Addressing Quality Control Factors in the Design, Development, and Implementation of Distance Learning Program

Dr. Michael W. Churton
Professor and Fulbright Scholar
University of South Florida
Tampa Florida
Churton@tempest.coedu.usf.edu

Abstract

Historically, open and distance learning has meant providing access to instructional content in which learners and their instructor(s) are assisted to overcome the communication barriers of location, time, and most recently pace (Churton, 2000; Juge, Hartman, Sorg, & Truman, 1997). At its most basic level, distance education occurs when an instructor and student(s) are separated by physical distance. Technology including print based technology is used to bridge this instructional divide (Churton & Rejniak, 2001). Due to development in education and the emergence of technological diversity and instructional design, the element of communicating in real time is now a reality. Tam (1998) suggested that distance learning has transcended various chronological landmarks and transformations in nomenclature, format, style, delivery applications, and numbers served. This rapid and diverse expansion of open and distance learning has led some to question the qualitative implications of such programs and have called for standards or benchmarks to demonstrate programmatic quality and integrity (Churton, 2001). As the global marketplace promotes the acceleration of open and distance educational opportunities, international linkages, overseas campuses, collaborative partnerships with multiple universities and other transnational relations, instructional quality and integrity remain keys to effectiveness and sustainability. For reasons of infrastructure, cultural
diversity, educational regulations, languages, and real costs, the challenges in providing a quality and comprehensive education can be quite difficult. As developed and transitioning countries consider the development and/or expansion of open and distance learning, a concern for quality control and the necessary support systems to ensure programmatic integrity requires concerted attention. It is the responsibility of policy makers to identify and apply appropriate curricula design, development, support, and evaluation measures to ensure that their distance learners and their distance learning instructors experience an effective transition to a distance learning environment. Distant learners should have the same level of academic integrity as students who attend campus based programs. Hastily conceived and designed distance learning programs will create not only student and instructor discontent but political concerns as well (Churton, 2000c). The premise of this paper/presentation suggests benchmarks in curricula design, development, support, and evaluation to ensure that open and distance learning programs demonstrates effective student outcomes.
Introduction

Given the international events of September 11, 2001 and its aftermath, increased attention was applied for the need of education to support tenets of knowledge, peace, security, freedom and the hope for all children to be raised in a secure and healthy environment. Surely, every country needs to examine their own beliefs and values and how they view the world and the people with whom they interact. Education will certainly be a key instrument for countries to ensure that its citizens are a learned populace, one that understands and celebrates the diversity of all people. Educational access, paradoxically, is perhaps the greatest and most difficult challenge for countries to comprehensively address. Serious revisions to traditional mindsets, policies, and educational customs need to be considered in order to provide affordable and qualitative access to education.

Mass educational programs that address significant numbers of citizens beyond traditional primary and secondary programs encompass in many respects, an inordinate amount of financial strain on limited economies and infrastructure for many developed and developing nations (Lenn & Miller, 1999). Often, to meet financial shortcomings, governments relax accepted standards and practices, allowing less than adequate educational primary, secondary, and tertiary as well as vocational programs to flourish (Churton, 2000). In addition, transnational educational programs have invaded international boundaries to assist if not replace government attempts to provide educational access. The mad dash to embrace e-learning, e-knowledge, and e-market development seems to obscure the impact or influence of transnationalization on education. Further, the development of private for profit educational entities filling a vast void for services, have priced access to education beyond the means of many citizens which in turn has broadened the educational and technological divide among people.

Within a context of rapid technological change and shifting market conditions, educational systems are challenged in providing increased educational opportunities without increased budgets. Some educational institutions are answering this challenge by developing effective distance education programs (Bates, 2000). At its most basic level, distance education takes place when a teacher and student(s) are separated by physical distance and the technology (e.g. voice, video, data, and print), used to bridge the
instructional gap. Open and distance learning programs can provide adults with a second chance for a college or continuing education while also reaching disadvantaged individuals—limited by time, distance or disability, and updating the knowledge base of workers at their places of employment. Open and distance learning is certainly not the only answer or strategy, but it is one solution that if designed properly and qualitatively, can and does provide opportunity and access to educational programs on a local, national, and global scale (Churton, 1999).

Several international trends and movements have contributed to the increased need for educational services either real or conceived to be real. The population of the world is increasing at an exponential rate to exceed 7.2 billion people by the year 2015. Asia countries of China, India, and Indonesia are three of the largest countries in the world and their population continues to escalate. Over ninety percent of global population increase will occur in developing or transitioning countries (Worldfact Book, 2001). With improved health care and medical sciences; people are living longer and demanding improved educational and health-care services.

Globalization has contributed to an ever-increasing need for quality educational programs and human resource development. Globalization, simply defined, refers to the unrestricted or at best limited flow or discharge of information, which impacts all aspects of society including cultural beliefs and values, economics, and social and educational systems. Digital satellite communications such as television and radio programs produce not only worldwide news and information but also entertainment programming, ranging from classical events to the absurd. The driving force of globalization is rooted in the e-economic and to network on a worldwide basis, which in turns demands increased educational and employment opportunities for the workforce.

