

# ***GLOBAL STANDARDS FOR ENHANCING QUALITY IN ONLINE LEARNING***

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The quality of online courses offered has been a topic of discussion in the recent years, and efforts have been taken to establish standards for developing online courses. In this study, the authors review 12 online learning standard documents and examine the standards included in each of these documents. The largest number of standards were in the area of instructional analysis, design, and development (164 standards), and the smallest number of standards were on faculty support and satisfaction (27 standards). Similarities and differences in these standard documents are discussed along with implications for administrators, faculty and instructional designers.

## ***INTRODUCTION***

Online learning is practiced at most universities around the world and content is delivered and accepted in varied formats (Allen & Seaman, 2015). The question is no longer whether online learning is used, but how is the quality of the courses developed and how can it be measured (Stifterverband für die Deutsche Wissenschaft e.V., 2015). In recent years, there have been efforts to establish standards to keep efforts in developing new content or teaching methods for online learning as efficient as possible (Ehlers, 2006). Professional groups such as the International Organization

for Standardization (ISO) have been trying for decades to contribute to the quality improvement by introducing standards (ISO, 2015). Bari and Djouab (2014) found that existing standards or frameworks need to be adapted to the particular institution and are difficult to implement in practice.

There is not a clear distinction between standards and quality in the literature and both terms are often used synonymously (Ehlers, 2011); however, the term “standards” implies more than just the quality of the content, and is therefore a term of wider comprehension: “A standard is a document that provides requirements, specifications, guidelines, or character-

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istics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose” (ISO, n.d.).

By means of the Internet and the web it is rather simple nowadays to share content for online learning. Online courses are mainly criticized because of their poor quality (Allen & Seaman, 2015). There are numerous online courses that contain poorly structured sites with no instruction for students, links to files with no information concerning file type or size, or discussion forums that are not used (Smithers, 2011). Slimp (2014) points out: “Perceptions of quality in online learning are as complex as the various models and delivery methods available” (p. 8). Nevertheless the quality of online learning course materials is an important issue that should be taken into account during the conceptual design of an online course.

Sun, Tsai, Finger, Chen, and Yeh (2008) found out that the quality of online courses has a strong, positively significant influence on learners’ satisfaction. Standards do not automatically lead to better quality, but should be understood as a tool to enhance quality. Moreover standards describe the conditions necessary for successful online learning (Ehlers, 2006, 2011). Standards for online learning should be transparent, open, adaptable, and extendable (Ehlers & Pawlowski, 2006). Standards make it easier to reuse existing online learning units, to update, to combine, and to integrate them with other content (Arnold, Kilian, Thillosen, & Zimmer, 2015; Ehlers, 2006; Lindner, 2004).

### ***ONLINE LEARNING STANDARDS***

There have been many different approaches to evaluate quality in online learning. With the growth in online learning, the demand for quality in online learning has also increased. Shelton and Saltsman (2004) proposed that quality in an online education program is not its growth rate but the combination of retention rate, academic outcomes, and success in online student and faculty support.

Shelton (2011) reviewed 13 paradigms for evaluation online learning and suggested a strong need for a common method for assessing the quality of online education programs. Shelton examined Institute for Higher Education Policy’s 24 Benchmarks for Success in Internet-Based Distance Education (2000), Bates’ ACTIONS Model of Quality (2000), WCET’s Best Practices for Electronically Offered Degree and Certificate Programs (2001), Khan’s Eight Dimensions of e-Learning Framework (2001), Frydenberg’s Quality Standards in e-Learning (2002), Sloan Consortium’s Five Pillars of Quality (2002), Lee and Dziuban’s Quality Assurance Strategy (2002), Lockhart and Lacy’s Assessment Model (2002), CHEA’s Accreditation and Quality Assurance Study (2002), Osika’s Concentric Model (2004), Moore and Kearsley’s Assessment Recommendations (2005), Haroff and Valentine’s Six-Factor Solution (2006), Chaney et al.’s Quality Indicators (2009). Shelton (2011) found that institutional commitment, support, and leadership theme was frequently seen in these standards. At least 10 of the standards included institutional commitment, support, and leadership theme as a primary indicator of quality. Teaching and Learning was the second most cited theme for indicating quality.

