Defining Quality in Distance Education: Examining National and International Standards for Online Learning

Barbara Lockee, Virginia Tech

Ross Perkins, Boise State University

Ken Potter and John Burton, Virginia Tech

Sigrid G. Kreb, Robert-Bosch-Krankenhaus

Introduction

What factors determine the quality of distance-delivered instruction? Given the rapid proliferation of distance education (DE) across a variety of contexts, there has been much discussion regarding the importance of the effective design of DE courses. Consequently, many organizations have established a variety of criteria and standards that detail the essential qualities of effective distance learning experiences. Accreditation groups, professional associations, foundations, and even individual institutions have created sets of guidelines and requirements to serve as evaluation frameworks for DE. Due to the extensive growth of distance education in K-12, corporate, military, and higher education environments, an analysis is warranted as to how varying organizations define "effective" design of distance learning experiences. More broadly, information presented from this study can provide insights to the instructional design community, particularly with regard to increasing awareness of the importance of the ID process in the design of distance delivered programming. Therefore, the purpose of this paper is to present findings of a qualitative analysis of standards related to distance course design, including commonalities and differences among organizations with regard to defining quality distance learning experiences.
Perspective/Theoretical Framework

Valuing, or rating, the usefulness, importance, or worth of an educational experience is at the heart of evaluation (Sanders, 1994). Hence, evaluation standards are inherently "value" driven, as they reflect a perceived set of values by a given organization. The practice of instructional design is conducted by individuals and entities with a widely varying range of knowledge and experience regarding the theoretical and practical aspects of ID (Larson & Lockee, 2009). Unfortunately, the design and development of instruction is often performed by people and/or agencies with little to no awareness of the ID process as a formalized activity, much less its theoretical underpinnings.

Related to this idea, exponential growth is occurring in the number of organizations that engage in the practice of distance education. Corporate, higher education, K-12, government, and non-profit groups alike are leveraging the ability to offer instructional programs through distributed means. In responding to this growth, there is widespread interest in maintaining the quality of distance learning experiences. As regulatory and policy-making bodies ranging from professional associations to accrediting agencies create standards of practice related to the instructional design of DE courses, awareness and adoption of ID is (or is not) reflected in these specifications.

Methodology

A qualitative approach was utilized to analyze standards related to the design of distance-delivered courses. Data about each organization was collected through a combination of website reviews, policy documents, and phone interviews with staff members and institutional clientele. Document analysis comprised the majority of this review, with phone interviews serving in a supplementary capacity.

Seventeen organizations, U.S.-based and international, representing a broad array of educational interests were reviewed for the purposes of this investigation. The following groups possessed a set of standards

related to the effective design of distance education courses for postsecondary education. While this data set is not exhaustive, this study strived to encompass a wide variety of entities in order to gain a comprehensive perspective on perceptions related to quality distributed learning experiences. Standards from the following organizations in Table 1 were included in this study.

