Web-based Distance Learning: Substitute or Alternative to the Traditional Classroom: Making the Delivery Method Decision

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Abstract

When a distance learning program administrator makes the critical choice of delivery methods, she/he needs to consider factors such as program developer centrism, international experience, cultural similarity, and desired level of control which will all be elaborated on in this article. The aim of this manuscript is to assist international business program developers with first a systematic framework and secondly a decision-tree model for making this critical delivery decision. Globalization and technology as well as changing demographics are altering our view of the field of international business, no where is this more evident than in the ways we teach executives and future managers to equip them for careers in international business. Web-based distance learning (WBDL) has skyrocketed into the training and education arenas since the mass usage of Internet technology began in the late 1990's. It is no longer a fad or new trend it is now an established, although rapidly changing, approach for delivering educational materials such as international business courses for both training and educational courses and programs. Our focus here is on finding answers to two questions: first, should the delivery method be primarily based on a global standard, or a locally customized, or a hybrid international business program? And secondly, should international business courses be delivered in the form of WBDL supplements to traditional classroom courses or as substitutes that are entirely online? In

conclusion, we offer several suggestions and research ideas to distance learning administrators and while the focus has been on international business education, we invite a discussion of broader applications of both the framework and decision-tree model which we have contributed.

Why Distance Learning and Why an Emphasis on Delivery Systems?

What this article is and is not about!

Before tackling the topic of what is the purpose of this article, let us comment on what it is not about. It is not merely about comparing technologies for the delivery of distance learning. Instead, we focus on the issue of delivering these costly multi-media devices, and the challenges associated with web-based distance learning (WBDL) which is expanding so rapidly to serve so many? To begin to answer this question and related questions about administering WBDL programs we will focus here on developing a systematic framework to improve our initial understanding of these WBDL programs and subsequently return to the critical issue of assisting distance learning administrators in the process of deciding on distance learning delivery systems (with international business programs as our specific area of learning interest).

Clearly the expenditure on delivery systems technologies is not in itself sufficient to ensure desired learning outcomes. Technology costs are of course a primary consideration which every program administrator faces when introducing a new program of study such as an international business program. However, other factors also need to be considered such as the design of materials; motives, attitudes and experience of program developers and instructors as well as students with regard to web-based tools; and support systems. The literature on learning assessment offers a current debate and discussion of the inadequacies of traditional learning outcomes assessment. This debate also applies to web-based distance learning programs and courses, especially if the goal is getting the desired results in educating executives and future international managers?

Web-based distance learning (WBDL) is a growing and changing learning system that is in urgent need of systematic study if we are to utilize it to best obtain desired learning outcomes. Towards this end, we review the literature on distance learning (combining management education and training and development literature). There are models of several components but an integrative model is needed to enable learning program administrators and researchers to better see the bigger picture and to facilitate the study and design of delivery and assessment systems (Arbaugh, 2005). In this article we develop an integrative conceptual framework based on this literature review. This framework shows three areas of emphasis: first, the learning environment which includes student/

instructor match-ups; second, technology which includes delivery system/design fits, and third, assessment of the learning outcomes of IB courses.

At the heart of this decision framework is the decision makers' degree of centrism or managerial philosophy with regard to doing business in other cultures than the one they were born into. This philosophy is categorized as ethnocentric, polycentric, regiocentric, or geocentric (EPRG) depending on their level of international experience, cultural similarity, desired level of control, and the nature of the delivery system itself. These factors all impact this EPRG philosophy and therefore the decision by the managers and administrators of an international business learning program being developed for use abroad by North American and other academic institutions.

Based on this review and framework we next turn to developing a decision-tree framework for assisting distance learning administrators in their making of the technology delivery decision (e.g. web-based or traditional or hybrid) with regard to design and delivery of teaching IB courses. We conclude with a list of suggestions to distance learning administrators for further research and adjustments to the WBDL approach for supplemental and for substitute or purely WBDL learning approaches.

Why a Framework for the Study of WBDL?

Having established that WBDL is more than just a new trend or fad, let's return to our first objective of providing a framework for systematic examination of web based distance learning (WBDL). Nearly a decade ago, scholars asked the questions, will business education remain insulated from emerging knowledge technologies? And, will the business-school play a leadership role? Clearly Ives & Jarvenpaa (1996) were on target when they suggested that the business sector more than the public sector seemed to be making the needed changes required by emerging knowledge-based efforts in the economy of the world. It is likely that both business educators and researchers will be impacted by these emerging technologies, forming a “new intellectual infrastructure which will also transform how we create and publish original knowledge and how we evaluate researchers” (Ives & Jarvenpaa, 1996:37). Spiller (2002) wrote about the “death of the open web”, noting that our current free access to the Internet may well change in short order. In sum, this discussion and evidence suggests that there is a sense of urgency to the development of a framework to enhance a systematic approach to the study of distance learning.

Next, we will present the results of a brief review of the literature on distance learning which helped us formulate the categories for our framework (see Figure 1). Topics include a history of distance learning; the learning environment - remote location as the *raison d'etre* of distance learning, location and experience matching of students and instructors; technological delivery and design- the level of an organization's technological capability, design of materials, support systems; and assessing learning outcomes, including information and knowledge transfer as well as conceptual skills of WBDL programs and systems.

We must also be aware of the ever changing nature of this relatively new web based version of distance learning which has its roots in correspondence courses and other past approaches to provide people access to learning from remote locations or when they have limited time to devote to traveling and being physically present in traditional classrooms. To illustrate this ever changing notion, just think of how fast the list of distance learning and Internet based tools and software has emerged and then think of all the other devices associated with interactivity and bandwidth now being developed that will obsolete this list in short order (see the list in Table 1 which we will return to in our discussion of technology and delivery methods).

Our focus here is on the literature on distance learning which has emerged since the 1997 advent of popularization of the Internet. The Journal of Teaching International Business, The Academy of Management Learning and Education Journal, and Syllabus (recently retitled "Campus Technology") magazine, are but a few of the periodicals referenced in this article that have placed considerable emphasis on web-based distance learning from 1997 to the present. However, while the literature recognizes that there is a clear need for a more systematic approach to the study of web-based distance learning programs, there is a paucity of information on the critical decisions needed to achieve successful implementation and administration of these programs.