Daniel and Uvalic-Trumbic (2013), in their report with Academic Partnerships titled a guide to quality online learning, list institutional support (vision, planning, and infrastructure), course development, teaching and learning (instruction), course structure, student support, faculty support, technology, evaluation, student assessment, and examination security as elements essential for quality online learning. They also add that to assure quality online learning in higher education the most essential requirement is institutional vision, commitment, leadership, and sound planning.

Ossiannilsson, Williams, Camilleri, and Brown (2015) reviewed more than 40 quality standards models or guidelines from organizations based on their functions and uses (certifi-

cation, accreditation, benchmarking and advisory framework) for quality assurance of open, distance, flexible and online education, including e-learning. The most common structure included aspects of institutional management, curriculum design, student support, and other elements of educational provision. The most general categorization of activities was management (institutional strategy, visions, and resourcing), products (processes of curriculum and module development), and services (student, and staff support, information resources etc.).

Bari and Djoub (2014) examined quality frameworks (SCORM, IEEE P1484 and IMS Global Learning Consortium) and standards (ISO/IEC 19796, Open ECBCheck and ISO 9126) in e-learning. The authors concluded that it might be difficult for educators to understand and apply technical quality frameworks while choosing an e-learning system. They recommended combining ECBCheck standards with ISO 9126 quality model to improve course management.

Frydenberg (2002) in his article on quality standards in e-learning analyzed the nine published quality standards of e-learning in the United States. Frydenberg (2002) examined standard-setters and identified three groups from professional faculty associations, regional accrediting agencies, and university faculty and administrators who are the main players to debate standard of quality for e-learning. The author also put the nine standards domains in a nine-cell matrix which were institution commitment, technological infrastructure, student services, design and development, instruction and instructor services, program delivery, financial health, legal and regulatory requirements, and program evaluation.

### ***Purpose of This Study***

A few studies have examined quality standards for online learning. However, only one study had analyzed standards across the globe. There was a need to examine global standards

for quality in online learning. The purpose of this study is to do a content analysis of existing global online learning standards and identify common elements in these standards that can inform faculty, administrators, and policy makers on what are essential standards for success in online learning.

Specifically, the study addressed the following research questions:

1. What are some of the global standard models that focus on enhancing quality in online learning and how many sections and standards are included in each of these standard models?
2. What are the common elements (i.e., most and least emphasized, similarities and differences) of global standards related to online learning?

## ***METHOD***

### ***Data Sources***

This comparative study was driven by an intensive document analysis (Hodder, 2000). Based on the goals of this study the authors sought to examine common trends and differences in sets of standards focused on the quality of online learning. Twelve publications were reviewed and each publication reviewed listed certain themes for indicating quality in online education programs. The different standards that were analyzed include:

1. Quality on the Line: Benchmarks for Success in Internet Based Distance Education

Quality on the Line was developed by the Institute of Higher Education Policy in Washington, DC, with support from Blackboard and National Education Association in 2000. Quality on the Line identifies 24 benchmarks in seven categories essential to ensure excellence in Internet-based distance education. The seven categories included instructional support, course development, teaching/learning, course structure, student support, faculty support,

and evaluation and assessment benchmarks (Phipps & Merisotis, 2000).  
<http://eric.ed.gov/?id=ED444407>

2. Online Learning Consortium Quality Scorecard, 2005

The scorecard was proposed by Online Learning Consortium (earlier known as Sloan Consortium) as an easy-to-use evaluation program to determine the effectiveness of online learning. The OLC quality scorecard is used to benchmark, assess, and measure the effectiveness of online programs based on eight categories of 75 standards.

<http://onlinelearningconsortium.org/consult/quality-scorecard/>

3. Blackboard Exemplary Course Rubric, 2000

The Blackboard Exemplary course program began in 2000 to identify and disseminate high quality online courses. The Exemplary Course Rubric includes eight key characteristics of high quality online courses within the framework of Course design, interaction and collaboration, assessment, and learner support.