	Organization Name	Type	Mission
1.	Distance Learning Accreditation Board (DLAB) http://www.usdla.org/html/resources/accreditation.htm	Accrediting service	Provides accrediting services for distance courses/programs on behalf of its parent organization, the United States Distance Learning Association (USDLA).
2.	Monterey Institute (MI)	Non-profit organization	The Monterey Institute for Technology and Education is committed to improving access to education.
3.	Sloan Consortium (Sloan-C) http://www.sloan-c.org/effective/pillarreport1.pdf	Special interest group (sponsored by the Sloan Foundation)	The purpose of Sloan-C is to help learning organizations continually improve quality, scale, and breadth of their online programs.
4.	Southern Regional Education Board (SREB) http://www.sreb.org/programs/edtech/pubs/2006Pubs/06T05_Standards_quality_online_courses.pdf	Nonprofit organization	The SREB helps government and education leaders in its 16 member states work together to advance education and improve the social and economic life of the region.
5.	Institute for Higher Education Policy (IHEP) http://www.ihep.org/assets/files//publications/M-R/QualityOnTheLine.pdf	Nonprofit organization	The IHE is dedicated to access and success in postsecondary education around the world.
6.	Southern Association for Colleges and Schools (SACS) http://www.sacscoc.org/pdf/081705/distance%20education.pdf	Regional accrediting agency	The primary regional accrediting body for the eleven U.S. Southern states (Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia).
7.	The Accrediting Bureau of Health Education Schools (ABHES) www.abhes.org	Professional accrediting agency	Provides accreditation services for private, postsecondary institutions in the United States offering predominantly allied health education programs, including those offered via distance education.
8.	Accrediting Commission of Career Schools and Colleges of Technology (ACCCT) www.accsct.org	Professional accrediting agency	Provides accreditation standards and services for private, postsecondary career schools and colleges.
9.	Accrediting Council for Independent Colleges and Schools (ACICS) www.acics.org	Specialized accrediting agency	Advances educational excellence at independent, nonpublic career schools, colleges, and organizations in the United States and abroad.
10.	Distance Education and Training Council, Accrediting Commission (DETC) www.detc.org	Specialized accrediting agency	Provides educational standards and accreditation services specifically for distance education providers. A variety of clientele are served by this organization, including k-12 schools, post-secondary institutions, military agencies, and professional associations.
11.	Canadian Recommended E-learning Guidelines (CanREGs) http://bit.ly/canregs2002	(created by what was formerly a non-profit)	Services include professional research, proposal writing & project planning, project management, policy development and analysis, strategic & business planning, evaluation and ROI analysis, and provision of workshops and training.
12.	European Institute for E-Learning http://bit.ly/eifel-oeqls	Non-profit	Support organizations, communities, and individuals in building a knowledge economy and a learning society through innovative and reflective practice, continuing professional development and the use of

			knowledge, information and learning technologies.
13.	Open & Distance Learning Quality Council (UK) http://www.odlqc.org.uk/standard.htm	Non-profit	The aim of the Council is to identify and enhance quality in education and training, and to protect the interests of learners. The Standards set out the Council's definition of quality. Open and distance learning providers who meet those standards are eligible to apply for accreditation by the Council.
14.	European Foundation for Management Development http://bit.ly/efmd-cel	Non-profit	EFMD is a global organization devoted to the continuous improvement of management development.
15.	Australasian Council on Open, Distance, and e-Learning (ACODE) http://www.acode.edu.au/benchmarks.php	Non-profit	Enhance policy and practice in open, distance, flexible and e-learning in Australasian higher education.
16.	Open ECBCheck (EFQUEL) http://bit.ly/ecb-check	Non-profit; part of European Foundation for Quality in eLearning (EFQUEL)	Supports capacity building organizations to measure how successful their e-learning programs are and allows for continuous improvement though peer collaboration and benchlearning
17.	French Forum for Open and Distance Learning http://bit.ly/fffod-cop	Non-profit	Contribute to reflection and dialogue; Facilitate collaborations; Develop proposals for a development policy for Open and Distance Learning and Multimedia Educational; Develop links and cooperation with counterparts in Europe and in the Francophone world; Give members access the organization's electronic information system for discussions and information exchange.

Table 1. Organizations maintaining standards for distance education programming.

Results

Themes

Analysis of the criteria for "quality" distance education courses and programs revealed a set of thematic issues: the relative lack of emphasis on actual design standards, the comparative nature of the standards with regard to campus-based instruction, mandates for interaction, media selection issues, faculty training requirements, and student support. Each theme is discussed as follows.

Instructional Design

Examining the 17 sets of standards from an instructional design lens, there is a clear lack of mention of instructional design as a term, much less a guiding framework for distance course planning and development, particularly amongst the U.S.-based organizations. Only one of the U.S. organizations referred to the instructional design process by name (Distance Education and Training Council, 2009): "The organization and presentation of instructional materials are in accord with sound principles of learning and grounded in sound instructional design principles" (p. 2). While ID did not appear as a process by which to guide distance course development, all of the groups identified one or more components of ID in their standards related to distance coursework. The DLAB stated that "Distance learning courses must be pedagogically sound. They must be compatible with the technology and attuned to the nature and needs of participants" (Distance Learning Accreditation Board, No date, p. 3). The DETC, ACCST, and the IHEP delineated the need to specify instructional objectives or learning outcomes. All organizations identified the need for course or program evaluation.

