Quality in online education: using a formal quality model

Robert W. Robertson, Argosy University, Tampa/Sarasota, USA

ABSTRACT. Online education continues to expand to meet the unique needs of a technological, knowledge based economy. The move towards more online education has challenged the paradigm of the traditional on ground experience which has dominated academia for centuries. However, online learning is not without its detractors. One common concern raised with respect to online learning relates to the quality of the experience, particularly related to on ground education. Key stakeholders such as students, regulatory bodies and employers all want to ensure that the online experience is similar or equivalent to that of the traditional on ground learning. To achieve quality in online learning there has been increased emphasis on developing appropriate frameworks that can be used to guide quality efforts. In addition, many organizations have either been developed to support quality in online learning or existing organizations have included quality sections to provide networking opportunities to improve the product. This paper explores the current framework for managing online quality from the perspective of the United States; and, the paper discusses the role of a formal quality model that can be used to guide online quality efforts.

KEYWORDS: Continuous improvement and online education, Florida Sterling quality council, Improving quality in online education, Malcolm Baldrige, Online education

Online education: disruptive innovation

Conceptually, education has been a very stable discipline. Since the time of Aristotle, learners would physically attend at the lectures of the “master” to learn more about a particular topic. Institutions developed from these humble beginnings have provided the training ground for the preparation of individuals entering society. Only recently have we seen that there have been challenges to what has become a very standardized delivery model for education. Specifically, technology has begun to change the process of education much as it has changed other sectors of the global economy. We
see that there has been significant increased interest in online (See Figure 1) as a delivery system providing for increased accessibility to education in a more efficient and user friendly manner (See, for example, Ten Years of Tracking Online Education in the United States, Sloan, 2012)

![Figure 1. Online enrollments in the United States](http://sloanconsortium.org/publications/survey/index.asp)

More recently, there has been considerable public attention to the online concept advanced by Coursera\(^1\) develop and provide Massive Open Online Courses (MOOC’s) at no cost to students. The courses are developed by a consortium of more than 85 universities, primarily based in the United States. For the most part, these courses are in English; however there are alternate language courses being developed and offered. In addition, it is important to note that the courses do not carry academic credit; however, some universities are now opening pathways that will enable MOOC’s be taken for university credit. In addition, the American Council on Education (ACE) has recently agreed to accept some MOOC’s for credit (Bellum, 2013). Further, some large employers have been looking at packaging courses to develop internal competencies within their employees. In large part Coursera sees an opportunity to bring high quality education to people throughout the world. Clearly, we see that online education is a dynamic and increasingly global phenomenon that is reaching many more users and providing far more education opportunities for a wider range of people world-wide. As we see this expansion of online education has generated critics who have raised concerns about the quality of the online experience particularly in relation to traditional education.

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1. https://www.coursera.org
processes and procedures. In advancing our understanding of quality in online education it is important to frame the discussion and delineate key terms.

**The quality concept**

At the outset, it is important to define the term “quality”. The American Society for Quality (ASQ) is one of the preeminent organizations which supports and promotes quality worldwide. The ASQ defines quality as “a subjective term for which each person or sector has its own definition. In technical usage, quality can have two meanings: 1) the characteristics of a product or service that bear on its ability to satisfy stated or implied needs; 2) a product or service free of deficiencies. According to Joseph Juran, quality means “fitness for use”; according to Philip Crosby, it means “conformance to requirements” (ASQ, 2013).

In terms of education, there have been a number of efforts at defining the quality concept and advancing methods and initiatives to support quality. One of the earlier efforts is from the Sloan Consortium. In a report titled *The Sloan Consortium Quality Framework and The Five Pillars*, Janet Moore (2005) advocates a continuous improvement approach to online quality. Moore identifies five key areas or pillars on which an online program can be developed. These five pillars advanced in this report are: learning effectiveness, cost effectiveness and institutional commitment, access, faculty satisfaction and student satisfaction.