While some countries develop intricate and mass telecommunication and digital communication applications other countries remain removed from the digital access. As a result, an ever-widening crevasse of knowledge and services continues to separate countries, cultures, and people from one another. Governments are conflicted and at times confounded by their inability to provide improved services and opportunities for their people. Without access to the technologies and knowledge consumed by more developed countries, decisions to import transnational programs and services by
developing countries are being pressured by an ever-growing demand for education by the general population.

In addition, the implosion of local enterprises, which have developed at such a rapid pace to fill an ever-widening service void, have offered questionable educational practices. Some governments themselves have responded to ensure that their citizens do not have access to information and values that may run counter to established practices. The outcome of globalization complicates collaborative associations from being developed or at the very least puts under extreme scrutiny the exchange of knowledge across international boundaries.

Considerations for Southeast Asia

The need for nations to increase the quantity and quality of human resource services through education will undoubtedly place continued pressure on the demand for open and distance education. An additional factor that operates frequently in transitioning countries is the rapidly increasing population. Even at current rates of population growth, few developing countries can or have the capacity to provide enough classroom space for all people who need education. Southeast Asia's search for a cost effective and efficient way to provide access to education at all levels will further make more demands on distance and open learning models (Jegede & Shive, 2001). As a result, transitioning countries in Southeast Asia will need to resolve a number of challenges and consider that:

- Two-thirds of the world’s population live on the Pacific Rim.
- 800 million people were added to the region in 2000.
- 75% of the population lives in rural areas
- Over 1 billion children under the age of 15 years and up to 400 million under 24 years of age requiring education and skill development.
- 500 million adults, over 24 years of age are in need education

Southeast Asia common features include large and rapidly expanding populations. Many citizens continue to live in rural and remote areas and have a significant demand for education, which has not been met. Many countries lack the capacity and resources
for conventional educational systems to meet the demand resulting in an inequitable representation of people who have been marginalized by resources, location, and economic conditions. In addition, the rapid advance of global digital transformation has impacted businesses and commerce suggesting that alternative methods for addressing human, business, and social needs are now required.

Given the pace with which open and distance learning is still being embraced in Asia, the number of mega universities in Asia will continue to increase. Although open education can be said to be a relatively new phenomenon within the Asian region, the exponential growth in the number of institutions and students studying by open and distance education has made Asia the new home of this type of education. Asia has by far the largest number of students using this mode of distance learning compared to other regions of the world (Murphy & Yuen, 1997). As revealed by a recent study of open universities, five of the ten mega-universities (those with over 100,000 enrolments) are in the Asian region (Daniel, 1996). These Open Universities are located in China, India, Indonesia, Taiwan, Korea and Thailand with Vietnam and the Philippines adding more students on a daily basis.

The technological infrastructure being planned and implemented across Southeast Asian Ministers of Education Organization (SEAMEO) countries will assist in the expansion of distance learning. Wireless communication through digital applications will perhaps be the technology of choice for Southeast due to its diverse geographical topology. In addition, the need not to support or enhance terrestrial based cable and telephone services since penetration of these services is relatively low, further underscores the use of wireless communications. Digital telecommunications seems to be the most cost and pedagogically effective direction for distance learning applications to consider. The focus once again is not on the technologically but rather on the systematic design, development, and evaluation of the educational programs delivered through open and distance learning with emerging technologies. Rationale for increase distance learning activities in Asia include:

- Higher Education needs are expanding.
Educational resources are neutral or declining.
Adult education and retraining will be a necessity.
Job training will be wanted by both employers and employees.
Knowledge will become a global equalizer.

According to the 1999 World Trade Organization’s Education Service Report (WTO, 1999), the global market for higher education and training was estimated at US $27 billion in 1995. The World Bank estimated that in 1999, there were 48 million learners in the world, 17 million in Asia. This compares to the projection that in the year 2025, there will be 159 million learners, 87 million in Asia. It seems likely that collaborative associations among governments and private sectors will need to develop in order to meet this exponential increase.

Within the context of rapid technological change and shifting market and economic conditions, educational systems at all levels are challenged to provide increased educational opportunities without the benefit of increased budget allocations. Many educational institutions are answering this challenge by developing open and distance learning programs (Bates, 2000). Distance learning programs can provide adults with another opportunity for education, while reaching those disadvantaged individuals limited by time, distance, or disability, and updating the knowledge base of workers at their places of employment (Churton, 2001). Distance learning is certainly not the only answer or concern but it is one solution that if designed properly and qualitatively can and does provide opportunity and access to educational programs on a local, national, and global scale (Churton, 2000b).