<http://www.blackboard.com/getdoc/7deaf501-4674-41b9-b2f2-554441ba099b/2012-blackboard-exemplary-course-rubric.aspx>

4. Quality Matters 2014, 5th Edition

Quality Matters is a faculty-centered, peer review process designed to certify the quality of online courses. The Quality Matters Higher Education Rubric, Fifth Edition, 2014 includes 8 general standards and 43 specific review standards to evaluate the design of online and blended courses. The 8 general standards are course overview and introduction, learning objectives (competencies), assessment and measurement, instructional materials, course activities and learner interaction, course technology, learner support, and accessibility and usability.

<https://www.qualitymatters.org/rubric>

5. CHEA Institute for Research and Study of Accreditation and Quality Assurance, 2002

The Council for Higher Education Accreditation created the Quality Assurance framework for accreditation of distance education. The framework includes seven key areas that are reviewed when examining quality of distance education. These seven areas include institutional mission, organizational structure, institutional resources, curriculum and instruction, faculty support, student support, and student learning outcomes.

[http://www.chea.org/pdf/mono\\_1\\_accred\\_distance\\_02.pdf](http://www.chea.org/pdf/mono_1_accred_distance_02.pdf)

6. Open eQuality Learning Standards, 2004

Open eQuality Learning Standards were introduced in 2004 and sponsored by the European Institute for e-Learning (EifEL) and LIfIA (Learning Innovations Forum d'Innovations d'Apprentissage). This is based on the Canadian Recommended E-learning Guidelines (CanREGs) which were launched in 2002. These standards can be applied to any e-learning products or services. This includes four sections and 25 standards in the area of quality outcomes—higher ed, quality outcomes—primary/secondary, quality processes and practices, and quality inputs and resources.

<http://www.eife-l.org/publications/quality/oeqls/intro>

7. NADEOSA (South Africa) 2005 revision of 1996 document

The National Association of Distance Education Organizations of South Africa developed quality criteria for distance education in South Africa. There are 13 criteria: policy and planning, learners, program development, course design, course materials, assessment, learner support, human resource strategy, management and administration, collaborative relationships, quality assurance, information dissemination, and results, with a total of 184 standards.

<http://www.oerafrica.org/resource/nadeosa-quality-criteria-distance->

education-south-africa-section-two-quality-criteria

#### 8. ACODE (Australia) 2014 revision of 2007 document

The Australasian Council on Open, Distance and e-Learning developed 64 so called “benchmarks” that covers eight different topic areas: institutionwide policy and governance for technology enhanced learning, planning for institutionwide quality improvement of technology enhanced learning, information technology service, technology enhanced learning service, staff professional development, staff support, student training, and student support. Each benchmark can also be used as standalone indicator. ACODE aims to assist institutions to deliver quality online or blended learning courses.

[http://www.acode.edu.au/pluginfile.php/550/mod\\_resource/content/4/TEL\\_Benchmarks.pdf](http://www.acode.edu.au/pluginfile.php/550/mod_resource/content/4/TEL_Benchmarks.pdf)

#### 9. Asian Association of Open Universities, no date

The Quality Assurance Framework of the Asian Association of Open Universities includes 54 quality criteria in the following 10 topic areas: policy and planning, internal management, learners and learners’ profiles, infrastructure, media and learning resources, learner assessment and evaluation, research and community services, human resources, learner support, program design and curriculum development, and course design and development.

<http://aaou.ouhk.edu.hk/files/documents/AAOU%20Quality%20Assurance%20Framework.pdf>

#### 10. ECBCheck 2012

The ECBCheck is a quality improvement scheme for E-Learning programs and was developed by InWent—Capacity Building International, Germany and the European Foundation for Quality in E-Learning. It provides 46 criteria divided in seven topic areas: information about the program, target group orientation, quality of the con-

tent, program/course design, media design, technology, and evaluation and review. Some of the areas includes categories, such as program/course design with the categories learning design and methodology, motivation/participation, learning materials, e-tutoring, collaborative learning, assignments and learning process, assessments and tests.