The Sloan Consortium is a voluntary network of members whose mission is to be the “leading professional online learning society devoted to advancing quality e-Education learning into the mainstream of education through its community. Sloan-C is dedicated to providing access to high quality e-Education to individuals, institutions, professional societies and the corporate community. Originally funded by the Alfred P. Sloan Foundation, Sloan-C is now a non-profit, member-sustained organization” (Sloan, 2013). The organization has been active in tracking online education through an annual survey and they have promoted continuous improvement in online education through research and publications.
Quality in education: the experience in the United States

Education in the United States includes national, state and regional oversight agencies with responsibilities that often include the promotion of quality in academic programs. In addition, we do see that there are also a number of professional associations that are involved with programmatic accreditation. The following section provides an overview of some of the key agencies and organizations that have a role to play in academic accreditation with a view to highlighting their interest and involvement in driving quality.

Council for Higher Education Accreditation

The Council for Higher Education Accreditation (CHEA) is a national advocate and institutional voice for self-regulation of academic quality through accreditation. Specifically, CHEA is an association of 3,000 degree-granting colleges and universities and recognizes 60 institutional and programmatic accrediting organizations (CHEA, 2013). CHEA is governed by a board of twenty college and university presidents, institutional representatives and public members. During the past two years CHEA has formally established an International Quality Group. The purpose of the CHEA International Quality Group (CIQG) is to “advance international quality assurance and improvement, assisting institutions and accreditation/quality assurance organizations in further enhancing capacity for academic quality as they expand international engagement” (CHEA, 2012). The rationale for developing CIQC provides an insight into the increasing importance of quality in education. As noted by CHEA (2012) “internationalization is now a powerful force throughout the academic community. Student exchanges and faculty exchanges are expanding rapidly. More and more research is now carried out by international teams of academics. Preparation for international engagement is becoming a routine feature of the undergraduate curriculum. Common interests and concerns such as public accountability, student learning outcomes, online education and lifelong learning bring colleges, universities and quality assurance bodies together. International discussions are ongoing about mutual recognition arrangements among countries as well as shared efforts...
to fight degree mills and accreditation mills. All of these issues will be addressed by the quality group”. Clearly, CHEA views quality as an area of growing interest and the formation of CIQC is a tangible response to that imperative.

**Distance Education and Training Council**

The Distance Education and Training Council (DETC) is a CHEA accredited organization whose mission is to serve as a “voluntary, non-governmental, educational organization that operates a nationally recognized accrediting association, the DETC Accrediting Commission. The DETC Accrediting Commission defines, maintains, and promotes educational excellence in distance education institutions. The Commission is dedicated to fostering quality assurance, protection of the rights of the students and institutional self-improvement through voluntary accreditation via peer evaluation. DETC accreditation aims to instill public confidence in DETC institutions’ missions, goals, performances, and resources through rigorous application and peer-developed accreditation standards.” (DETC, 2013).

**Regional accreditation**

Regional accreditation is generally deemed as the “gold standard” within the US education system. Essentially, it is a system of peer review which is a rather unique feature. The system has been in use within the US from the 1850’s (Ewell, 2008). Initially, the accreditation system was focused simply on defining what constituted a “college”. More recently, we see increased focus on accountability within academic institutions including a more rigorous examination of “outcomes”. There are six regional accreditation associations which are located in different geographical areas of the country. These associations vary in terms of the number of institutions that they accredit. The range is from approximately 200 to more than 1,000 institutions with more than 14 million students in total (Wolff, 2005). In addition, it is interesting to note that many regional accreditation
bodies are involved with the review and accreditation of institutions outside the US. Also, many colleges and universities located throughout the world follow practices and procedures that were developed in the United States through the regional accreditations system. In that respect, the systems developed and used in the US do have importance globally.

Generally, US academic institutions do have significant autonomy, and the individual states actually provide the majority of the oversight. Regional accreditation allows for a more co-ordinated interstate system of accreditation efforts. Fundamentally, it was developed as a system to provide non-governmental, peer-to-peer evaluations of institutional quality.

There are many common themes that are evident with respect to regional associations. For example, they all use a set of published standards which include similar common elements including: eligibility and candidacy, self-review, on-site team visit, and decision/appeal.