Institutional programs promoting education, including primary and secondary programs, need to clearly define the programmatic and financial goals by which they will consider development or expansion of distance learning opportunities (Platt, 2001). Given similar needs and characteristics, the following examples provide a foundation from which to consider an appropriate delivery: (1) the workforce is widely or remotely dispersed, making it expensive in time and money for instructors to travel to the learners; (2) Some information and skills can be taught in a day or less making travel less cost
effective for either the learner or the instructor; (3) instruction using distance learning strategies can be designed to allow learners at all levels to fit the instruction into their lifestyles. Learners can read print, view video, or work on computer-based instruction and still meet their other responsibilities; (4) instruction using distance learning strategies can be designed to allow learners to progress at their own rates; they can focus and reflect upon the information learned; (5) When the primary purpose is to provide information, a distance learning strategy can be used to provide the same information simultaneously, and on a wide-area network; and (6) due to ever-increasing competition from other programs and countries, decisions to develop distance-learning programs stem from a need for cultural considerations and values.

Evolution of Distance Education

Distance education is used in a variety of settings and for a broad range of purposes. Universities use distance learning to increase the number of students who have been denied access to higher education. Companies use distance learning to upgrade their workers' skills and keep them abreast of rapidly advancing technologies. Individuals use distance learning for their own professional development and to enhance their career opportunities. Governments use distance learning to provide on-the-job training to teachers or other workers to enhance the quality of traditional primary and secondary schooling and to deliver instruction to remote and rural areas that might not otherwise be served (Shutte, 1997). The use of technology has revolutionized the types and quality of distance education alternatives ranging from print to digital applications.

There is tremendous growth and diversity in distance learning industry creating a myriad of new alliances as traditional educational institutions join with businesses, governments, and international organizations. Transitioning countries now have new opportunities to access knowledge and enhance their human and economic resources. Technology is a major contributor to the dramatic transformation of distance learning. While the use of emerging technology for distance learning is relatively new, traditional technology such as radio and television have been used effectively for more than fifty years while satellites and Internet applications have transformed most of the world into a
borderless educational arena. (Wiche, 2001; Milheim, 1991). Although many developing countries still have limited access to these new technologies, major new investments by the World and Asian Banks and development foundations in telecommunications and information systems will dramatically improve access to educational programs (Churton, 2000b). Briefly distance learning technologies include:

**Print.** Correspondence study as practiced by universities, governments, and other organizations is the classic distance-learning format. This format relies almost exclusively on the medium of print (Bates, 2000). Printed textbooks and training manuals have allowed generations of learners to add to their knowledge and skills while remaining in their home communities and continuing to meet other responsibilities. In some form, print based technology continues to play a significant role in distance learning. Cost effectiveness and literacy access are perhaps the two most advantages associated with print based delivery.

**Telephone:** The use of synchronous two-way audio communication assists in the teaching-learning process. Accessing the instructor or student (s) via telephone provides an opportunity to have real time communication. Either as a single or group-based model, the telephone has provided a relatively low cost connection over geographical distances. The advent of digital systems has enabled the world to access voice communications as well as limited text based communication at a relatively low overall cost to the learner.

**Radio and Television:** Asynchronous communication using radio and television frequencies is quite common throughout the world. In some instances synchronous communication using short wave technology allows teacher and learner to communicate in real time. There are numerous examples of effective distance learning applications using radio and education television in Australia, Laos, China, and other locations.

**Personal Computers and the Internet.** Although print-based instruction can allow learners to apply and assess their knowledge, it does not easily allow the practice and assessment of complex skills. Computers provide an excellent means to engage individual learners in active problem solving in a realistic way. Well-designed training via computer is ideal for addressing some types of learning objectives, but its development is time-consuming and costly. Computer instructional applications, world
Digital Telephony, Compressed Video, and Satellites. Instruction provided exclusively through the medium discussed above usually separates instructor and learner psychologically as well as geographically. Recent developments in telephony and wireless technology make it possible for instructors and learners separated by vast distances to have real time interaction with bridge lines, which can be used for audio conferences. Compressed video can be added to voice transmission via telephone lines, allowing instructors and students to both hear and see each other. Satellites can transmit high quality visual and auditory signals. Although satellites are used to transmit sound and picture in one direction, feedback and questions from students can be designed through facsimile and audio bridge returns. Digital convergence allows for a convergence of two-way video and audio using satellite transmissions.

Although technology plays a key role in the delivery of distance education, educators must remain focused on instructional outcomes and not the technology. The key to effective distance education is focusing on the needs of learners, the requirements of the content, and the constraints faced by the teacher and learner, before selecting a delivery system. Typically, this systematic approach will result in a mix of media, each serving a specific purpose. For example:

- A strong print component can provide much of the basic instructional content in the form of a course text, as well as readings, the syllabus, and day-to-day schedule.
- Interactive audio or video conferencing can provide real time face-to-face (or voice-to-voice) interaction. This is also an excellent and cost-effective way to incorporate guest speakers and content experts.
- Computer conferencing or electronic mail can be used to send messages, assignment feedback, and other targeted communication to one or more class members. It can also be used to increase interaction among students.
• Pre-recorded videotapes can be used to present class lectures and visually oriented content.
• Fax can be used to distribute assignments, last minute announcements, to receive student assignments, and to provide timely feedback (Odin, 1997).

