. Such customization and individualization represent possible increases in the number of students and in their satisfaction level.

The confluence of the need for continuous learning and unprecedented innovations in ICTs has pushed distance education approaches to the forefront of educational practice (Garrison, 2000:1). It is no longer the case that conventional education institutions are unable and/or unwilling to provide adequately for other than full-time, on campus, properly matriculated students (King, 2001:48). Moreover, the distinction between distance and attendance modes of educational delivery is blurring, or being redefined to allow flexible responses to education and training demands. Off-campus programs employ face-to-face tutorials and

laboratory work, and residential sessions. Now programs for attending students increasingly employ strategies with time and place flexibility such as syndicate work, use of distance education materials, use of television and video materials and of computer-mediated instruction programs. They also use the World Wide Web, e-mail, and groupware. Workplace education and training provides a new definition of campus (Inglis *et al.*, 1999:20-2). And email, bulletin boards, real-time chat and threaded discussion transforms distance education by eliminating the problem of student isolation and allowing for open and immediate communication between learners and learners and learners and their tutors.

Parallel to the popularity of e-learning, the number and variety of related hardware and software systems for the education market has been increasing rapidly and administrators, faculty and other personnel responsible for procurement, operation, maintenance, and training have difficulties considering the administrative, educational, financial, and training dimensions of the new servers, networks, authoring and course management software.

Around the world, many universities are experimenting with improving accessibility to existing programs, designing new programs to take advantage of emerging technologies, and marketing their programs to new audiences and in new ways. Corporations are also engaged in experimentation in education and training, forming new educational institutions internal to the corporation or new alliances with universities to promote learning using technology. Completely new models for universities are also being developed to respond to the opportunities created by a growing worldwide market for lifelong learning (Hanna, 1998:3).

Using basic print/correspondence methodologies, radio, television, audio-conferencing, video-conferencing, CD-Rom and the Internet/Web, many countries and institutions are now providing open schooling, non-formal adult and community education, vocational education and training, and bi-modal and open higher education. Technology and globalization are also leading to new forms of organization serving the education market, including corporate universities, consortia and strategic alliances, university-industry partnerships, online and virtual universities (Latchem and Hanna, 2001:1-12).

Administrators of higher education institutions feel the pressure arising from such challenges and from the increasing competition and shrinking revenues. They try to reach new national and international markets and extend their provisions into new target groups to deal with competition and compensate for lost revenues. These efforts have associated risks and challenges, such as limited information on local conditions in new markets especially international and cross-cultural markets—the need for new investments in human resources and technological infrastructure, and the difficulties associated with managing a growing organization or new form of collaborative enterprise.

The New Higher Education Context

Because of these underlying changes, the higher education context is very different from that of two decades ago. Today there are:

- Changed relationships between government and public higher education institutions.
- > Newly assigned roles and missions for the higher education sector.
- > Increased competition for market share and dwindling resources.
- > Rapid increases in the number and variety of educational products and technologies.
- > New technology-based national and international educational providers.
- > New customer groups.

- Unfamiliar, untested global markets.
- > Emerging learning paradigms (i.e. e-learning).

These factors reflect various external elements interacting with and influencing organizations, and a *complex* environment. Moreover, permanence in the changes indicates that the environment is *dynamic*. Therefore, today's higher education environment can be defined as *complex* and *unstable*, and this creates a high degree of uncertainty for the decision makers (Daft, 1998:54). Oversized, slow and bureaucratic higher education institutions with complex internal structures resulting from massification compound decision makers' feelings of uncertainty. Such an environment has significant leadership and managerial implications.

The leadership and managerial implications of the new higher education environment
In general, those who occupy management positions in higher education institutions are
first introduced to management concepts and their applications when they assume their
posts. They gain experience as they perform their duties, and a structured professional
development approach to management is seldom provided. Today's highly volatile
environment implies that managerial issues must be taken ever more seriously. The
positions of president and vice president or vice chancellor and deputy vice chancellor, dean,
vice dean, head of department and so on should be given to people capable of managing
educational organizations in an increasingly competitive environment. Moreover, the
composition of management team, decision-making mechanisms, communication practices,
and organizational structures may need to be implemented for a more professional, effective
management to deal with changes effectively and to seize opportunities that result from
new circumstances.

Mintzberg (1980, cited in Gibson, et al., 2000:16) identifies three primary and overlapping managerial roles: interpersonal role, decision role, and informational role. Each role has several related activities that distinguish it from the others. Interpersonal role activities clearly involve the manager interacting with other people both inside and outside the organization. Decisional role activities involve the manager in making decisions about operational matters, resource allocation, and negotiations with the organization's constituencies. The informational role involves the manager as a receiver and sender of information to a variety of individuals and institutions.