A Brief Literature Review: Towards a Framework

This rapidly developing literature on web-based distance learning is organized into four primary categories: a brief history of distance learning; the learning environment- student/ instructor match; technology fit- design and delivery; and learning outcomes- assessment. By organizing the research and literature in this manner we start to provide administrators and researchers with a general systematic framework, a guide for present and future decisions and studies.

A Brief History of the Evolution of Distance Learning

Before we begin our development of a framework for the study of web-based distance learning we first trace the evolution of distance learning from approximately 1960 and the earliest uses of 'telecourses', to the advent of educational pay TV, and on to the Internet. We could of course go further back in time, however, we agree with Freed (2004, p.1) that the central question faced by distance learning administrators and for educational media in general was and largely remains, "how can educational media ventures pay their own way?"

This brief history of the evolution of distance learning reveals the rapid pace of change or speed of development of distance based technologies to learning, from telecourses to pay TV to modern interactive web-based distance learning (WBDL) systems. However,

WBDL is more than just a recent fad and far more than just a new technology being applied to the learning environment, it is now a major trend in management education and will likely be an integral part of traditional approaches in the near future (McGrath, 2004; Alavi & Gallupe, 2003; and Hogan & Warrenfeltz, 2003).

The Internet

Interaction between instructors and students and student to student remained as the biggest barrier to the success of educational media (Freed, 2004). In the early 1990's several universities in North America offered their students free access to the Internet and the use of email between students and instructors took off,

leaving voicemail as a backup tool. However, voicemail is clearly reemerging in the form of computer mounted cameras, camera phones and other devices. Remote students found the Internet to their liking, obviating the central location theme which Buckminster Fuller (1979) advocated. As a medium, the Internet could provide the basic multimedia elements seen as critical to distance learning to anyone, any where rather than from a central location:

- Video, audio, graphics, and text- all provided on demand.
- Real-time instructor-student and student-student interaction (the later being especially valued for team learning outcomes).
- Access to online libraries and databases.

Freed (2004) reminds us that "bandwidth" remains an obstacle for distance learning. This is mostly a speed issue involving slow downloading time, which can be a clear disadvantage to students and course material delivery. As a result "multi-media" distance learning systems blend computer based and TV materials with CD's and other devices. High-

speed cable modems, digital and other speed technologies are and will continue to reduce the bandwidth or "speed" of downloading problem, but these technologies may not yet be available to all remote students scattered about the globe, many in developing nations where hi-speed Internet remains a thing of the future and where telephone lines and systems are less than reliable. The home as classroom without walls is making the notion of "coming to training" obsolete, and, it is clearly here to stay (Arbaugh, 2004). However, some remote students located in overseas locations and others in rural areas of North America , are not yet equipped with the newest tools. It may be that self-paced CD packages and interactive TV technologies will bridge the gap in the years to come. However, recall Fuller's (1979) warning that *"any dreamable vision of technological advance will be a reality,"* and get prepared but with mobility and flexibility not with soon to be obsolete equipment.

History, Some Conclusions for Distance Learning Administrators

Freed (2004) concludes his discussion of the evolution of technology mediated distance learning with some remarks on the power of knowledge and the importance of understanding interactive media with regard to learning outcomes. This is sage advice for distance learning administrators.

A critical overall goal of administrators is one of being prepared to utilize emerging technologies, a goal that seems very much in agreement with Buckminster Fuller. To these comments we add the notion that distance learning has already become an integral part of what is rapidly becoming the "new traditional classroom" for teaching subjects such as international business because of the flexibility and capabilities of the Internet to connect and create an interactive learning environment populated by diverse participants from locations all over the world (Arbaugh, 2005).

It is also important to note here that Mintzberg (2004), Mintzberg & Gossling (2002), Pfeffer & Fong (2002, 2003) and Connolly (2003) have called attention to the learning and research deficiencies associated with current MBA programs, most of which have international business (IB) components. The paucity of programs that develop tacit knowledge or learning that intermingles with experience is at the heart of this criticism. We will return to assessment issues during our literature review.

With these initial thoughts on the history and evolution of distance learning delivery technologies in mind, let's turn to the next element in our review and framework, the learning environment and issues such as student attitudes, instructor matches, and remote location which is the *raison d'etre* of distance learning. Subsequently we will focus more directly on the distance learning administrator's decision making

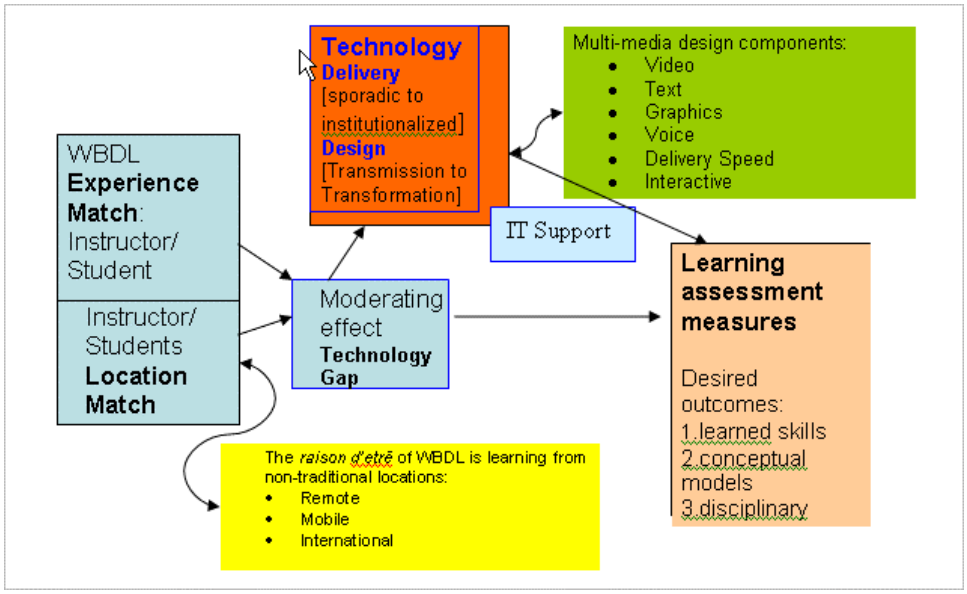
challenge, and a decision-tree approach to making the critical delivery method decision with regard to international business learning programs which are the primary contributions of this article.