**Distance Education: A Management System**

A system for open and distance learning cannot effectively operate without an organizational structure. A management system for open and distance learning consists of several inter-related units including students, instructors, facilitators, support staff, and administration. This network must be in agreement on the scope and goals for the program.

**Students** - Meeting the instructional needs of students is the cornerstone of every effective distance education program. Regardless of the educational context, the primary role of the student is to learn. When instruction is delivered at a distance, students are often separated from others sharing their backgrounds and interests, have few if any opportunities to interact with teachers outside of class, and must rely on technical linkages to bridge the gap separating class participants.

**Lecturers and Professors** - The success of any distance education effort is dependent upon lecturers. In a traditional classroom setting, the instructor’s responsibility includes designing course content and developing an understanding of student needs. Special challenges confront those teaching at a distance. For example, the instructor must:

• Develop an understanding of the characteristics and needs of distant students with little first-hand experience and limited, if any, face-to-face contact.
• Adept teaching styles taking into consideration the needs and expectations of multiple, often diverse, audiences.
• Develop a working understanding of delivery technology, while remaining focused on their teaching role.
• Function effectively as a skilled facilitator as well as content provider.
**Facilitators** - The instructor often finds it beneficial to rely on a site facilitator to act as a bridge between the students and the instructor. To be effective, a facilitator must understand the students being served and the instructor's expectations. Most importantly, the facilitator must be willing to follow the directive established by the teacher. Where budget and logistics permit, the role of on-site facilitators has increased even in classes in which they have little, if any, content expertise. At a minimum, they set up equipment, collect assignments, proctor tests, and act as the instructor's on-site eyes and ears.

**Support Staff** - These individuals are the silent heroes of the distance education enterprise and ensure that the myriad details required for program success are dealt with effectively. Most successful distance education programs consolidate support service functions to include student registration, materials duplication and distribution, textbook ordering, securing of copyright clearances, facilities scheduling, processing grade reports, managing technical resources, etc.

**Administrators** - Although administrators are typically influential in planning an institution's distance education program, they often lose contact or relinquish control to technical managers once the program is operational. Effective distance education administrators are more than idea people. They are consensus builders, decision makers, and referees. They work closely with technical and support service personnel, ensuring that technological resources are effectively deployed to further the institution's academic mission. Most importantly, they maintain an academic focus, realizing that meeting the instructional needs of distant students is their ultimate objective (Churton, 2001).
Increased Demand for Open and Distance Learning

Within the past ten years, there has been a significant increase in the open and distance learning industry (Jegede & Shive, 20001). The distance learning industry, as it has now become due to supply and demand principles, has experienced an increase in the number and types of individuals learning outside traditional classrooms, diversity of providers, inclusion of an economic dimension, and the viability and utilization of emerging technologies for delivering content on an international basis. To demonstrate the industry status of distance learning consider for example the rapid increase in the United States from 1995-1998 (DE:OERI, 1999):

- 78% of all 2 and 4-year U.S. postsecondary institutions offered college-level degrees or certificates designed to be completed totally through distance education.
- 57% of institutions charged both comparable tuition and comparable fees for distance education and on-campus courses.
- The 2 most popular fields offered via distance education were the general field of English/ humanities/ social & behavioral sciences (70%) and business & management (55%).
- 2-year and 4-year postsecondary institutions combined to offer about 1,230 degree and 340 certificate programs through distance education.
- An estimated 54,470 different distance education courses, of which 49,690 were college-level, credit-granting courses, were offered.
- 75% of institutions that offered any distance education courses charged the same tuition for those as for comparable on-campus courses.
- An estimated 1,661,100 enrollments in all distance education courses in postsecondary institutions (DE:OERI, 1999).

The advent of emerging technologies such as digital telecommunications, online software, the internet and the improvement of traditional technologies such
as television, radio and print technologies. Distance learning is seen by many as a transformative vehicle for increasing the pace of change and reformation in higher education (CHEA, 2001). Nontraditional service providers have viewed this rapid expansion as an opportunity to capitalize on an e-market venture that not only will disseminate their content but also enhance their profit margins as well. Open and distance learning service providers have erupted due to this economic scenario of mass education.

A key to understanding the organizational structures and approaches used by postsecondary providers in distance learning is to distinguish between the different types of postsecondary providers, both in terms of who provides the education and who awards the degree or certificate. Not all programs have been consumed by the wave of distance learning. Of the programs that have accepted the challenge, decisions involving this acceptance can be traced to several factors. It must be noted that programs considering distance learning must also consider international implications inherent in providing contents in an anytime or anyplace structure. Typical providers of the new open and distance learning initiative include:

- **Postsecondary/ Tertiary Programs** Institutions that offer postsecondary and continuing education programs are perhaps the largest group of distance learning providers. A variety of service delivery models are used including: 
  - *Branch campuses:* campuses set up by an institution in another country to provide its educational programs to foreign students. 
  - *Franchises:* an institution approves the delivery of its curricula by an institution located in another country. 
  - *Articulation:* the systematic acceptance by an institution for specified study at an institution in another country. The specified study rewards partial credit towards a degree or certificate program. Both collegiate higher education institutions, as well as other entities, provide instruction to degree- or credential-seeking students through learning activities that are typically organized in courses for some form of academic credit.

