THE GLOBALIZATION OF HIGHER EDUCATION THROUGH THE LENS OF TECHNOLOGY AND ACCOUNTABILITY

By

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ABSTRACT

Technology has ushered in a new era in higher education making knowledge of technology essential for administrators. Technology is transforming higher education by providing a global interconnectedness that reshapes educational, social, economic and cultural life.

The globalization of networks based on travel, mobile phones, broad-band Internet and other information and communications technologies, are creating change on an unprecedented scale. Similarly, technology enables complex data transfers essential to knowledge-intensive production and distribution.

Globalization forces higher education institutions to examine their participation in the international environment and to assess their involvement in a seemingly transparent world. The potential for technology in global higher education coupled with the mobility of people, information and ideas will expand the influence of technology, globalization and higher education.

Keywords: Technology, Higher Education, Globalization.

INTRODUCTION

Driven largely by technological innovations, higher education has embraced the unthinkable: globalization (Albright & Nworie, 2008). Globalization permitted higher education institutions to expand their economic horizons and incorporate new techniques for the delivery of instruction (Schofer & Meyer, 2006). However, all the change came at a price: accountability (Fusarelli, 2001). Although the creative and rapid changes in technology have been embraced, the implications of new technology is years away (Boud & Prosser, 2002). New cautions from physicians to philosophers echo throughout the common media (Scott, 1998). However, throughout the world, higher education administrators are attempting to determine the impact of technology in a global, technical society (Giddens, 2001).The focus for many in decision making positions is on the creation and distribution of "hard" components for technology, while others focus on flexibility, learning and development of new knowledge instead of specific mechanisms (Lub, van der Wende & Huisman, 2005). Astechnology continue to grow exponentially, administrators in higher education must confront both the opportunites and challenges of technology and accountability (Goldstein, 2004). Higher education administrators are trying to thrive and survive with the latest forms of technology because the increased development and application of technology has become a sociological phenomenon (Harder, 1997).

Globalization as a strategy in higher education has gone largely unquestioned (Jarvis, 2000). From the euro to international transportation, the globe is smaller and more accessible (Marginson & Rhoades, 2002). But are the results positive? Higher education is bombarded with concerns for accountability, but those issues go largely unquestioned in light of new technology and increased economic advantages that are driven by new markets and globalization (Marginson & Mollis, 2001).

There is a push from globalization forces for organizational change and production of research and training in order to

be accountable to governments (Stewart & Kagan, 2005; Tjeldvoll, 2010). In addition, the balance between academic freedom, institutional autonomy, and accountability from stakeholders is being challenged in higher education institutions world-wide (Kogan, Bauer, Bleiklie & Henkel, 2000).

Globalism

Higher education institutions are being transformed by globalization, and education is a key component of this new global environment (Jacobs & van der Ploeg, 2006). Globalization is often defined as the engagement of people and ideas across many national borders (Vaira, 2004). Globalization encourages, often demands, educational systems that meet quality standards demanded in an increasingly technological and diverse society. As a result, global educational systems must take advantage of innovative leadership coupled with technological systemic linkages (van der Wende, 2003). The changing demographics of higher education, with older students, returning graduates, and professionals needing updating, means that higher education must use technology to adapt for globalization (Eggins, 2003).Technology is the only tool available to help higher education administrators manage the sheer volume of information necessary for success in today's environment (Duderstadt, Akins & Houweling, 2002).

Education, business and political leaders specify that globalization is linking international political, economic, educational, cultural, and social life (Harvey & Williams, 2010). In today's environment, globalization for the 21st century fuels the current interest in accountability because the future is tied inextricably to education, particularly higher education (Archibugi & Coco, 2005). It is assumed with the creation and implementation of accountability policies that data collected will inform and help improve educational practices. However, getting data to decision makers has been more difficult than imagined or planned (Brooks, 2005).

Technology significantly impacts all aspects of higher education, particularly those associated with applying technology to global delivery of services (Douglas, 2005). Technology has increasingly become the medium of choice for most engaged in creating diverse international markets for their goods and services (Kaul, Conceicao, le Goulvin & Mendoza, 2003).

Technology

The evolving process of infusing technology into higher education has been sporadic and chaotic with recent technology advancements in applications such as social networking creating dramatic challenges and unlimited potential for innovation (Pawlowski & Richter, 2010). Continuous technological development requires knowledge and skills necessary to function in this global society. Society has assumed a global focus, supported by technology, that demands quality higher education institutions produce more at less cost (Guile, 2001).