Among all 10 sets of U.S.-based standards, the Monterey Institute of Technology and Education (Online Course Evaluation Project, 2006) offers the only recommendation for a theoretical basis for distance

course development:

> Instructional philosophy refers to the theories of learning that underlie the presentation of content, the kinds of activities and assessments created for the course, and the role of the instructor and the learner in the process of learning. Varying instructional philosophies include 1) linear progression, fixed sequence, 2) drill and practice—presentation, memorization, and assessment, 3) constructivist learning in which learners construct new learning based on prior learning (p. 9).

While this representation of various learning theories is limited at best, it at least acknowledges the need to ground design of coursework on established theoretical constructs.

The standards promoted by the seven international organizations represented in this study, on the other hand, make consistent use of some form of the term "design" or "learning design," and delineate expectations related to it. The Canadian Recommended e-Learning Guidelines (2002), for example, note in standard 3.11 that evidence of program success comes from a "routine review and evaluation" of a number of factors, including instructional design (p. 7). The comprehensive guidelines created by the European Foundation for Quality in eLearning (EFQUEL) (2010) indicate in Standard A.2 Technical and organizational requirements states that "Staff involved with the design, management, administration, and evaluation of the programme is qualified," (p. 2) and among these the specifically note *instructional designers* among them. The French guidelines (French Forum for Open and Distance Learning, 2004) make a clear effort to separate "training course engineering" and "pedagogical engineering" (i.e., instructional design). Its Standard 3.3 is essentially a prescription for the well-known ADDIE (analysis, design, development, instruction, and evaluation) process that undergirds the vast majority of ID models.

A Comparative Perspective

One of the more interesting themes that appears across most of the standards promoted by the U.S. organizations is that they tend to be written from a comparative perspective. In an earlier analysis of accreditation standards, Lezberg (2007) concurs, stating that the standards assume that "the success of education depends on its taking place at certain times and in certain places where the faculty member and his or her students are present in a locale appropriate for learning…" (p. 405). So strong has been this assumption that historically institutions did not offer the same credit for correspondence courses, many times assigning continuing education credit only (Lezberg).

The comparative perspective is most often represented in terms of measuring the effectiveness of student learning. Half of the organizations analyzed (ABHES, ACCST, ACICS, SACS, and Sloan) specifically indicated that the effectiveness of distance courses is to be measured in terms of comparing the achievement of distance students to campus-based students. For example, the ABHES website states that distance education evaluation reports must contain "a comparison study/analysis including the overall examination and final grade results for those students enrolled in similar courses/programs of study on a residential basis versus those engaged in distance education" (Accrediting Bureau of Health Education Schools, No date, p. 136). The ACCST guidelines state that

> Observable, measurable, and achievable student performance outcomes must be identified so that programs or courses of study offered through distance education methods can be compared to programs or courses of study with similar subject matter and objectives, whether offered by DE methods or residential means (Accrediting Commission of Career Schools and Colleges of Technology, No date, p. 90).

One of Sloan's "Five Pillars of Excellence" in online learning is learning effectiveness, which contends that "On-campus and online instruction achieve comparable learning outcomes" (Moore, 2005, p. 5). While the validity of such comparisons has been criticized with regard to determining the effectiveness of DE (Head, Lockee, & Oliver, 2002; Lockee, Burton, & Cross, 1999), recent federal endorsements of such an approach will likely perpetuate this evaluation strategy (U.S. Department of Education, 2008).

Other comparison points between campus-based and distance courses relate to the content and duration of

programs, assuming that both instances should be the same. For example, the ACCST states that, "The school must demonstrate that the content and length of a distance education program or course of study are comparable to residential programs. The school must justify any deviations from established clock-to-credit hour conversions, if applicable" (Accrediting Commission of Career Schools and Colleges of Technology, No date, p. 90). The ACICS standards indicate that, "Requirements for successful completion of distance education courses and programs must be similar to those of residential courses/programs" (Accrediting Council for Independent Colleges and Schools, No date). Again, the assumption is made that programs are being transitioned from place-based instruction to a distance approach, not that unique needs are being addressed through the creation of new, audience-specific educational programming.