Latchem and Hanna (op cit.) argue that given the uncertainties and confusions of today's higher education environment and the need for far-reaching and long-lasting change in these institutions, what is needed is leadership rather than management. They show that leaders have to transform their organizations in order to respond to the constant changes arising from technology and globalization that are compatible with online delivery. They are needed to address such issues as creating flexible organizational structures that promote effective decision-making processes and teamwork, a culture that supports risk-taking and innovation, and committed investment in human resources (e.g. recruiting new personnel, staff development) and technological infrastructure (hardware and software). Leadership is also needed to improve the competitiveness of the institutions. This calls for a comprehensive and frank reassessment of the strengths and weaknesses of the organization and the opportunities and threats in the environment. There is also need to identify and serve new national and global markets, and provide innovative courses and programs aimed at meeting the lifelong and just-in-time education needs of a wide variety of client groups.

Organizational Transformation

Organizational transformation implies radical changes in how members perceive, think, and behave at work. These changes go far beyond making the existing organization better or

fine-tuning the status quo. They are concerned with fundamentally altering the organizational assumptions about how the organization functions and how it relates to the external environment. Changing these assumptions entails significant shifts in the organization's philosophy and values and in the numerous structures and organizational arrangements that shape members' behavior (Cummings & Worley, 2001:499).

Daft (1998:54) suggests that organizations need to have the right fit between internal structure and external environment; an unstable and complex environment calls for *organic* organizational structures; teamwork, and participative and decentralized decision making. According to Jaffe (2001:14), organic organizations are characterized by specialized areas of knowledge, personnel contribution to the larger organizational tasks, frequent redefinition and reformulation of task responsibilities, horizontal or lateral forms of communication and interaction, the sharing of information and advice, and a focus on commitment to the larger collective interest of the organization.

Higher education institutions have been trying to adapt to the changing environment in various ways. Sporn (1999:15) asserts that there are common patterns of institutional responses to an uncertain environment. These responses focus on quality and efficiency, access, and cost containment. Among the most commonly employed adaptation strategies employed are university reorganization (e.g. reengineering, deregulation and reorganization, privatization); transformative leadership, management and governance; quality improvement (e.g. total quality management), program review and evaluation; focus on applied research and technology transfer; financial accounting and fundraising systems; and personnel restructuring (i.e. outsourcing administrative tasks and processes, increasing part-time employment).

Transforming existing organizations for an uncertain, competitive environment and for such innovative practices as e-learning requires a systemic approach encompassing many organizational dimensions. It requires a vision of what higher education will look like in the future, and a clear plan and methodology for transforming the institution to achieve this vision. All of the inter-related organizational aspects need to be addressed in the transformation process: management and leadership (e.g., transformational leadership issues, sound business practices), organization structure (e.g. flexible organizational structures, effective teamwork), strategy (e.g. market and needs analysis, strength, weaknesses, opportunity, and threat analysis) technology (e.g. upgrading IT infrastructure, hardware and software management), human resources (e.g. recruitment, staff development), and organization culture (e.g. changing and managing culture as a competitive advantage).

Moreover, the transition depends not only on the efficiency of the transformation process itself but also on the commitment and entrepreneurial capacities of the senior and middle managers and staff. This may be particularly difficult for the traditional single-mode university; more accustomed with face-to-face contexts and client groups within readily identifiable local catchments. As Hanna (1998:75) observes, one of the most important and immediate but intensely challenging tasks for the traditional university is to develop additional strategies for building leadership capacity for change and decision-making structures that support change at the faculty level.

Greater competitiveness

Traditionally, universities have sought to maintain or enhance their competitive position with activities chiefly directed at student recruitment, particularly by using aggressive promotional activities. With the tumult and dynamism of the present environment, though, university administrators cannot rely exclusively on student recruitment efforts for success.

Rather, they need to be proactive and innovative, as well as have a proclivity for taking risks (Liu & Dubinsky, 1999:1316). Developments in technology and globalization have led to many new models for higher education provision. Hanna (1998:68) characterizes these as:

- > Extended traditional universities (universities moving from face-to-face interaction into dual-or mixed-mode provision)
- > For-profit, adult-centered universities (e.g. the University of Phoenix online)
- Distance education/technology-based universities, such as the open universities and those that Daniel (1996) called the 'mega-universities' (e.g. the UK Open University, Turkey's Anadolu University)
- Corporate universities (e.g. American Express, Intel, and Disney)
- University/industry strategic alliances (e.g. Scotland's 14 universities partnering with News International in the Scottish Knowledge Consortium)
- Degree/certification competency-based universities (e.g. Western Governors' University and Excelsior University in New York)
- Global multinational universities (the dimensions and characteristics of the global university are only beginning to emerge, but the outlines of such a university are becoming apparent by examining how certain for-profit universities in the United States have developed)

These are all competitive responses to establish competitive advantage over rivals or potential competitors. To sustain such competitive advantage, institutions must achieve an external position vis-à-vis their competitors or perform internally in ways that are unique, valuable, and difficult to imitate (Barney, 1996). Competitive strategies can be based on low costs and differentiation in products and services (Cummings & Worley, 2001:474), administrative or instruction delivery processes that represent value over other education providers (e.g. through electronic library, online registration), relatively less expensive courses and programs and innovative courses to address niche markets ignored by competitors.