The Learning Environment & Experience

The relative paucity of empirical research on distance learning in business schools adds to the sense of urgency, noted earlier with regard to the need for a framework to direct systematic research into WBDL as a learning system. One clear exception here is the study by Brower (2003) which focused on emulating classroom discussion via discussion board technology. This study illustrates with a single class example (e.g. an executive MBA organizational behavior and human resources course) how to create a "student- centered learning community" in a distance classroom. The virtual nature of the WBDL classroom learning environment features hi-tech equipment and a relative lack of face-to-face interaction between instructor and students as well as between students. The students in this study are described as working from their homes and office computers scattered over North America , however, there are no examples of remote students nor of

international students actually domiciled in other nations. One needs to remember that instructors are also located somewhere else. These are issues of learning environment and of physical location begin our review and formation of a conceptual model (see Figure 1).

Figure 1. A framework for the study of WBDL programs



Student's attitudes, motives and experience

The learning experience and environment is also impacted by the attitudes of the students. Also, as noted earlier, Fuller (1979) clearly recognized the changing nature and future potential of the next generation, this is further complicated the notions of student acceptance of web-technology, the nature of students as clients, and students web-experience as postulated by Martins & Kellermanns (2004), Armstrong, (2003) and Arbaugh, (2004). Martins and Kellermanns (2004) propose a conceptual model of factors they suggest as impacting the attitudes of students towards a "web-based" course and related technologies. These researchers developed measures for an assessment of the validity of the model with their results indicating some support . Positively related to perceived usefulness of the system were perceived incentives to use the system, faculty encouragement, and peer encouragement to use the system. These factors were then seen as positively related to acceptance of the system by students. Another set of factors were related to ease of use of the system, with student acceptance being impacted by the later.

> 'Students as clients' uses a professional analogy to suggest that distance learning students need to be assessed over the long run not just for short run satisfaction with a course or program of study (Armstrong, 2003; and Trank & Rynes, 2004).

To date there is no research on instructor attitudes, however, in the interim we suggest that most instructors are equipped with hi-speed equipment except when traveling to remote areas of the world. Recently, the lead author was traveling in Japan on business while still maintaining contact with students enrolled in a S.E. Asian based MBA distance learning program. The hi-speed Internet connection card in his laptop was not operable in Japan , necessitating the use of much slower phone lines, with a result of delays in grading and feedback which can be a very big issue with experienced distance learners who have the hi-speed capability. This and other instructor related issues needs examination by researchers and needs to be clearly understood by distance learning administrators when developing and coping with the challenges associated with selection, training , and evaluation of WBDL instructors. Now let's return to the related topic of location which impacts both instructors and students in distance learning classes.

Location of Instructor and Students

Location of both instructor and of students enrolled in WBDL courses is a critical component of the learning process to which distance learning administrators must pay careful attention. Matching instructor and student locations may not be as crucial as understanding their specific technology and other needs dependent on their level of remoteness. What about

traveling instructors and traveling students? Instructors of WBDL courses are frequently adjunct faulty who move about the planet earth to meet their various obligations. For example, the lead author recently taught a WBDL course which he began and ended from his home in Mississippi , however, for several weeks in the middle of the session he was in Japan on another assignment. Thanks to a notebook computer, a few wireless connects at airports and coffee shops, and a dial-up modem, he remained connected to his students throughout the session with only some minor line outage problems. On another occasion he was remote in Eastern Africa and the line outages caused significant problems as they lasted for several days at a time due to inefficient phone systems in the developing nation where he was located.

On numerous occasions the author has taught a WBDL course in which the students were literally scattered around the globe. Some students in a single class were in India , others in Malaysia , China , Singapore , the Middle-east, eastern and western Europe, North America and even Uzbekistan . The learning environment called for teams of students to complete some assignments and individuals other assignments. Team members were clustered regionally where possible but complaints were frequent about inability to access team members. Time zone differences also created both student to student and instructor to student problems. Yes, these and other problems are anecdotally support ed as they are here, but they need to be examined scientifically if we are to make the best of WBDL and its resources from content delivery to interaction, to immediate access to online databases and libraries.

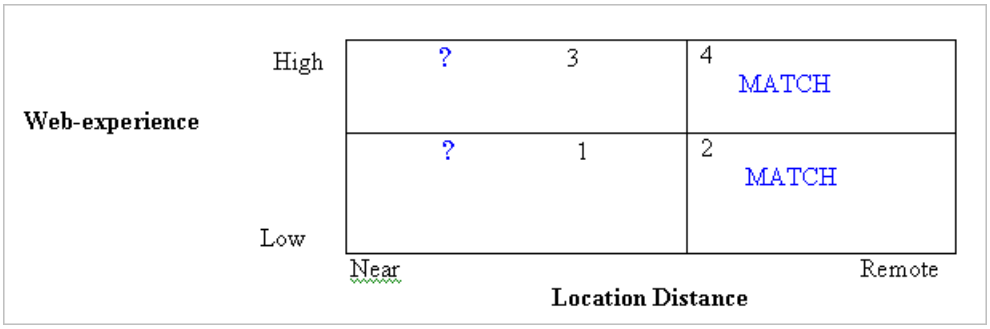
Teamwork is clearly an important component of traditional business management courses and it is very relevant in today's diverse workplace. However, training and educating students to work in organizational teams may be the Achilles' heel of distance learning until new techniques are developed that allow for greater team member interaction, simulating face-to-face teams. Armstrong, Allinson, & Hayes (2004) examined student-supervisor dyads in management education and a similar study needs to be done for academic student- instructor dyads. Chen, Donahue, & Klimoski (2004) discuss the need for development of teamwork knowledge, skills, and abilities.

In sum, location is critical to students and instructors from both the aforementioned issue of remoteness and with regard to web-experience (e.g. compatibility and quality of equipment). It is also important with regard to the mobility of instructors and students which is a core benefit and attractiveness component of the WBDL method of learning.

In Figure 2 we present a 2x2 model to illustrate the “experience/location gap” that this literature has suggested. When there is a match between

student/instructor web-experience and their remoteness, there seems to be a better appreciation of each others roles in the distance learning environment. However, there is considerable uncertainty as to how these relationships will work out when no match exists as in boxes 1 and 3 in the following 2x2 diagram, suggesting that distance learning administrators as well as instructors need to pay special attention to these situations.

Figure 2: The experience/location gap.



Technology: Design and Delivery

This framework can assist in making more systematic and informed decisions about technology related delivery systems, the primary cost component decision, which distance learning program developers and administrators wrestle with every day. We purposefully focus here on web-based distance learning although other technologies were noted in the historical segment of this review. An organization's level of technical capability for delivering distance learning is a key component of the framework we present here (see Figure 1). The literature just reviewed while emphasizing the need for a conceptual framework, also noted the importance of technology and the key elements of design and delivery systems associated with WBDL.