The notion that distance learning should be comparable to on-campus learning is a phenomenon that has existed throughout the history of distance education (Thompson & Irele, 2007). There would seem to be a certain irony in this in that the university system itself grew up when the primary technology of content transmission were books which were rare and expensive (Cobban, 1975). Education took place in the church or in the homes of the wealthy. The early universities were a cheaper solution to make content available to those who were not wealthy (although in England inclusion of commoners was not encouraged until the 1500s) nor were they interested in a monastic life. In some cases professors wrote books. In other cases they annotated books the books of others. In all cases they taught the book (Cobban, 1975). Lecture was the primary method in order to transmit the book. Interaction between student and professor was very much the interaction between the student and the content. Then, as now, professors did not study pedagogy or design or any method that might be helpful to structure and transmit knowledge let alone models that might not involve "transmission" from teacher to student. Yet, Schalick (2006) says,

> Universities, long immune to change by virtue of their role as societal institution, are challenged by technologies on all levels, and are being reinvented with or without planned strategies. The extraordinary growth of means of communication, of access online to university courses, of new Internet-facilitated access to the vast resources of international libraries once held close to the smaller academic community, has exploded the concept of where knowledge resides and how it is to be accessed (p. 2).

Unsurprisingly, the traditions of the universities and colleges conflict with the potential offered by new technologies. Nowhere is this more evident than in the standards for distance education. Again, with the exception of Sloan which promotes asynchronous learning networks, economy of scale, and new "markets," (Moore, 2005), many of the standards for distance learning assume that all things should be comparable between face-to-face students on campus and distance learning students off campus.

Among the international organizations' standards, the "comparison" approach seems not to be the primary tactic for assessing quality distance instruction. Rather, the documents are consistent in establishing quality based on broader measures that should in fact cover any course, distance or otherwise. The standards of the European Institute for E-Learning (2004), along with the Canadian standards (2002) on which they are almost entirely based, do note a comparison to traditional programs, but not in terms of "quality" per se. The emphasis is instead on the value place on the courses, credits, or degree programs – as students would want assurances that their work would be readily accepted by other universities, employers, and so on. Interesting, the Australian Council on Open, Distance, and e-Learning (2007) standards, though they do not compare traditional courses to distance courses in terms of quality, do mention that "the vast majority of pedagogical applications are the complete realisation of an existing institutional learning and teaching strategy" (p. 11). Like the European standards, this benchmark indicates that providers need to be consistent, at the very least, in their DE offerings. Such an expectation does not make the traditional courses the bi-facto the measuring stick, as is what a number of the U.S.-based organizations who promote standards seem to do.

Mandatory interaction

The majority of these organizations require opportunities for interaction between the instructor and

student and/or among students, but do not define a purpose for such interaction. For example, the SREB requires that "the course or program provides for appropriate interaction between faculty and students and among students" (Standards for Quality Online Courses, 2006, p. 5). The IHEP maintains a similar requirement: "Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways, including voice-mail and email" (Quality on the Line: Benchmarks for Success in Internet-Based Distance Education, 2000, p. 2). Learners are not as convinced of the importance of such interaction (see, e.g. Su, Bonk, Mafjuka, Liu, & Lee, 2005) and, depending on the delivery approach (synchronous versus asynchronous), find it in opposition to some of the reasons they enroll in distance education.

> In contrast with other requirements for interaction, the DETC specifies the inclusion of interaction for the purpose of student support. Encouragement of Students: An active program, designed to optimize interaction between the institution and the student is followed to encourage students to start, continue, and finish the program in which he/she is enrolled, if continuing and finishing are the student's goals (Distance Education and Training Council, 2009, p. 3)

The emphasis within this criterion is communication between the institution and the learner to facilitate student progress within a program, rather than interaction for instructional purposes. While interaction certainly has beneficial manifestations within instruction (i.e., practice, feedback), mandating interaction without clear purpose does not contribute to the instructional effectiveness of the DE experience (Lockee, Cennamo, Potter, & Burton, 2007). While some of the international standards contain little by way of prescriptive interaction between students and instructors, the European Foundation for Management Development (2011) sets forth that "student/participant interaction with the teaching staff, other students/participants and/or interactive learning software is an essential characteristic of the program and is facilitated through a variety of ways" (p. 6). The standards do not go on to specify how such interactivity is fostered, but further on do specify that feedback from instructors is expected on a regular basis (p. 7). Interestingly, the European Institute for E-Learning (2004) standards, though generic in guidance with respect to interactivity, specifies that comprehensive courses will ensure that concept mapping activities and simulations would be available (p. 6), as should be collaborative activities (p. 5), yet provide no explanation as to why these are important. The implication seems to be that these activities would be required no matter the topic area. On the one hand, the French standards (2004) recognize the facility with which instructors in traditional settings can interact with learners, and recommend that distance teachers look for mechanisms that will allow them to interact as easily, but