Technology has ushered in a new era in higher education making knowledge of such technology essential for administrators (Johnson, 1979). Technology is transforming higher education providing a global interconnectedness that reshapes educational, social, economic and cultural life (Brennan, 2008). This dual aspect of technology in higher education leads to two distinct area of technology in which administrators must be concerned – academic, and administration (Dede, 2000).

First, in the academic area, administrators must be aware of the impact that technology has on the classroom environment. Today's students have grown up with technology in their everyday lives --- computers, cell phones, online games, and social media (Dawson, 2008). Therefore they expect some technology in everything they do. However, some recent researchers (Pawlowski & Richter, 2010) have shown that the average undergraduate student does not want a total online class; they prefer a more hybrid or blended approach where they meet with their professors and fellow students (Sanders & Morrison-Shetlar, 2002).

Bonk (2009) postulates that educators have an ethical obligation to consider using technology to enable students' learning. However, it's not as simple as responding to students' expectations that courses will have a Web component. The web experience must be integrated into the overall course. How does this involve administrators? They must develop the technology component to support

faculty learning and development of the fundamental skills necessary in this integration. Therefore, the administrator must understand the technology integration concept and realize that it is more than just adding some optional technology components to the course. For example, based on our experience in teaching online courses in a graduate program, it can sometimes take faculty ten minutes to develop the one minute of good video for an online class. To offer a professional course will also require more professional equipment than most faculty members have immediately available (Guri-Rosenblit, 2009).

The next component in this area that administrators must address is the technology infrastructure to support the streaming video or the capacity to have multiple students downloading video and audio content for their online and blended courses. Farrington (1999) recommends that the Web should be used for what it does well, delivering large amounts of content on a 24-hour day basis and leave the faculty to do what only the human can do. Recent researchers (Kember, McNaught, Chong, Lam & Cheng, 2010) have shown that blended learning is very effective. Blended learning courses use online discussion groups, video conferences, and other Web technologies to engage students in interactive learning. This promotes anywhere, anytime learning by the student. This will require network connection large enough to support the demand, which will vary based on the student's desired learning timelines (Arbaugh, Desai, Rau, & Sridhar, 2010).

Second, in the administrative area, administrators must acquaint themselves with the management of the data and information that is now available. As a by-product of the teaching and learning aspect of the college or university, there is a trove of data available to be converted into usable information. This information is critical for administrators to make informed decisions (Wang, 2010).

The first component in this area consists of understanding the data in the respective systems. Three key characteristics the data must have for successful use are definable, consistent, and accurate. Data must be definable in order to measure it (Goldstein & Katz, 2005). One cannot measure what one cannot define. The data must be consistent; it must mean the same thing every time it is referenced. The data must be accurate. The collection and editing of the data must be in a fashion that everyone trusts the accuracy of the data. If these three characteristics are not present, the decisions made from the data cannot be assured to be valid and will cause uncertainty. Business intelligence systems are having major impacts in higher education. As more and more information must be processed in the Information Age, the technological systems will continue to evolve, and the administrators using these systems must continue to upgrade their skills and knowledge of the systems (Kankanhalli, Tan & Wei, 2005).

Another area administrators must be aware of is the new area of cloud computing (Zhang, Cheng, & Bautaba, 2010). Cloud computing is one of the current buzzwords, today, in information systems. From an educational point of view, educators must seek to understand the technology and its possible application to education information systems. Is it the answer to all of current problems and concerns about educational information systems cost? How can educators use this technology to meet their mission for education information systems to provide critical decision-making information? The answers to these and similar questions are critical for the educational information technology team. Even cursory research into the subject of "cloud computing" will provide an enormous amount of information on the subject (Sultan, 2010). However, to be successful in planning and implementing, a move to cloud computing the team must be able to define what they mean by the term and to understand the evolutional history of the concept. The team must identify additional issues, such as, different types of cloud computing platforms and their associated risks. The team must effectively evaluate whether the cloud technology is appropriate for their specific use. This entire approach must have senior administrator participation and involvement.

Educational administrators must educate themselves about the aspects of technology, and how it can be best used in the educational organizations. No longer can administrators leave technological issues to the technicians. They must continue to upgrade their

individual and organizational knowledge and skills in the area of technology, and use this knowledge and skills to move the higher education organization ahead in the use of technology in higher education in the 21st century. A key question that needs to be asked: Are we trying to save 20th century education or are we building 21st century education by making the best use of technology?