- **Enhancements to Traditional Campus-Based Instruction:** The vast majority of institutions offering distance learning are traditional colleges and
universities with on-campus students who also offer some courses and entire programs of study at a distance. Technology-assisted instruction is both a pedagogical enhancement to the regular curriculum and a way to facilitate access to students who either cannot or choose not to enroll in traditional classes. Faculty are using websites to supplement their courses, including chat rooms for student study halls, and e-mail communication between students and faculty. Students who receive instruction via these means are regularly matriculated, enrolled in the usual courses, taught by the same faculty, and stay on campus most of the time they are studying. The instruction can be offered through online, off-campus centers as well as on-campus.

- **Military Services**: In some countries, the military plays a role in providing access to training and education through distance learning. The U.S. military services has invested several hundred million dollars over the next decade to provide global access to training through distance learning. The goal is to use distance learning methods to improve efficiency and effectiveness of military training and re-entry into the civilian workforce.

- **Unaffiliated Distance Learner Providers**: A variety of learning activities are available, primarily through the Internet that are not associated with any postsecondary institution. The major difference between unaffiliated learning activities and other kinds of distance learning is that they are not typically credit-bearing, degree, or credentialing programs.

- **Corporate Programs**: Many large corporations offer programs for academic credit from institutions often involving crediting across national borders. A large application of distance learning today is employee training. In 1998, over $70 billion was spent on training by employers. General Motors and Toyota Motor Company have conducted distance-learning programs since the early 1980’s on a national and global basis. Though estimates suggest that as many as 1,000 corporate universities exist, the extent to which the corporate sector is using distance learning is difficult to ascertain.
• **Consortia**: Consortia are cooperative sharing arrangements among institutions, where several colleges and universities join together through a state, regional, and/or international network to offer distance learning programs. The authority to award the degree or credits is retained by the institutions. Examples include the Southern Regional Electronic Campus, Western Governor’s University, Global Campus 21 and others.

• **Contracted or brokered Arrangements**: Contracted or brokered arrangements are structures that bring institutions, faculty, and other service providers for the purpose of delivering distance learning. No alliance is made with the institution and the degrees, certificates, etc have no relationship to that institution. Typically these arrangements are profit organizations.

• **Virtual Universities On-Line and distance education programs**: Distance education programs that are delivered through internet, web, satellites, computers, correspondence, or other technological means across national boundaries. These institutions offer most if not all of their delivery through a technological means including print technology. The British Open University, Asian Open Universities, African Virtual University, Western Governors University, and International University are examples of these types of institutions (CHEA, 2001).

**Demand for Quality Assurance**

The globalization of education has enabled universities, both public and private, corporations, private companies and even primary and secondary programs to offer content across state, national, and international boundaries without regard to time or place restrictions. Countries in transition are now afforded expanding opportunities to access knowledge and information not only within their own countries but also from programs based in other hemispheres and some in cyberspace itself. In addition, pedagogical implications for distance learning impacting the teaching and learning process has demanded that alternative service delivery models be considered to ensure learner outcomes. The challenges for open and distance learning have been to dispel the fact that learning through a distance-learning format is less effective or important as
traditional campus-based programs. Issues of quality control and accreditation are raised. However, the demand for access to human resource development and educational opportunities has been expanded by the influence of several global trends, which not only conflicts with traditional educational standards and benchmarks but also increases the demand for educational access and services (Jegede & Shive, 2001).

a. The emergence of lifelong learning. Human resource development, especially in a transitioning economic market place from knowledge to an e-market demands a training of many individuals at all employment levels. People of all ages participating in learning are the impetus for the creation of new providers well beyond the traditional educational establishment, expanding not only who gets educated, but by whom.

b. Efforts to make instruction more learner-centered; the pedagogical trends of education seem to suggest that a more learner-centered approach to learning reinforces educational outcomes. A constructivist approach to learning suggests that: instruction is largely self-directed; it is more focused and purposeful; and it employs the appropriate level of faculty facilitation (Shyu & Brown, 1992).

c. The desire to provide access irrespective of where a student lives. It is clear that all learning does not occur within the confines of four walls of a school or institution of higher education. Whether the teaching and learning process occurs in one location, several locations, or in no location at all does not deny the opportunity for individuals to learn or to access education.

d. The development of Information technology: Perhaps more so than any other one factor, the resolution in the information technologies sciences has resulted in the convergence of voice, data and video applications. This global capacity has enabled us to look and create alternative forms of learning.
The challenge is to ensure that open and distance learning does not continue to be denied the recognition of being a viable and important modality for addressing human resource and educational needs. Globally, accrediting commissions have addressed the challenge of open and distance learning primarily by accommodating initiatives within existing accrediting standards. Accreditation commissions have tended to develop a set of open and distance learning guidelines for institutions, which are used as a supplement to the accreditation standards or criteria that each commission already has in place. The question, which must be addressed, inquires as to whether or not open and distance learning programs should be measured against the same criteria as what traditional campus-based programs have been accredited.