> In distance learning these spontaneous indicators no longer exist and it is essential to invent new ones and to reach a compromise concerning the inevitably longer period of time between a warning or request for assistance being voiced, and a solution being found. (p. 33)

The "Code of Practice" document does not go on to formulate how this takes place. Where there is guidance toward best practice (ex., collaborative learning opportunities), the authors of the French standards are careful to make the case for them:

> Collaborative or cooperative work is not an absolute requirement for e-learning. However in a good many cases it may provide a solution to learners' isolation and provide support for their motivation through the sense of belonging that it creates. These asynchronous or synchronous group relations will be more or less organized and will have tools to achieve the educational aims that are expected of them: social cohesion, sharing of knowledge or the production of knowledge. (p. 37).

It is worth noting that the Australian (2007) standards are also not prescriptive, yet offer sound advice that any activities chosen for DE courses should, among other things, "be based on sound educational research and good practice" (p. 10). Perhaps all standards documents should have include this guidance at the very top of any discussion about pedagogical interventions in courses no matter their mode of transmission.

Media Selection

Distance course design choices related to media selection can be organized into two categories: delivery

mode and media attributes (Head, Lockee, & Oliver, 2002). With regard to distance delivery mode, the ACICS maintains a different set of requirements if courses take an asynchronous approach. Their standards for self-paced instruction state that "Institutions must notify and receive approval from ACICS prior to using self-paced as a mode of delivery" (Accrediting Council for Independent Colleges and Schools, No date). Additionally, if teaching self-paced courses, "Institutions must shift from a teacher-centered to a learner-centered environment" (Accrediting Council for Independent Colleges and Schools). The interesting aspect of this requirement is that there is not a parallel mandate for "learner-centered" synchronous distance offerings. Some of the guidelines analyzed do reflect the importance of choosing a delivery approach that supports instructional goals. The IHEP contends that learning outcomes should drive the media delivery mechanism, not the availability of technology (Quality on the Line: Benchmarks for Success in Internet-Based Distance Education, 2000).

With regard to media attributes of distance delivery systems, the MITE guidelines describe different media types and how they might be appropriately used to achieve certain objectives in distance courses. For example, "Audio can be used as a narrative clarification for still images, to introduce instructional elements in the course, or to create more interactive ways to learn" (Online Course Evaluation Project, 2006, p 9). This set of standards provides the most detailed recommendations regarding media selection from an instructional design standpoint.

In some cases of media selection, expectations exceed practicality. For example, according to the SREB, quality online courses "must utilize technology that enables the teacher to customize each student's learning experiences through tools and formats such as video, interactive features, resources and links to related information" (Standards for Quality Online Courses, 2006). These courses are expected to include multiple learning opportunities or multiple learning paths to master the content, based on student needs. Although technologically possible, this level of customization is not achievable through technology alone but also requires the services of qualified instructional designers with knowledge of the multiple factors influencing student learning experiences. A more realistic approach is seen in the following standards: "The institution uses appropriate and readily accessible technology to optimize interaction between the institution and the learner and enhance instructional and educational services" (Distance Education and Training Council, 2009), and, "The technology used is appropriate to the nature and objectives of the programs and courses and expectations concerning the use of such technology are clearly communicated to students" (Southern Association of Colleges and Schools, 2006).

The Canadian and European standards suggest that the inclusion of media in DE courses should only be included if the media enhances understanding rather than detracts from, following the same guidance of U.S.-based organizations. In careful language, the French document (2004) captures the spirit of similar standards in this way, "experience shows that sobriety and simplicity are better than too much animation which can impede acquisition/understanding of contents" (p. 24).