Accountability

Accountability has been a concern for educational leaders for as long as schools have existed (Berliner & Biddle, 1995); however, only recently has technology been a focus for accountability. In today's environment, the globalization of the 21st century fuels the current interest in accountability because the future of globalization is tied inextricably to education and education appears to be functionally coupled with technology (Berge, 1998).

In recent years, nothing has effected education as profoundly as the concept of accountability (Johnson, 1979). Since the end of World War II there have been numerous developments in higher education including accountability, technology, international markets and the privatization of higher education. (Ginsberg & Berry, 1998). These developments have occurred in practically every country including non-Western countries (Vught, van der Wende & Westerheijden, 2002). There have been many reasons for this increased development including the need to train people to work in the modern society where populations have grown significantly (Dunn, 2008).

These developments, in particular, quality and autonomy or integrity are said to all relate to accountability (Stensaker & Lee, 2010). They have also been categorized as reform issues namely governance and finance; funding; managerialism; accreditation; quality assurance; use of performance indicators; faculty roles and reward; and cultural, social, and ethical change (Eggins, 2003). Because of reform issues, "…higher institutions around the world find themselves in a situation where they are no longer only accountable to stakeholders within their own country but also to the international community at large" (Stensaker & Lee, 2010, p. 24). Consequently, outside authorities came to play a more important role in the governance of higher education institutions, not always for the best (Banta, 2010).

Accountability emerged in 1990s as policy makers began to empower campus leaders. Accountability focused on enhancing institutional autonomy and performance and it became a major political focus (Shin, 2009). Institutional autonomy and accountability formed a new kind of accountability that is performance based which links an institutions performance to financial allocations (Banta, 2010; Conner & Rabovsky, 2011; Houston, 2010; Shin, 2009).

Traditionally, the university has had autonomy and has tried to discourage control from outside agencies. "However with the increase of size, scope, importance, and costs of universities there has been increased pressure from governments who provide money to expect accountability" (Arnove, Altbach, & Kelly, 1992, p. 50). Accountability methods prescribed by accrediting agencies, institutions, and governing bodies are used to improve student learning and teaching (Banta, 2010). Trustees and governing board members have largely decided that they should play a more active role in the management of institutions (Conner & Rabovsky, 2011). As a result, according to Arnove, et al. (1992), "the demands for accountability will increase and will cause institutions considerable difficulty. As budgets increase there will be inevitable demands to monitor and control expenditures" (p. 52).

The size of the accountability movement indicates that the survival of education world-wide may very well hinge on the ability of educators to demonstrate productivity and accountability in a chaotic marketplace (Fusarelli, 2001). Accountability is necessary to measure quantitatively educational investment because education is about the utilization of human resources (Naughton, Suen & Shavelson, 2003). Efficiency and effectiveness coexist in maximum educational organizations (Waite, Boone & McGhee, 2001). Organizations can temporarily survive without perfect efficiency; they usually die if they are ineffective. Drucker (1974) stated "Efficiency is concerned with doing the right things. Effectiveness is doing things right" (p. 45). Higher education administrators are forced to objectify, measure and quantify persons, programs and

processes. This discrepancy of quantity over quality creates an unhealthy ethos in the institution and threatens to destroy the programs that the efficiency is designed to help (Raywid, 2002).

The increased development and application of technology in higher education has become a sociological phenomenon (Harder, 1997). However, the integration of technology for administrative uses has created a schizophrenic atmosphere for educational leaders (Ohler & Warlick, 2001). As technical capabilities continue to increase, costs continue to decline, and as humans improve their abilities to utilize new technological tools, a new era in administrative applications appear imminent (Rother, 2003).

The long-range purpose of accountability is to enhance productivity. A second powerful application of accountability is comparing productivity across individuals, grade levels, higher education institutions, competitors and even countries (Vught, van der Wende & Westerheijden, 2002). Accountability is necessary to measure quantitatively resource investment because education is about the utilization of human resources. Accountability gives an educational institution the evidence it needs to make substantial changes to enhance productivity. The key concept is determining how to measure productivity in service organizations like schools and colleges (Houston, 2010). Originally intended to serve as diagnostic/ prescriptive tools, accountability measurement instruments have become tools for the justification of punitive actions aimed at administrators and educational institutions (Shapiro, 2002).