With the ever increasing numbers of participants being served through a distant learning format, this extraordinary growth of technology-mediated distance learning in higher education has prompted several different organizations to develop principles, guidelines, or benchmarks to ensure quality distance assurance. Virtually all of the strategies include such topics as course development, faculty training, student services, learning resources, infrastructure, and outcomes assessment (WICHE, 2001). These benchmarks, which were developed initially for all types of distance learning, have been in existence in various forms for a number of years. The question that arises is whether they are applicable to technologically based distance education. In short, are the current benchmarks appropriate and necessary to ensure quality open and distance learning through technologically based programs?

**Accreditation and Benchmarks**

The measurement of educational outcomes and experiences in distance learning is elusive. With few exceptions, little evidence indicates that student learning outcomes are emphasized more heavily in the vast majority of distance learning settings than in the traditional institution environments. However, some of the more prominent providers are attempting to inject more of a student learning outcomes focus into their overall delivery systems. For example, the University of Phoenix has established comprehensive cognitive and affective assessment systems for working adults. Motorola University employs a process where students are assessed one and three months after completion of
a course to determine their retention of the crucial knowledge and skills. Perhaps more importantly, managers expect performance to improve as a direct result of the learning activities. The Western Governors University has developed a system where quality control requires the successful completion of an externally administered, criterion-referenced assessment instrument for awarding certificates and degrees. Although WGU (1999) will authorize certain providers to supply academic content, the process by which the student acquires the necessary knowledge and skills is secondary.

- Establish reliable and valid performance measurements for distance learning;
- Require providers to substantiate evidence of contact between faculty and students;
- Require evidence of effective instructional techniques;
- Promote systematic efforts for selecting and training faculty;
- Assure the availability of learning resources;
- Promote ongoing monitoring and enhancement of the technology infrastructure of institutions;
- Focus attention on the development of courseware and the availability of information.

A review of these guidelines suggests some common elements from which to consider for the quality control of distance learning programs. However, one must realize that all distance-learning programs are not same and therefore should not be relegated to the same set of standards. Earlier in this paper a discussion of formats was presented that identifies transitional distance learning programs and distance learning program embracing the emerging technologies. Regardless of the format, several commonalities seem to exist which would begin to address quality concerns for open and distance learning programs

**Course Structure Benchmarks**

The program provides students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technological competence and skills, technical equipment requirements, availability of academic support services and financial aid resources, and
costs and payment policies. Each program of study results in learning outcomes appropriate to the rigor of the degree or certificate awarded. An electronically offered degree or certificate program is coherent and complete. The program provides for appropriate real-time or delayed interaction between faculty and students and among students. Qualified faculty provide appropriate oversight of the program electronically offered. Throughout the duration of the course/program, students have access to technical assistance, including detailed instructions regarding the medium used, practice sessions prior to the beginning of the course, and convenient access to technical support staff.

**Teaching/Learning Benchmarks**

Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways, including voice-mail and/or e-mail and real time through synchronous communication. Feedback to student assignments and questions is constructive and provided in a timely manner. Students are instructed in the proper methods of effective research, including assessment of the validity of resources.

**Faculty Support Benchmarks**

Technical assistance in course development is available to faculty. Faculty members are assisted in the transition from classroom teaching to online instruction and are assessed during the process. Instructor training and assistance, including peer mentoring, continues through the progression of the online course. Faculty members are provided with written resources to deal with issues arising from student use of technology.

Quality assurance in many programs and institutions focuses heavily on review of faculty credentials, selection procedures for new faculty, and faculty training. In addition, faculty are expected to understand the role of technology in a learning environment, be trained in online teaching concepts, and use assessment techniques appropriately. The program provides faculty support services specifically related to teaching via an electronic system. The program provides training for faculty who teach via the use of technology.
Student Support Benchmarks

Enrolled students have reasonable and adequate access to the range of student services appropriate to support their learning. Students receive information about programs, including admission requirements, tuition and fees, books and supplies, technical and proctoring requirements, and student support services. Students are provided with hands-on training and information to aid them in securing material through electronic databases, interlibrary loans, or through the government archives, news services, and other sources. Before starting an open and distance learning program, students are advised about the program to determine (1) if they possess the self-motivation and commitment to learn at a distance and (2) if they have access to the minimal technology required by the course design. Students are provided with supplemental course information that outlines course objectives, concepts, and ideas, and learning outcomes for each course are summarized in a clearly written, straightforward statement. Students have access to sufficient library resources that may include a “virtual library” accessible through the World Wide Web. Faculty and students agree upon expectations regarding times for student assignment completion and faculty response.