Faculty Training

Another common theme among the standards is a requirement or the provision of faculty training for distance environments, with a particular emphasis on such training in the international organizations. The focus of training across national and international standards, however, seems to be technological proficiency rather than pedagogical preparation for distance instruction. For example, the ABHES requires that, "Faculty is adequately trained in use of distance education technologies" (Accrediting Bureau of Health Education Schools, No date, p. 136). However, the DETC goes beyond simply requiring training and expects that faculty will maintain an approved professional development plan that includes regular participation in programming related to teaching at a distance. Interestingly, the same consideration is typically not given to the importance of planning campus-based instruction (Spector, 2008). The Open and Distance Learning Quality Council (2005), based in the United Kingdom, encourages DE providers to "be committed to the continuous professional development of staff and tutors" (p. 14), and this same expectation is found among the Canadian, European, and Australian

standards.

Student Services

Another facet of the comparative nature of the standards relates to the offering of services for distance students. Taking what works on campus and moving it off campus leads to further difficulties with student services. Consider the following standards:

> Students have adequate access to the range of services appropriate to support the programs, including admissions, financial aid, academic advising, and delivery of course materials, and placement and counseling (Southern Association of Colleges and Schools, 2006).
>
> The institution must provide student services such as counseling, academic advising, guidance, financial aid, and employment assistance for students enrolled in distance education courses/programs. (Accrediting Council for Independent Colleges and Schools, No date)

These standards have multiple problems when applied to distance education courses and programs. Many financial aid requirements are established by the federal government and distance education students taking a single course in a term may not qualify. Counseling services and employment assistance typically are offered on an institutional basis and not on a course or program basis. Diffusion of these services to distance education students is likely to lag well behind campus services, especially given that these services were specifically designed for traditional, campus-based learners.

Standards for student support as expressed by the organizations outside the United States are equally expressive in terms of ensuring that students have a satisfactory learning experience (the Australian standards use the word support more than 80 times). One of the more interesting standards, though, is found in the document by the United Kingdom's Open and Distance Learning Quality Council. In its document, it not only delineates standards for support of current students – it has an entire section dedicated to it – there are also standards to ensure that courses and programs are marketed to prospective students in a fair, candid manner – evidently seeking to avoid some of the problems that have beset for-profit DE providers in the U.S. of late. Though some standards across the international organizations related to support are fairly generic, all of the guidance offered makes clear that support needs to exist not only at technological levels, but pedagogical levels as well.

Final Thoughts

The standards for distance education espoused by the various organizations discussed in this study have been created to support and enhance the quality of the educational experience for all students. As one considers the differences found among the standards, particular when comparing U.S. and international perspectives, it is important to keep in mind that each set of standards was created within a unique context. The expectations from place to place vary not only due to different policies, but also based on the type of distance learning providers impacted by the standards, as well as the degree to which DE providers are actually held accountable to the standards. While there are certainly important differences among the standards, and though there is certainly room for improvement among some, there can be no doubt that the standards are a critical step forward in helping to promote and ensure quality among distance programs, which of course has the greatest benefit for the millions of learners who are enrolled in them.

References

Accrediting Bureau of Health Education Schools. Appendix I: Distance Education. Retrieved from http://www.abhes.org.

Accrediting Commission of Career Schools and Colleges of Technology. Section IX Distance Education. Retrieved from www.accsct.org.

Accrediting Council for Independent Colleges and Schools. Appendix H Principles and Guidelines for Nontraditional Education. Retrieved from http://www.acics.org/publications/criteria.aspx#AppH.

Australian Council on Open, Distance, and e-Learning. (2007). ACODE benchmarks. [Electronic document]. Retrieved from http://www.acode.edu.au/resources/ACODE_benchmarks.pdf

Canadian Recommended e-Learning Guidelines. (2002). [Electronic document]. Retrieved from http://www.futured.com/pdf/CanREGs%20Eng.pdf

Cobban, A.B. (1975). *The Medieval Universities: Their Development and Organization.* London: Methuen Publishing.

Distance Education and Training Council. (2009). *Accreditation Standards.* Retrieved from http://www.detc.org.

Distance Learning Accreditation Board (DLAB). United States Distance Learning Association. Retrieved from http://www.usdla.org/html/resources/accreditation.htm.