A great deal of technological development had been spawned by the late 1990's culminating in the introduction of the Internet as a communications tool used by massive numbers of people around the world. As predicted by Schreiber & Berge (1998), an organization's technical capability for conducting distance learning should evolve from sporadic distance-learning events until achieving institutionalization of distance learning. This institutionalization process seems to be well under way in businesses and academia with business leading the way (Alavi & Gallupe, 2003). Masalin (2003) highlights the case of Nokia as an example of leading change through continuous learning, another example of institutionalization of learning.

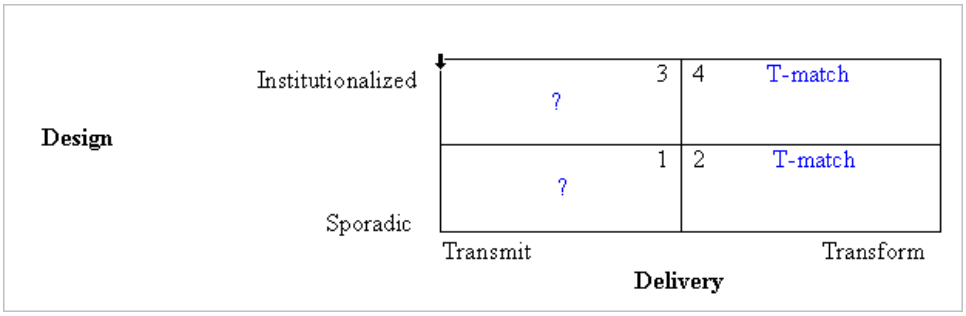
Martins & Kellermanns (2004) note that many North American and other university based business schools have already expended a great deal on web-based course design and related technologies. Likewise, large corporations around the world have invested heavily in training and development systems that allow them to train geographically remote or distant organizational members without having to transport them over long and costly distances. Langlois, Litoff, & Ilacqua (2001) discuss the Bentley College- Belarus connection and the development of a collaborative international business program that crosses national boundaries. Arbaugh (2004) states that the accelerating need for training and increased globalization are making the idea of "coming to training" increasingly obsolete. Study abroad programs do however remain active. Alternatively, distance learning over the Internet is instead bringing the learning to the student's location, a fact of which administrators are rapidly becoming aware.

In Figure 3 we offer distance learning administrators and researchers a summary of our brief review of the literature on technology and the learning environment to assist in clarifying where and how to match delivery techniques and design of instructional materials. Here we can see that when the organization's technology delivery capability has developed from sporadic to institutionalized, it has the capability to support WBDL, as seen in boxes 2 and 4 in the 2x2 model. This support is indicated as a "T-match" between organizational delivery capabilities and the fact that their design of materials has matured from mere transmission to transformation.

We illustrate this model with the following hypothetical example.

> Here we have a class of 4 students and an instructor who is local but highly mobile. The students are remote, local, and mobile. The real trouble spot involves mobile faculty and students who are mobile and remote. In this "Trouble spot" quadrant, there may be technology breakdowns such as slow downloading, the mobile instructor being off line more frequently, or remote and mobile students working on team assignments with other remote and mobile students may have difficultly connecting on chat times or discussion boards, etc.. In short there is a poor fit because there is a technology gap and because the students are significantly more web-experienced than their instructors in many situations.

Figure 3: A technology gap – delivery & design.



To assist both administrators and researchers in being more systematic and effective with regard to the development and implementation of WBDL programs such as those in international business, we have just summarized the literature into a single conceptual framework (see figure 1) as well as the two by two's shown as figure 2: The experience-location gap and figure 3: The technology delivery & design gap. We focus next on the central issue of this article, how distance learning administrators are to make the critical decision about delivery of these WBDL programs.

Towards a Decision-tree Model for Making the Delivery Systems Decision

The cost and difficult challenges associated with delivering high-quality distance learning programs to people located in the remote highlands of Kenya or located in downtown Detroit can be enormous as the following list in Table 1 of multi-media tools and software available to distance learning programs suggests. It is for these reasons that we now turn to the focal issue of our decision-tree for assisting distance learning administrators in making the critical delivery decision.

Recognizing that a specific distance learning administrator or institution may not have an unlimited budget, we next suggest a decision-tree designed to assist WBDL program administrators in making the delivery system decision when their institution's managerial philosophy of doing business abroad or in this case developing learning programs abroad, is predominantly already established based on past experience.

This decision-tree is an extension and modification of the work by Mathews, Rivera, & Pineda (2001). In their discussion of key elements effecting the decision of how to deliver management education abroad, these authors focused on two approaches, adapting to the local environment and the “cookie-cutter” approach. We will term these two approaches local customization and hybrid to distinguish them from the third alternative which is the global standard. At present the USA model is the most apparent global standard and it is being copied or modified by many European and other institutions often in collaboration with USA academic institutions or by local branches of North American universities

such as Temple University- Japan . The delivery decision was dependent on international orientation (divergence/ convergence), international experience, desired control over internationally located programs, and home/host culture environmental factors according to Mathews et al (2001). For the sake of simplicity and due to the author's primary area of interest, we will continue with Mathews et al's (2001) focus on "international business" programs in the development of this decision-tree model. Different academic disciplines or courses and programs will of course have variations on what we present here.

EPRG- management's philosophy

As the premise or starting point for this decision making model (see Figure 5), we differ from Mathews et al's (2001) notion of orientation, by inserting the EPRG model of Heenan & Permutter (1979) which examines management's philosophy with regard to doing business abroad or at home. Here we provide reader's with a brief working knowledge of this prominent model. Our adaptation of the EPRG or type of centrism applies here to the administrators and developers as well users of the international business programs being designed and delivered. In the presence of ethnocentrism, management of a particular organization is likely to prefer to develop and deliver an IB program that is basically representative of their home culture. For a USA organization that wants to delivery an IB program in Eastern Europe , the ethnocentric model would predict that they will select what is essentially a clone of the USA business schools, emphasizing using USA trained faculty, USA firms doing business abroad, and USA theories and approaches to entering and sustaining a foothold in overseas markets.

Contrast this with a polycentric philosophy which calls for developing and delivering an IB program in Eastern Europe . Here the emphasis would be on local ways and means for doing IB. Often this approach is characterized by the phrase "when in Rome do as the Romans do".