<http://www.ecb-check.net/>

#### 11. UNIQUE 2011

European Foundation for Quality in e-Learning, European Foundation for Management Development, the MENON Network, and EUROPACE developed UNIQUE that stands for a collection of standards for higher education online learning and online teaching. The 71 standards are divided in three topic areas: learning/institutional context, learning resources, and learning processes. Each area includes further sections.

[http://unique.efquel.org/files/2012/09/UNIQUE\\_guidelines\\_2011.pdf](http://unique.efquel.org/files/2012/09/UNIQUE_guidelines_2011.pdf)

#### 12. International Organization for Standardization (ISO)

The ISO/IEC 19796-1 origins from the Publicly Available Specification (PAS) from the Standards Institute DIN (PAS 1032-1, PAS 1032-2) and was created in cooperation of representatives of industry and research. Starting position of PAS was a lack of quality criteria. Therefore the processes should be described in detail that the processes itself can be qualitatively evaluated (PAS 1032-1, 2004; PAS 1032-2, 2004). ISO/IEC 19796-1 consists of the categories needs analysis, framework analysis, conception/design, development/production, implementation, learning process and evaluation/optimization. The processes are described following this scheme: ID, category, process name, description, relations, subprocesses/subaspects, objective, method, result, actors, metrics/criteria standards and annotation/examples.

[http://www.iso.org/iso/catalogue\\_detail?csnumber=33934](http://www.iso.org/iso/catalogue_detail?csnumber=33934)

## ***Procedure***

Each set of standards was entered into a spreadsheet. Information was entered including the author/sponsor, year the standards were published, and the section headings for each set of standards. For each section heading the number of standards was also identified and entered into the spreadsheet.

## ***Data Analysis***

The sections of the standards documents were coded using an inductive open coding process (Coffey & Atkinson, 1996). Based on the names of the sections and the standards within the sections, codes were assigned. Sections and standards within the same code were then compiled. After these sections and standards were coded and compiled, the codes were checked in order to verify that the codes matched both the sections and the standards.

## ***RESULTS***

Twelve standard models were identified; Table 1 displays the number of sections and standards from the 12 standard documents reviewed. The average number of sections per document was 8.25. Open eQuality Standards and the BlackBoard Exemplary Rubric had the fewest sections which were 4. The largest number of sections was in the ECB Check Standards and the NADEOSA (South Africa) standards, as both had 13 sections. The average number of standards per document was 54.16 standards. The largest number of standards was in the NADEOSA (South Africa) standards with 184 standards and online Learning Consortium Standards had the fewest with 5 standards.

Table 2 shows the codes identified through data analysis and the number of standards within each code. There were a total of 650 Standards included in the analysis. The codes with the largest number of standards were instructional analysis, design, and development

(164 standards), student attributes, satisfaction, and support (115 standards), and institutional mission, structure, and support (102 standards). The codes with the smallest number of standards were faculty support and satisfaction (27 standards), policies and planning (33 standards), and course facilitation, implementation and dissemination (40 standards).

## ***DISCUSSION***

### ***Selection of the 12 Global Standard Documents***

This research study included researchers from the United States and Germany. While the researchers from the United States chose the U.S. documents that they were familiar with the German researchers selected the ones from Europe and Asia. This helped in compiling a list of twelve global standard documents for online learning.

### ***Differences in the Documents***

In the standards documents that were analyzed there was variance in the length of these documents and the number of sections and standards in each document. Some document authors created sets of standards that were thorough, lengthy prescriptions of multiple elements related to online teaching. Meanwhile, other document authors created more general and shorter documents to provide loose guidelines.