European Foundation for Management Development (EFMD). (2011). EFMD CEL criteria, indicators and standards. Technology-Enhanced Learning accreditation for ICT-based learning programmes. [Electronic document]. Retrieved from http://www.efmd.org/images/stories/efmd/downloadables/Criteria-Indicators-Standards.pdf

European Foundation for Quality in eLearning (EFQUEL). (2010). Open ECB Check. [Electronic document]. Retrieved from http://www.qualityfoundation.org/openecbcheck/images/stories/docs/openecbcheck-programmes-and-courses-version2010.pdf

French Forum for Open and Distance Learning. (2004). *Code of Practice: Information technologies e-learning guidelines*. [Electronic document]. Retrieved from http://www.fffod.org/media/20070613-RBPZ76001-EN.pdf

Head, J. T., Lockee, B. B., & Oliver, K. M. (2002). Method, media, mode: Clarifying the discussion of distance education effectiveness. *Quarterly Review of Distance Education, 3*(3), 261-268.

Larson, M., & Lockee, B. (2009). Preparing instructional designers for different career environments: A case study. *Educational Technology Research and Development 57(*1), 1-24.

Lezberg, A. K. (2007). Accreditation: Quality control in higher distance education. In M. G. Moore, (Ed.), *Handbook of distance education* (2nd ed., pp. 403-417). Mahwah, NJ: Lawrence Erlbaum.

Lockee, B. B., Burton, J. K., & Cross, L. H. (1999). No comparison: Distance education finds a new use for no significant difference. *Educational Technology Research and Development, 47*(3), 33-42.

Lockee, B., Cennamo, K., Potter, K., & Burton, J. (2007). IDT on-line: Using authentic contexts for the conduct of distance education research. In M. Orey, J. McClendon, & R. M. Branch (Eds.), *Educational media and technology yearbook* (pp. 43-47). Westport, CT: Libraries Unlimited.

Moore, J. M. (2005). The Sloan Consortium Quality Framework and The Five Pillars. The Sloan Consortium. Retrieved from http://www.sloan-c.org/effective/pillarreport1.pdf.

Online Course Evaluation Project (2006). A request for proposals by the Monterey Institute for Technology and Education.

Open and Distance Learning Quality Council. (2005). Standards in open and distance learning. [Electronic document]. Retrieved from http://www.odlqc.org.uk/

Quality on the Line: Benchmarks for Success in Internet-Based Distance Education. (April, 2000). Institute for Higher Education Policy (IHEP). Retrieved on July 25, 2008 from http://www.ihep.org/assets/files//publications/MR/QualityOnTheLine.pdf.

Sanders, J. (1994). *The Program Evaluation Standards: How to Assess Evaluations of Educational Programs.* Joint Committee on Standards for Educational Evaluation. Thousand Oaks, CA: Sage Publications.

Schalick, J.A. (2006) Technology and Changes in the Concept of the University: Comments on the Reinvention of the Role of the University East and West. In, Technology Management for the Global Future. Istanbul: Published proceedings of PICMET, 3, pp. 1140-1146.

Southern Association of Colleges and Schools. (December, 2006). Distance Education Policy Statement. Retrieved from http://www.sacscoc.org/pdf/081705/distance%20education.pdf.

Spector, J. M. (2008). What makes good online instruction good. In J. Visser & M. Visser-Valfrey (Eds.), *Learners in a changing learning landscape: Reflections from a dialogue on new roles and expectations* (pp. 251 - 266). Dordrecht: Springer.

Standards for Quality Online Courses. (November, 2006). Southern Regional Education Board. Retrieved from http://www.sreb.org/programs/edtech/pubs/2006Pubs/06T05_Standards_quality_online_courses.pdf.

Su, B., Bonk, C.J., Magjuka, R.J., Liu, X., & Lee, S. (2005). The importance of interaction in web based education: A program-level case study of online MBA courses. *Journal of Interactive Online Learning. 4*(1), pp. 1-19.

Thompson, M. M., & Irele, M. (2007). Evaluating distance education programs. In M. G. Moore, (Ed.), *Handbook of distance education* (2nd ed., pp. 419-). Mahwah, NJ: Lawrence Erlbaum.

U.S. Department of Education, Office of Innovation and Improvement. (2008). *Evaluating Online Learning: Challenges and Strategies for Success*, Washington, D.C. Retrieved from http://www.ed.gov/admins/lead/academic/evalonline/

Contact Information:

Barbara Lockee
Phone: 540.231.9193
lockeebb@vt.edu

Ross Perkins
Phone: 208-426-4875
rossperkins@boisestate.edu