In their haste to become more accountable, educational administrators must not lose sight of the concept that change is difficult and often produces results that are not intended. One of the major problems with a centralized approach to accountability is that "one size fits few" so that different measures must be used in different circumstances (Ohler & Warlick, 2001). Consequently, educational leaders need to understand accountability, know their organizational capacity and be able to clearly articulate the role accountability plays in their organization (Rother, 2003).

The Future

Accountability is here to stay, but it must be understood in relation to the contextual reality of higher education institutions and not just in the abstract thinking of theorists and politicians. However, there is evidence of increasing differences among the educational goals of governments, administrators, faculty and students (Baker & LeTendre, 2005).

Higher education provides students with the knowledge and skills necessary to function in society (Markus & Robey, 1988). Now that society has assumed a global focus, supported by technology, higher education institutions are asked to offer the highest quality education to a widely diverse audience at a cost that can be supported by society (Olson, 2000).

The recent decline in public financial support for higher education is having a significant impact on education in the United States and around the world (Vaira, 2004). Higher education institutions seeking to meet increasing demands and maintain quality are being forced to consider strategies to generate additional revenue. Unfortunately, some politicians and higher education administrators perceive that online delivery of instruction is a revenue source (Shavelson & Huang, 2003).

Figure 1 illustrates the conceptual argument that there is a direct relationship in higher education between the increase of technology and the increases demands of accountability.

Technology must transform the way students learn and the way educators teach in the coming decades. Drucker (1974) suggests that educators can learn lessons from an earlier technological revolution – the printed book. The

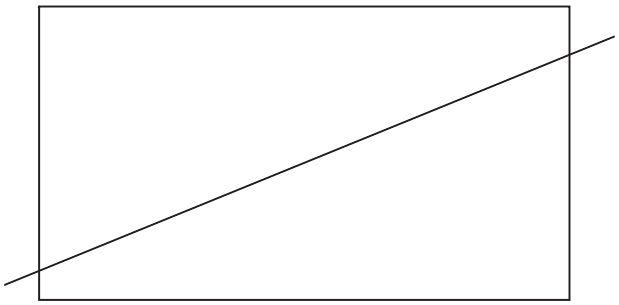

Figure 1. Relationship between Technology and Accountability

lessons:

- That embracing the new technology of learning and teaching is a prerequisite for national and culture success---and equally for economic competitiveness.
- Technology itself matters less than the change which it triggers in substance, content and focus of schooling and school. (p. 194-195)

Technology makes the business of education more complicated and competitive each day (Adeoye & Wentling, 2007), and yet, technology has become the defining medium of work in higher education (Bloom, 2005). Technology has produced increased accessibility coupled with augmented affordability and personalization (Hawkings, 2000). The emergence of technology as a tool in higher education will continue to produce more and better information in a global environment, but in a continually fluid and uncertain manner (Brennan, King & Lebeau, 2004).

Economic, educational and cultural globalization have created in a new period in higher education. Higher education institutions will become more important as mediums for global relationships in every facet of society (Dawson, 2008). Globally, very university participates in world-wide network and world leaders have unprecedented global visibility and power (Guri-Rosenblit, Sebkova & Teichler, 2007).

Conclusion

From this literature review, several themes emerged. First, higher education is critical to the productivity of each country in helping to determine quality of life. Second, technology permits the rapid exchange of data and information from a broader perspective than ever before. Third, technology has also enabled informal networking to replace more formal structures. Numerous noteworthy events in very recent history have demonstrated the power of social networks often at the expense of corporations and governments. Fourth, as a consequence of technology the world is now a global society, not just a local one. Fifth, the integration of globalized education created by technology is fueling a renewed sense of learning, meaning that learning is the important concept, not the delivery. Finally, these changes in higher education have come at a price. As the push for education increases so does the pressure for accountability.

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Michael D. Richardson is the Meraux Endowed Professor of Educational Leadership and Head of the Department of Educational Leadership and Technology at Southeastern Louisiana University. He previously held faculty and administrative appointments at Western Kentucky University, Clemson University, Georgia Southern University and Mercer University. He completed bachelors and masters degrees in Education at Tennessee Technological University and was awarded the Doctorate of Education from the University of Tennessee. He served as Founding Editor of the Journal of School Leadership an Internationally refereed Journal of Educational Leadership, as Editor of The Journal of At-Risk Issues and Founding Editor of Contemporary Issues in Educational Leadership. He has authored or edited fifteen books, published more than one hundred and twenty-five articles in professional journals, and made more than two hundred presentations to regional, national and international professional organizations. He served as a secondary and elementary principal, Personnel Director, Director of Special Projects, Coordinator of Federal