Administrative Support

Perhaps the most important aspects of an effective open and distance learning programs is the degree to which the administration supports the program. A comprehensive distance learning program needs to be developed which includes all aspects of the program. Policies for faculty evaluation include appropriate consideration of teaching and scholarly activities related to electronically offered programs The institution demonstrates a commitment to ongoing support, both financial and technical, and to continuation of the program for a period sufficient to enable students to complete a degree/certificate.

Evaluation and Assessment Benchmarks

The program’s educational effectiveness and teaching/learning process is assessed through an evaluation process that uses several methods and applies specific standards.
Data on enrollment, costs, and successful/innovative uses of technology are used to evaluate program effectiveness. Intended learning outcomes are reviewed regularly to ensure clarity, utility, and appropriateness. The institution evaluates the program's educational effectiveness, including assessments of student learning outcomes, student retention, and student and faculty satisfaction. Students have access to such program evaluation data. The institution provides for assessment and documentation of student achievement in each course and at completion of the program.

**Library Resources**

A critical aspect of any distant learning program is the access that students and instructors have to library resources and services. To suggest that distance-learning programs do not have the same requirement for library resources as on campus students is detrimental to the quality and integrity of distance learning. A basic tenet for a distant learning program is that distance-learning students should have the same access to library resources and services as on-campus students. The university of South Florida’s Virtual Library is an excellent model for programs to consider and can be access through [http://www.lib.usf.edu/virtual/index.html](http://www.lib.usf.edu/virtual/index.html).

The library has primary responsibility for identifying, developing, coordinating, providing, and assessing the value and effectiveness of resources and services, designed to meet both the standard and the unique informational and skills development needs of the distance learning community. Innovative approaches to the design and evaluation of special procedures or systems to meet these needs is encouraged.

Accommodating open and distance learning diverts attention from the challenge that open and distance learning poses to academic values of accreditation. Academic values are part of the evolving history and tradition of open and distance learning. Open and distance learning forces us to reconsider the viability of standards in an e-learning environment. This provides an opportunity for institutions to rethink traditional academic values, their relationship to quality, and their role in accreditation. The following list of accreditations associations supports standards of best practices and other quality control
benchmarks (GATE, 2001). Certainly these are not an exhausted list but would suggest baselines from which to consider and or adopted similar or enhanced standards.

**International Education Links**

- Association of African Universities - [www.aau.org](http://www.aau.org)
- Education 2000 - [www.education2000.co.uk](http://www.education2000.co.uk)
- Educause - [www.educause.edu](http://www.educause.edu)
- FIMPES (Mexican Federation of Private Institutions of Higher Education) - [www.fimpes.ur.ms](http://www.fimpes.ur.ms)
- Institute of International Education - [www.iie.org](http://www.iie.org)
- IAU International Association of Universities - [www.unesco.org/iau](http://www.unesco.org/iau)
- Inter-American Organization for Higher Education - [www.oui-iohe.qc.ca](http://www.oui-iohe.qc.ca)
- Mexican Association for International Education - [www.elnet.org](http://www.elnet.org)
- Ortelius -- Database on Higher Education in Europe - [www.ortelius.unifi.it](http://www.ortelius.unifi.it)
- United Nations Education Science and Cultural Organization UNESCO - [www.unesco.org](http://www.unesco.org)

**Open and Distance Learning Links**

- European Distance Education Network - [www.eden.bme.hu](http://www.eden.bme.hu)
- EADI European Association of Development Research and Training Institutes - [www.eadi.org](http://www.eadi.org)
- International Council for Open and Distance Education - [www.icde.org](http://www.icde.org)
- Western Cooperative for Educational Telecommunications - [www.wiche.edu/telecom](http://www.wiche.edu/telecom)

**Intergovernmental Service Organizations Links**

- Global Services Network - [www.globalservicesnetwork.com](http://www.globalservicesnetwork.com)
OECD (Organization for Economic Cooperation and Development) - www.oecd.org
WTO (World Trade Organization) - www.wto.org
World Intellectual Property Organization - www.wipo.org

Quality Assurance / Best Practices / Accreditation Links

- Arthur Andersen Best Practices - www.arthurandersen.com
- American Productivity and Quality Center - www.apqc.org
- Council for Higher Education Accreditation - www.chea.org
- European Union's Bologna Declaration - www.crue.upm.es
- European Quality Improvement System Accreditation - www.efmd.be
- Hong Kong University Grants Committee - www.ugc.edu.hk
- The Quality Assurance Agency for Higher Education - www.qaa.ac.uk
- Western Cooperative for Educational Telecommunications - www.wiche.edu

Recommendations

Finally, the Indiana Higher Education Telecommunication System (IHETS) (WICHE, 2001) developed a series of guidelines for the consideration in the design and development of distance learning programs. Distance learning programs developing or continuing academic course or programs would be wise to consider these principles and design ones that reflect a country's culture, educational priorities, and level of technology utilization.