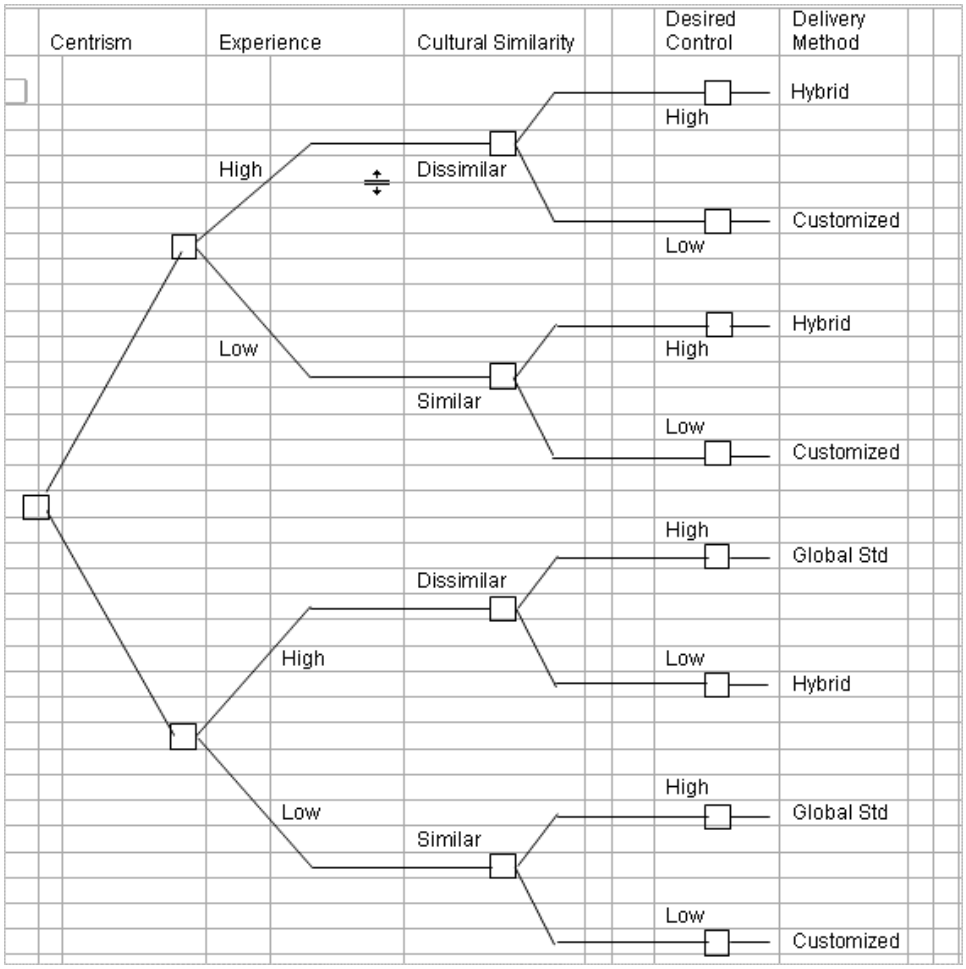
The third and fourth managerial philosophies, regiocentrism or geocentrism, are based on regionalism and/or globalism. The emphasis of the region/geocentrism view is on hiring the best available faculty regardless of their nationalities or origins of their degrees, and pursuing IB in terms of regional and global benchmarks of the best people, producers, marketers, most cost efficient, regardless of the home nation of the firm(s) being studied.

Each of these EPRG philosophies has its advantages and disadvantages, its pros and cons. For example, polycentrism advocates point out that no one knows how to do business in Rome better than an experienced Roman business person, knowledgeable in the laws, customs, and practices of

Rome . In the case of ethnocentrism, the claim might be that the USA system works so well everywhere else that it must also be the best in Eastern Europe . For geocentrists or regiocentrists, who pursue the best of the best, no matter the country of origin, costs may indeed be minimized by seeking out the best financial sources and not limiting the search to one's home nation or banks. Unfettered by ethnocentric or polycentric biases, program developers with geocentric philosophies may be free to consider collaborations across borders, as illustrated by the Bentley College-Belarus case noted earlier (Langlois et al, 2001).

We note here that our decision-tree (see Figure 5) focuses on regiocentrism and geocentrism. For example, when an Australian University wants to establish a WBDL international business programs abroad, if they are regionally oriented in their focus, they will most likely select countries such as New Zealand or Singapore which are geographically in relative proximity and they will apply the Australian international business program model to the entire region with variations to meet local needs. In the geocentric case institutions would seek the best possible international business program regardless of the originating institution's nationality. This regio/geo limitation was necessitated by the author's discussion with several colleagues and experts who noted that in the case of ethnocentrism and polycentrism, managerial orientations were so strong as to override the collective international experience of an institution. In both of the regiocentric and geocentric cases, cultural similarity, and desired control variables lead directly to the decision to deliver by a global standard or local customized approach respectively. The logic seemed irrefutable as ethnocentrism reflects a clear preference for doing things the home country way regardless. For example, when a B-school based in Massachusetts sets up international business programs in Malaysia , India , and/ or Japan , if they are ethnocentrically oriented, then they will use the North American model as a global standard with little to no variation to account for local values and needs. And, if the same Massachusetts institution was to follow the polycentric approach, they would do the opposite, tailoring or customizing the learning programs to be as localized as possible, recalling that the Roman way is best when in Rome .

Figure 5: Delivery Decision-tree



In addition to the EPRG component, there are several other key factors to consider in making the decision as to IB program delivery systems (see Figure 5). The technology component of our framework focuses on both delivery and design. The decision associated with developing a cost effective design and delivery system is critical to the success of both supplemental and substitute approaches to teaching international business. The list of multi-media tools shown in Table 1, was compiled from the literature reviewed for this article. One addition to the list is ‘wireless technology', which further illustrates the urgent need studying these rapidly emerging tools and systems (Bowers, 2001). This is by no means a comprehensive list of the rapidly developing tools and systems associated with WBDL, however, it serves to illustrate the complexity and costly nature of this critical decision. Not every organization can afford the full set of multi-media tools, and this may necessitate outsourcing, partnerships or other collaborative approaches to building effective WBDL programs for teaching international business courses and programs.