Many of the models listed above also reveal a desire to increase strategic positioning and competitiveness through collaboration with other educational providers or business firms. Oblinger (2001: 12-3) claims that integrating and managing relationships with a host of external providers complicates the management of the operation even while providing greater flexibility.

Seldom have scholars attempted to come to terms with 'management' as a set of special strategies to advance and calibrate how one goes about *leading*, not merely supervising, an entire organization. Leaders, managers and faculty need help in grasping the characteristics of the volatile new environment, creating a vision for the future, and putting this into practice. Latchem & Hanna (2001) define the context for change, the challenges and the opportunities, and the case studies of institutional leaders interviewed for the book begin to add to such a body of knowledge.

CONCLUSION

Globalization and technology related developments are 'change drivers' that have significantly re-shaped the landscape of the higher education. New missions and responsibilities assigned by governments in pursuit of national 'wealth creation' and international competitiveness, shrinking public funds, increased need for flexible, lifelong learning arising from the changed nature of work, new learning paradigms and the entry of technology-based new educational providers have had far-reaching effects on higher education. Despite the disputes between proponents of 'university as a social institution' and

proponents of 'university as an industry', higher education now seems to be moving closer to the market-oriented approach.

The impact of the changes in open and distance education institutions are also profound. The difference between traditional universities and distance education institutions has disappeared, the need for lifelong learning and rapid developments in ICT have led many traditional universities to become involved with online delivery, and the commercial potential has attracted many new technology-oriented private as well as public providers.

This creates an unstable and complex environment for the universities and requires flexible structures, sound business practices, strong leadership, and innovative approaches. Leadership is needed to transform institutions into more flexible, innovative and accountable forms and develop new strategies for market gain and resource acquisition and for this, a system-wide approach is needed.

Higher education literature provides examples of management concepts, approaches and analogies that are employed by business firms. Intensive reliance on business models, however, may intensify negative attitudes towards 'managerialism' in universities. The reason for such attitudes is the improper utilization of management concepts and applications.

To maximize the value of the relevant literature, it is crucial to consider unique characteristics of the universities and examine the feasibility of the concepts before applying them. It is also imperative that those leading and managing the institutions, at whatever level, not only practice, but reflect upon their practice, researching, analyzing and reporting on successful and failed management and organizational practices in ways that will help other leaders and would-be leaders, understand, grasp and manage the changes surrounding them.

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Table: 1
Descriptive Statistics for SoC Scores in All Seven Stages in Raw Scores and Percentiles and Final Course Grades between Experimental (Online) and Control (Traditional) Groups

(Online) and Control (Traditional) Groups					
			Std.		
	N	Mean	Deviation	Minimum	Maximum
Awareness pretest raw score	19	4.53	4.005	0	14
Awareness pretest					
percentile	19	45.3684	27.24011	10.00	91.00
Informational pretest	4.0	24.24			
raw score	19	24.21	5.442	14	33
Informational pretest percentile	19	83.1579	13.15828	54.00	99.00
Personal pretest raw score	19	24.53	6.380	8	35
Personal pretest percentile	19	81.6316	15.11883	35.00	99.00
Management pretest raw score	19	18.95	8.423	6	34
Management pretest percentile	19	63.0000	27.57414	18.00	99.00
Consequence pretest raw score	19	24.26	4.942	16	35
Consequence pretest percentile	19	50.3684	21.27129	19.00	96.00
Collaboration pretest raw score	19	25.79	6.170	16	35
Collaboration pretest percentile	19	69.0000	22.00757	31.00	98.00
Refocusing pretest raw score	19	25.26	4.569	16	35
Refocusing pretest percentile	19	82.1053	14.13779	47.00	99.00
SOC pretest total raw score	19	147.53	27.579	87	195
SOC pretest toal percentile	19	81.68	17.515	33	99
Awareness posttest raw score	19	3.58	4.682	0	18
Awareness posttest percentile	19	36.4211	28.17074	10.00	96.00
Informational posttest raw score	19	24.32	5.888	7	33
Informational posttest percentile	19	84.1579	15.53585	34.00	99.00
Personal posttest raw score	19	26.21	6.097	11	35
Personal posttest percentile	19	85.0000	13.17826	45.00	99.00
Management posttest raw score	19	17.58	8.745	1	33