### ***Most-Emphasized Standards***

The coding of sections and standards indicated that the most emphasized topics in the section headings included instructional analysis, design and development, student attributes, support and satisfaction, and institutional mission, structure, and support. These topics were clearly significant to the authors of these documents. Shelton (2011) found that institutional commitment, support, and leader-

TABLE 1  
Standard Details

<i>Standard Name</i>	<i>Year</i>	<i>Sponsor</i>	<i>Number of Sections</i>	<i>Number of Standards</i>
Quality on the Line: Benchmarks for Success in Internet Based Distance Education	2000	Institute for Higher Ed Policy, supported by NEA and Blackboard	7	24
Open eQuality Learning Standards (Canada), <a href="http://www.eife-l.org/publications/quality/oeqls/intro">http://www.eife-l.org/publications/quality/oeqls/intro</a>	2004	Canada	4	25
Online Learning Consortium (Formerly Sloan-C) Quality Score Card	2005	OLC Consortium	8	75
Blackboard Exemplary Rubric	2000	Blackboard	4	17
Quality Matters	2015, 5th edition	Quality Matters	8	45
CHEA Institute for Research and study of accreditation and Quality Assurance	2002 revision 1	Council for Higher Education Accreditation	7	7
NADEOSA (South Africa)	2005 revision of 1996 document		13	184
The Australasian Council on Open, Distance and e-learning)	2014	Australasian Council on Open, Distance and e-learning	8	64
Asian Association of Open Universities)	no date	Asian Association of Open Universities	10	54
ECBCheck	2012		13	46
UNIQUe	2011		10	71
International Organization for Standardization (ISO)	2005		7	38
		Average	8.25	54.16

TABLE 2  
Codes From Standard Analysis

<i>Codes</i>	<i>Standards</i>
Instructional analysis, design, and development	164
Student attributes, satisfaction, and support	115
Institutional mission, structure, and support	102
Course assessment and program evaluation	77
Quality control	47
Technology support	45
Course facilitation, implementation, and dissemination	40
Policies and planning	33
Faculty support and satisfaction	27
	650

ship were important quality indicators in his review of 10 different standards and our analysis found this within the top three categories. International Council for Open and Distance Education (2015) analyzed 40 quality standard models and found that institutional management, curriculum design student support was the most common structure. This is in alignment with our findings where institutional mission, structure and support was ranked as the third from the standards we analyzed.

Instructional analysis, design, and development was ranked as the top most category of standards analyzed. It was not surprising to find standards specific to analysis, design and development and importance of course design in online learning take precedence over other standard categories. Research has found that course designers must consider carefully the structure in designing e-learning and online learning courses (Ausburn, 2004; Grant & Thornton, 2007; Teräs & Herrington, 2014). Without a well-designed online course, the entire effort put into offering online learning will not be successful.

### ***Least-Emphasized Standards***

The codes with the smallest number of sections were faculty support and satisfaction and policies and planning. It was surprising to see that there were not many standards regarding these two areas. These are two critical areas for online learning to be successful. While there were standards regarding technology support, there were few specific to faculty. Policies regarding online course offerings are still evolving and hence this could have been an area that not all the standard documents we analyzed included. One possible explanation could be that the standards authors determined that these topics were not as important to them compared to the other ones.

### ***Similarities and Differences***

While some standard documents focused heavily on the design aspect of online courses

(Quality Matters, Blackboard Exemplary Rubric, Quality on the Line), some of the standard documents focused more institutional level (Online Learning Consortium Quality Scorecard, Asian Association of Open Universities, and Open eQuality Learning Standards).

### ***Implications for Future Research and the Improvement of Practice***

This study provided an initial exploration of standards documents related to online teaching and learning by conducting a document analysis and identifying frequently used standard categories. Administrators and other users of online learning standards should focus on the mostly emphasized standards before focusing on the least emphasized standards. Instructional designers to assist in developing online courses can benefit from using these standards to guide them in the design process of online courses. Future research should include a more in depth analysis of the standards and how they are implemented. This could include focus groups or interviews with those who design and develop courses in order to more closely examine the application of the standards.

### ***CONCLUSION***

This study analyzed 12 global standard documents that were used across the world to evaluate quality in online learning and identified most emphasized and least emphasized standards across these documents.

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