Table 1: A Short List of Multi-media Tools (hardware and software)

Streaming video
Laptops
Digital video cameras
Wireless Internet connectivity
High-speed data networks- bandwidth
Video-conferencing and VOIP
Video cell phones
E-mail
Projection television screens
Sound-sensitive video cameras
Two-way audio and video systems
Mobile e-learning carts
Synchronized computers
Shared databases
Course management systems
Web resources (Many are free, at least for now)
Software

Technology and Multi-Media

Speed and interactivity capabilities were at one time major drawbacks to distance learning, as was noted in our introductory discussion of the historical evolution and development of distance learning. Again we are reminded of Buckminster Fuller's remarks on communications technology and how anything we can envision or dream of will likely come to be. The critical technology components of multi-media learning

environments are depicted as moderating variables in Figure 1. The basic components consist of video, voice, text, interactivity and graphics. To these we add, access to online databases and virtual libraries. These online tools provided remote students with access to materials that were at a distance that made them less than readily accessible prior to the advent of WBDL and other computer/Internet based multi-media systems. We conclude this segment on a decision-tree for making the delivery decision with a recommendation. We recommend following the check list of considerations shown in Table 2 to distance learning administrators when they are designing or deciding upon WBDL for supplemental and/or substitute use for teaching IB courses.

Table 2: Checklist of Considerations When Designing IB Courses

1. Student issues
2. Instructor issues
3. Organizational issues
4. Technology- delivery and design
5. IT and top level support
6. Outcomes assessment
7. Flexibility in a rapidly changing environment
8. Supplemental vs. substitute

Each of the eight items in Table 2 needs to further consider the following questions:

- The interactive nature of multi-media learning has brought distance learning closer to the traditional classroom, or has it?
- Should we adopt WBDL as an alternative to traditional classrooms or is distance learning technology already a major supplement to the new traditional classroom?
- What is the best delivery system for a given situation (global standard, customized, or hybrid)?
- Does WBDL have some advantages over the traditional or other learning systems?
- Does technology give the instructor and/or student a learning advantage?

Learning Outcomes

These same questions need to be addressed with regard to the final component of our framework (see figure 1), learning outcomes . Distance learning administrators need to be particularly cognizant of learning outcomes as well as the advantages and pitfalls of distance versus traditional learning. They need to be careful not to fall into the infatuation with the new technology trap. And, disciplinary measures may also matter as noted by Arbaugh (2005) in a study of WBDL courses from several MBA programs. The speed and bandwidth issue associated with online technologies was introduced in our

evolution and history segment. New technologies are rapidly emerging to overcome obstacles and indeed to improve distance learning. These new developments may even be providing as yet unknown advantages and improved learning outcomes for distance learning programs such as those with an international business emphasis.

One specific outcome that is frequently pursued by WBDL programs and their administrators involves the teaching of future international managers.

Early and Peterson (2004) and Peterson (2003) discuss the multinational environment and training and educating of managers for the complex realities of the global marketplace. Mintzberg's (2004) call for more intermingling of real world experience with the learning process might well include study abroad programs as well as WBDL programs and courses which are in competition for this international student market. Many socio-economic forces are at play in decisions by governments and others with regard to the relative costs and benefits of these different learning pedagogies and delivery systems. For example, a recent budget driven change in Malaysian government support of cross-cultural education has resulted in a significant decrease in the number of Malaysian students studying abroad in North America and Australia and elsewhere, in favor of more distance learning programs.

Empirical studies of the moderator role of technology in distance learning are scarce. One exception is the research by Webster & Hackley (1997). In essence, the literature suggests that location dimensions have a moderating effect on the learning experience. However, we have suggested that remoteness and thus geographic distance is the *raison d'etre* of WBDL. Webster & Hackley's (1997) examination of teaching effectiveness found some initial evidence in support of the moderating effect of location on the learning experience and of the further mediating effect of technology in the form of multi-media components impact on learning outcomes (see Figure 1). Outcomes were

measured by these researchers in terms of students' reactions to distance learning. The dependent variables in their study included involvement and participation, cognitive engagement, technology self-efficacy, attitudes toward the technology, perceived usefulness of the technology, attitudes toward distance learning, and relative advantage of distance learning. Future research may want to examine the relationship between these learning outcomes and measures of actual student performance?

Chen, Donahue, & Klimoski (2004) examined the knowledge, key skills, and abilities sets of teams of students. Their results provided some support for the notion that students in an experimental class significantly increased their teamwork knowledge and skills compared to a control group. Teamwork attitudes and self-efficacy were not improved.

Future research needs to examine the issue of limitations to team assignments in WBDL settings and whether and how learning outcomes associated with “teamwork” can be effectively pursued in these virtual settings. Studies such as Miller's (2003) on the use of simulations in distance learning environments should assist in heeding the call of Mintzberg (2004) for more tacit learning experiences, at least as far as these virtual realities can go in fostering risk free opportunities to learn

about the complexities of doing international business, not just reading about them.

Cole, Field, and Harris (2004) report on two studies examining the notion of ‘psychological hardiness' in enhancing the classroom learning experience. The focus of these studies was on development of measures of psychological hardiness and testing the impact it has on a sustained sense of accomplishment for students as well as on coping with stressful learning environments. Clearly, one aim of education and of distance learning administrators is to provide programs which give students knowledge and skills that endure over time, this and other aspects of sustaining learning outcomes has received only minimal attention in the business education literature in recent times, especially with regard to administering WBDL programs.

In sum, can WBDL courses contribute effectively to improving the learning outcomes and education of managers who will need to operate across cultures and with diverse workforces, clients, and partners? Will international management students enrolled in WBDL programs get the same or better learning outcomes with regard to language skills, understanding diversity, and cultural awareness as their traditional classroom or study abroad counterparts? Is it indeed the worst thing we could do as administrators and scholars, that is, to “recommend that everyone stay at home” in today's troubling global environment?”(Peterson, 2003, p.197). Answers to these questions will only come from further study and perhaps WBDL courses allow us as educators and administrators of learning programs to reach people who would not otherwise have an opportunity to interact with students from other countries, even if in a virtual learning environment. Comparative studies of various traditional and distance learning pedagogies will help answer this and other related questions, and so will the sharing of WBDL experiences between administrators, instructors, students, and others.