Management posttest percentile	19	63.8947	31.39160	2.00	99.00
Consequence posttest raw score	19	27.37	5.756	12	35
Consequence posttest percentile	19	64.4737	23.92434	9.00	96.00
Collaboration posttest raw score	19	27.37	6.256	11	35
Collaboration posttest percentile	19	72.4211	22.20940	16.00	98.00
Refocusing posttest raw score	19	24.95	5.411	10	33
Refocusing posttest percentile	19	80.9474	19.12379	22.00	99.00
SOC posttest total raw score	19	151.37	27.490	74	191
SOC posttest total percentile	19	83.74	18.607	18	99
Pre_course performance	19	45.89	10.011	16	60
Final course grades	19	94.32	2.77	85	97

Table: 2
Ranks for SoC Scores in All Seven Stages in Raw Scores and Percentiles and Final Course
Grades between Experimental (Online) and Control (Traditional) Groups

			Mean	Sum of
	Groups	N	Rank	Ranks
Awareness pretest raw score	Control	5	11.90	59.50
	Experimental	14	9.32	130.50
	Total	19		
Awareness pretest percentile	Control	5	11.90	59.50
	Experimental	14	9.32	130.50
	Total	19		
Informational pretest raw score	Control	5	7.90	39.50
	Experimental	14	10.75	150.50
	Total	19		
Informational pretest percentile	Control	5	7.90	39.50
	Experimental	14	10.75	150.50
	Total	19		
Personal pretest raw score	Control	5	5.00	25.00
	Experimental	14	11.79	165.00
	Total	19		
Personal pretest percentile	Control	5	5.00	25.00

	Experimental Total	14 19	11.79	165.00
Management pretest	Control	5	9.70	48.50
Tuw score	Experimental Total	14 19	10.11	141.50
Management pretest percentile	Control	5	7.80	39.00
	Experimental Total	14 19	10.79	151.00
Consequence pretest raw score	Control	5	5.70	28.50
	Experimental Total	14 19	11.54	161.50
Consequence pretest percentile	Control	5	5.90	29.50
	Experimental Total	14 19	11.46	160.50
Collaboration pretest raw score	Control	5	7.00	35.00
	Experimental Total	14 19	11.07	155.00
Collaboration pretest percentile	Control	5	7.00	35.00
	Experimental Total	14 19	11.07	155.00
Refocusing pretest raw score	Control	5	7.90	39.50
	Experimental Total	14 19	10.75	150.50
Refocusing pretest percentile	Control	5	7.90	39.50
	Experimental Total	14 19	10.75	150.50
SOC pretest total raw score	Control	5	7.40	37.00
	Experimental Total	14 19	10.93	153.00
SOC pretest total percentile	Control	5	7.20	36.00
	Experimental Total	14 19	11.00	154.00
Awareness posttest raw score		5	9.20	46.00
	Experimental Total	14 19	10.29	144.00
Awareness posttest percentile	Control	5	9.20	46.00
	Experimental Total	14 19	10.29	144.00

			I	ı .
Informational posttest raw score	Control	5	8.00	40.00
	Experimental	14	10.71	150.00
	Total	19		
Informational posttest percentile	Control	5	8.00	40.00
<u> </u>	Experimental	14	10.71	150.00
	Total	19		
Personal posttest raw score	Control	5	5.40	27.00
	Experimental	14	11.64	163.00
	Total	19		
Personal posttest percentile	Control	5	5.40	27.00
	Experimental	14	11.64	163.00
	Total	19		
Management posttest raw score	Control	5	7.50	37.50
	Experimental	14	10.89	152.50
	Total	19		
Management posttest _ percentile		5	7.50	37.50
	Experimental	14	10.89	152.50
	Total	19		
Consequence posttest raw score	Control	5	8.10	40.50
	Experimental	14	10.68	149.50
	Total	19		
Consequence posttest percentile	Control	5	8.10	40.50
	Experimental	14	10.68	149.50
	Total	19		
Collaboration posttest raw score	Control	5	7.70	38.50
	Experimental	14	10.82	151.50
	Total	19		
Collaboration posttest percentile	Control	5	8.30	41.50
	Experimental	14	10.61	148.50
	Total	19		
Refocusing posttest raw score	Control	5	9.80	49.00
	Experimental	14	10.07	141.00
	Total	19		
Refocusing posttest percentile	Control	5	9.80	49.00
	Experimental	14	10.07	141.00
	Total	19		
SOC posttest total raw score	Control	5	6.90	34.50

	Experimental	14	11.11	155.50
	Total	19		
SOC posttest total percentile	Control	5	6.80	34.00
	Experimental	14	11.14	156.00
	Total	19		
Pre_course performance	Control	5	7.60	38.00
	Experimental	14	10.86	152.00
	Total	19		
Final course grades	Control	5	12.60	63.00
	Experimental	14	9.07	127.00
	Total	19		