1.0: Distance learning programs organize learning activities around and assess learner progress by reference to these outcomes.

1. When possible, individual learners help shape the learning outcomes and how they are achieved.
2. Intended learning outcomes are described in observable, measurable, and achievable terms.
3. The learning design is consistent with and shaped to achieve the intended learning outcomes.

4. Distance education media and delivery systems are used in a way that facilitates the achievement of intended learning outcomes.

5. Learning outcomes are assessed in a way relevant to the content, the learner’s situation, and the distance education delivery system.

6. Assessment of learning is timely, appropriate, and responsive to the needs of the learner.

7. Intended learning outcomes are reviewed regularly to ensure their clarity, utility, and appropriateness for the learners.

**2.0: Distance learning initiatives must be backed by an organizational commitment to quality and effectiveness in all aspects of the learning environment.**

1. Involvement in distance learning is consistent with the overall mission of the provider; policies regarding distance learning are integrated into the provider’s overall policy framework.

2. The providing organization makes a financial and administrative commitment to maintain distance learning programs through completion and to support faculty and learner services needed to ensure an effective learning environment.

3. Administrative and support systems (registration, advising, assessment, etc.) are compatible with the learning delivery system to ensure a coherent learning environment.

4. The organization’s curricular and administrative policies incorporate the needs of distance learning as well as traditional learning activities.

5. The provider makes a commitment to research and development of distance learning, maintaining a systematic evaluation of the content, processes, and support systems involved in its distance learning activities.
6. The provider makes a concomitant investment of resources and effort in professional development and support of both faculty and staff involved in distance learning.

7. The providing organization recognizes effective participation in distance learning through its promotion and reward system for faculty and staff and ensures that its policies regarding promotion, tenure (if applicable), and departmental/program funding reflect the integration of distance learning into the organization’s mission.

8. The policies, management practices, learning design processes, and operational procedures for distance learning are regularly evaluated to ensure effectiveness and currency.

9. The provider does not distinguish between learning accomplished at a distance and learning accomplished through other means in recognizing learner achievement.

3.0: Distance learning opportunities are effectively supported for learners through fully accessible modes of delivery and resources.

1. The providing organization has a learner support system to assist the learner in effectively using the resources provided. This system includes technology and technical support, site facilitation, library and information services, advising, counseling, and problem-solving assistance.

2. The provider considers the needs for learner support in relation to the distance learning mode(s) used and makes provision for delivery of appropriate resources based on the design of the learning activities, the technology involved, and the needs of the learner.

3. Access to support services—such as scheduling, registration, and record keeping—is convenient, efficient, and responsive to diverse learners as well as consistent with other elements of the delivery system.

4. Support systems are accessible to and usable by the learners and are sufficiently flexible to accommodate different learning styles.
5. The provider discloses to the learner all information pertinent to the learning opportunity—such as course prerequisites, modes of study, evaluation criteria, and technical needs—and provides some form of orientation for those desiring it.

6. Support systems for each learning opportunity are reviewed regularly to ensure their currency and effectiveness.

4.0: Distance learning activities are designed to fit the specific context for learning the nature of the subject matter, intended learning outcomes, needs and goals of the learner, the learner’s environment, and the instructional technologies and methods.

1. Learning opportunities include a clear statement of intended learning outcomes, learning content that is appropriate to these outcomes, clear expectations of learner activities, and flexible opportunities for interaction, and assessment methods appropriate to the activities and technologies.

2. Elements of a learning event—the learning content, instructional methods, technologies, and context—complement each other.

3. The selection and application of technologies for a specific learning opportunity are appropriate for the intended learning outcomes, subject matter content, relevant characteristics and circumstances of the learner, and cost range.

4. Learning activities and modes of assessment are responsive to the learning needs of individual learners.

5. The learning experience is organized to increase learner control over the time, place, and pace of instruction.

6. Learning outcomes address both content mastery and increased learning skills.

7. Individuals with specialized skills in content, instructional methods, or technology work collaboratively as a design team to create learning opportunities.

8. The learning design is regularly evaluated for effectiveness, with findings used as a basis for improvement.
5.0: **The provider has a plan and infrastructure for using technology that supports its learning goals and activities.**

1. The technology plan defines the technical requirements and compatibility needed to support the learning activity.

2. The technology plan addresses system security to ensure the integrity and validity of information shared in the learning activities.

3. The technology facilitates interactivity among all elements of a learning environment and places a high value on ease of use by learners.

4. The technology selected for distance learning is fully accessible and understandable to learners and has the power necessary to support its intended use.

5. Providers communicate the purpose of the technologies used for learning and, through training, assist learners, faculty, and staff to understand its etiquette, acquire the knowledge and skills to manipulate and interact with it, and understand the objectives and outcomes that the technologies are intended to support.

6. The technology infrastructure meets the needs of both learners and learning facilitators for presenting information, interacting within the learning community, and gaining access to learning resources.
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