Summary and Conclusions

Students as clients of distance learning

Distance learning administrators who develop, implement, and evaluate international business programs will benefit from the use of a systematic framework based on the existing body of literature on Internet based learning programs that has emerged since 1997. These administrators will want to pay close attention to students as clients of distance learning. Remote location remains the *raison d'etre* of distance learning, however, while it is an assumed factor for students, it is not always considered for instructors. Prior web-experience is also important, necessary for both students and instructors if they are to create a comfort or competence fit.

One important question for administrators asks “What motivates students to pursue distance learning and what are their attitudes towards the associated technologies?”

Technology match (see T-match in Figure 3) can be either sporadic/institutionalized or transmitted/transformed. And, global standards, locally customized, or hybrid WBDL

programs can be chosen or designed to meet the needs of a specific institution and its learning constituents. The decision-tree developed and presented here should be useful to both administrators and researchers in their efforts to make these decisions.

Assessment of learning outcomes and the effective use of disciplinary measures involves skills, conceptualizing, and satisfaction. All of these critical elements must be systematically examined if we are to develop and deliver the most effective programs possible whether as enhancement of traditional classes in international business or as substitutes or alternatives to old traditional classes. How to deliver programs and courses in “international business” remains a challenge as the above literature suggests. Towards this end we have contributed a decision-tree model to assist IB program developers and administrators in making the delivery decision. While centrism guides this basic delivery decision, in the case of regio/geocentrism, international experience, cultural similarity and desired control are also important variables to be considered when selecting a global standard, a locally customized, or a hybrid delivery system. And, we need to remain cognizant of our students' needs when selecting the delivery system best suited for them.

The students who benefit from distance learning are different from past generations and predicting and delivering the right equipment for teaching them will be challenging. In 1979, R. Buckminster Fuller, noted scholar, inventor, and renaissance thinker, wrote the following passage in his book “On Education”:

> “I think one of the most important events of the educational revolution is the present realization that we are going to discover that children are born comprehensively competent and coordinate and that they are capable of treating with large quantities of data and families of variables right from the start. I am quite confident that we are going to find ways of helping children to coordinate their spontaneous comprehension of the ‘whole' instead of becoming specialists without losing any of the advantages gained by yesterday's exclusive ‘specialization”…..Next, let us think carefully and daringly of the equipment we will need and

> that we don't need….At M.I.T. for instance… there are rooms full of special and expensive apparatus…equipment that is now obsolete- at best collections of machinery make a dull museum".
>
> "This is what's coming…. Get ready the greatest educational facility at the dynamic population center of the North American continent, assuming that any dreamable vision of technical advance will be a reality and that humanity is about to demonstrate competence beyond our estimates of yesterday and today. "Shoot for the moon"- yesterday a statement of lunacy- only a lunatic would now deny that this is the most evidently "next" practical of humanity" (Fuller, 1979, pp. 80-84).

Well ahead of many scholars and ahead of his time, R. Buckminster Fuller clearly recognized the importance to modern education of developments and forthcoming developments in communications technology, altering the very nature of the location and of the multi-media utilized in the classroom of the future, providing even a new objective of generalist versus specialist education of our youth to meet the challenges of the future.

We have purposely left the debate over the comparative benefits of different delivery systems and over generalization versus specialization for others and focused instead on the web-based distance learning class and its successful delivery of desired learning outcomes. We followed the lead of R. Buckminster Fuller, who stated that distance learning as it is practiced today is merely the tip of the iceberg, and that it is here to stay, although rapidly changing. By taking this stance we can more clearly focus on the best ways to deliver WBDL programs and to perform effective outcomes assessments. These steps are necessary to achieve the learning outcomes desired of international business programs around the world.

In conclusion, our chances to truly get prepared but with "mobility" and "flexibility", not with soon to be obsolete equipment as Buckminster Fuller suggested 25 years ago, can be greatly improved if we systematically gather evidence as to the strengths and weaknesses as well as learning outcomes of WBDL and other approaches to international business management education. The conceptual framework and decision-tree model were both presented here to assist in that systematization process and to integrate both public and private sector experience with these learning systems. Whether the delivery decision is based on a global standard, locally customized, or a hybrid it will be greatly impacted by our centristic philosophies and attitudes and of course by our institution's international experience, financial resources, and willingness and

capabilities to develop partnerships to accomplish the desired learning outcomes.

The remaining challenge for both distance learning administrators and researchers is, will we make the necessary resources available and take the time available to systematically pursue the study of distance learning. This very important approach to learning is rapidly changing the very nature of international business education at all levels from universities to corporate programs and must be treated seriously and systematically. Administrators and all learning participants need to respect and view distance learning with a new temporal lens and sense of urgency or the technologies will overwhelm the learning environment.

As a final note, we heed the call of Mintzberg (2004) and Pfeffer & Fong (2002), noting that these conceptual framework and decision-making steps are necessary if academia is to make a relevant impact on the learning experience of managers and future managers around the world. As a final offering we provide a selection of some of the many relevant issues that need to be researched as we develop and deliver distance learning programs (see Table 3). These issues are primarily aimed at distance learning administrators, however, they also have broader value with regard to both international business and WBDL programs in general.

Research Suggestions

These research issues as summarized and presented in Table 3 are aimed at administrators and scholars who are interested in pursuing the understanding and improvement of distance learning, from learning environment to technology to outcomes, with a focus on WBDL. While we have focused on international business in this article, we invite commentary and discussion on the broader application of the framework and decision-tree model which we have just presented.

Table 3: A Summary of Suggested Areas for Further Research

Administrative areas

- How can administrators' cluster or group students from remote parts of the world so as to better facilitate teamwork and team assignments in WBDL programs? Future research needs to examine the issue of limitations to team assignments in WBDL settings and whether and how learning outcomes associated with “teamwork” can be effectively pursued in these virtual settings. This team approach is critical to international business and varies

depending on the degree of individualism or collectivism in various cultures.

• Can WBDL program administrators implement and evaluate courses with regard to contribution to effectively improving the education of managers who will need to operate across cultures and with diverse workforces, clients, and partners? Will international management students enrolled in WBDL programs get the same or better learning outcomes with regard to language skills, understanding diversity, and cultural awareness as their traditional classroom or study abroad counterparts?

• Is it indeed the worst thing we could do, that is, to "recommend that everyone stay at home" in today's troubling global environment?" Perhaps WBDL courses allow us as program administrators and educators to reach people who would not otherwise have an opportunity to interact with students from other countries, even if in a virtual learning environment.

• Clearly, one aim of education is to provide students with knowledge and skills that endure over time, this and other aspects of sustaining learning outcomes has received only minimal attention in the business education literature in recent times, especially with regard to WBDL. Meaningful evaluation of outcomes of WBDL programs is a must if distance learning is to survive and get better.

• The effect of technology and location on learning outcomes needs to be systematically examined to both justify and improve WBDL programs. This task belongs to administrators and researchers alike.

• Future research may want to examine the relationship between these learning outcomes and measures of actual student performance?

• The interactive nature of multi-media learning has brought distance learning closer to the traditional classroom, or has it? Does WBDL have some advantages over the traditional or other learning systems? Does technology give the instructor and/or student a learning advantage? Does technology make the administrative task easier or harder?

• Evaluate the moderating effect of location on the learning experience and of the further mediating effect of technology in the form of multi-media components impact on learning outcomes.

• Examine location from both the issue of remoteness and quality of equipment and also with regard to the mobility of instructors and students. Can administrators assist in gaining better instructor/student matches?

• Time zone differences created both student to student and instructor to student problems, administrators need to help clarify these and develop solutions.

• Emulating classroom discussion via discussion board technology and chat rooms. Should emulation be the goal or can WBDL have advantages over traditional discussions?

• Comparative studies of various traditional and distance learning pedagogies will help answer many of the above and other related questions. Most administrators have access to data pertaining to both pedagogies and with the assistance of using a systematic framework these comparisons will be more meaningful.

References

Alavi, M. & Gallupe, R. B. (2003) Using Information Technology in learning: Case studies in business & management education programs, *Academy of Management Learning & Education*, vol2no2, 139-154.

Arbaugh, J. B. (2005) How Much Does "Subject Matter" Matter? A study of disciplinary effects in on-line MBA courses, *Academy of Management Learning & Education*, vol4no1, 57-73.

Arbaugh, J. B. (2004) A review of " *Distance training* " by Schreiber & Berge, San Francisco: Jossey-Bass, 1998, *Academy of Management Learning & Education*, vol3no1, 117-120.

Armstrong, M. (2003) Students as Clients: A professional services model for business education, *Academy of Management Learning & Education*, vol2no4, 371-374.

Armstrong, S., Allison, C. & Hayes, J. (2004) The effects of cognitive style on research supervision: A study of student-supervisor dyads in management education, *Academy of Management Learning & Education* , vol3no1, 41-64.

Bower, P. (2001, January) Discovery based learning: Lessons in wireless teaching, *Syllabus* .

Brower, H.H. (2003) On emulating classroom discussion in a distance-delivered OBHR course: Creating an on-line learning community, *Academy of Management Learning and Education,* vol2no1: 22-36.

Chen, G., Donahue, L. & Klimoski, R. (2004) Training undergraduates to work in organizational teams, *Academy of Management Learning & Education* , vol3no1, 27-40.

Cole, M., Field, H. & Harris, S. (2004) Student learning motivation & psychological hardiness: Interactive effects on student's reactions to a management class, *Academy of Management Learning & Education* , vol3no1, 64-86.

Connolly, M. (2003) The end of the MBA as we know it? *Academy of Management Learning & Education* , vol2no4, 365-367.

Early, D. C. & Peterson, R. (2004) The elusive cultural chameleon: cultural intelligence as a new approach to intercultural training for the global manager, *Academy of Management Learning & Education* , vol3no1, 100-116.

Freed, K. (2004) A History of Distance Learning, Retrieved June 25, 2004 from http://www.media-visions.com/ed-distlrn.html

Fuller, R. Buckminster (1979) *On Education* . Amherst : U. Mass. Press.

Heenan, D. & Perlmutter, H. (1979) *Multinational Organizational Development* , Reading , MA : Addison-Wesley.

Hogan, R. & Warrenfeltz, R. (2003) Educating the Modern Manager, *Academy of Management Learning & Education*, vol2 no1, 74-84.

Hunt, D. M. (2001) A clash between cultures: An approach to reducing cultural hostility in a homogeneous classroom, *Journal of Teaching International Business*, vol11no3, 61-83.

Ives, B. & Jarvenpaa, S. L. (1997) Will the Internet revolutionize business education and research?, *Sloan Management Review*, vol37no3, 33-41.

Langlois, G., Litoff, J. & Ilacqua, J. (2001, October) Reaching across boundaries: The Bryant College-Belarus connection, *Syllabus* .

Martins, L. & Kellermanns, F. (2004) A model of business school students' acceptance of a web-based course management system, *Academy of Management Learning & Education*, vol3no1, 7-27.

Masalin, L. (2003) Nokia leads change through continuous learning, *Academy of Management Learning & Education*, vol2no1, 68-72.

Mathews, V., Rivera, J. & Pineda, R. (2001) Management education abroad: Adaptation versus a cookie-cutter approach, *Journal of Teaching International Business*, vol2no4, 1-14.

McGrath, A. (2004, October 18) Bricks & Clicks , U.S. News & World Report, pp. 62, 66.

Miller, V. (2003) Teaching Business Strategy for an emerging economy: An Internet-based simulation, *Journal of Teaching International Business* , vol13no2/3, 99-109.

Mintzberg, H. (2004) " *Managers not MBA's* ", San Francisco : Barrett-Koehler.

Mintzberg, H. & Gosling, J. (2002) Educating Managers Beyond Borders, *Academy of Management Learning & Education,* vol1no1: 64-76.

Peterson, P.M. (2003) New Directions to the Global Century, *Frontiers: The Interdisciplinary Journal of Study Abroad*, vol 9, 189-198.

Pfeffer, J. & Fong, C. (2003) Assessing Business Schools : Reply to Connolly, *Academy of Management Learning & Education*, vol2no4, 368-370.

Pfeffer, J. and Fong, C. (2002) The end of Business Schools? Less success than meets the eye, *Academy of Management Learning & Education*, vol1no1, 78-95.

Schreiber, D. & Berge, Z. (1998) *Distance Training: How innovative organizations are using technology to maximize learning & meet business objectives*, San Francisco : Jossey-Bass.

Sims, R. (2002) *Teaching business ethics for effective learning*, Westport, CT : Quorum Books.

Trank, C. Q. & Rynes, S. L. (2004) Who moved our cheese? Reclaiming Professionalism in Business Education, *Academy of Management Learning & Education*, vol2no2, 189-205.

Webster, J. & Hackley, P. (1997) Teaching Effectiveness in technology-mediated distance learning, *Academy of Management Journal*, vol40no6, 1282-1309.

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