**Eligibility/Candidacy**

In this preliminary step, the institution submits an application to the regional association. The intent is to illustrate that the institution does meet the baseline requirements outlined by that association. The candidacy documents that are required confirm licensure with the state. Also, these documents illustrate the match to the eligibility standards. For example, these standards usually include things like the governance structure, appropriate numbers of faculty with the correct credentials, the types of degrees that are offered including the general education requirements. Based on a review and approval of these candidacy documents an institution may proceed to full membership application.

**Self-study**

One of the main aspects of the application is a self study that develops the application to clearly illustrate that the institution meets the standards set by the regional accreditation commission. Basically, the self-study is developed as a document which outlines in detail the compliance by the academic institution to the requirements set out by the accrediting association. One element of the self study is
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the systematic manner in which an institution provides for regular strategic planning including the development and use of performance measures.

On site
One key element of the accreditation system is that there is a peer review. This includes a peer review of the self assessment and an onsite visit that includes additional document reviews and actual interviews with key stakeholders.

Accreditation decision
Based on the detailed site visit reports that include interviews, document review, and observations, the review team prepares a report and recommendations. This portfolio of information guides the regional association’s decision to approve, approve with conditions or deny accreditation. In terms of specific institutional guidance around the concept of quality there have been a number of recent advances. For example, the Higher Learning Commission of the North Central Association has recently developed two programs that are required to maintain accreditation. These programs are: the Program to Evaluate and Advance Quality (PEAQ) and the Academic Quality Improvement Program (AQIP). Both initiatives were developed with specific outcome elements. The AQIP allows more discretion in the development of institution specific quality improvement principles and plans (The Higher Learning Commission, 2003b).

In addition, the Southern Association Commission on Colleges (SACS) has developed requirements for a more focused approach to student learning and quality enhancement. Specifically, SACS\(^2\) Nota in banda laterale now establishes that institutions must develop a Quality Enhancement Plan (QEP) plan that highlights specific strategies and actions that will lead to continuous improvement in student learning. To date, there have been a number of actions that institutions have included to advance their QEP’s including: providing tutorial assistance in areas such as writing skills, assisting with the development of critical thinking skills, enhancing student engagement, and promoting international awareness. As the use of the QEP process expands there will be additional

materials and information available on “best practices” in improving outcomes.

**Professional associations**

Another stakeholder in the education process with an interest in quality is that of professional accreditation bodies. In terms of business education we see that there are two main associations. The Association to Advance the Collegiate Schools of Business (AACSB) has a mission to “AACSB International advances quality management education worldwide through accreditation, thought leadership, and value-added services” (AACSB, 2013). Currently, AACSB operates in 83 countries and it has more than 1,300 member institutions.

Accreditation Council for Business Schools and Programs (ACBSP) has a mission of “ACBSP promotes continuous improvement and recognizes excellence in the accreditation of business education programs around the world”; and a vision of “every quality business program worldwide is accredited”. ACBSP has more than 10,000 individual members and 1,260 members operating in more than fifty countries.

Of course professional accreditation agencies do have formal systems and procedures that are required for membership. Of interest in both of these professional accreditation bodies is the identification of “quality” as an important component of their systems. Again, these are simply examples of the types of professional accreditation bodies that are operating within the education system. Clearly, a common element in these professional accreditation bodies is the recognition of quality as a key component within their accreditation systems. In summary, there are many stakeholders involved in the US system of accreditation of academic institutions. As we see from the preceding discussion, all have increasingly promoted quality as an important attribute of education.
A formal quality framework: the Florida Sterling Quality Council

In addition to the extensive efforts that national, regional and professional associations have advanced to improve quality there have been other initiatives that have been adapted and adopted by some educational institutions. Specifically, a number of academic institutions have used the Malcolm Baldridge quality criteria. In addition, some states have adopted state wide quality frameworks developed to improve organizational quality. One example is the State of Florida. In Florida, the Sterling Quality Council is a public, private, not-for-profit organization located in the Governor's Office which uses a quality framework based on the national Malcolm Baldridge criteria to improve the competitiveness of Florida organizations. Since its inception in 1992, 68 organizations have received the Governor's Sterling Award for significant improvement and achievement of performance excellence. The Governor's Sterling Award and the Sterling Management Model are based on the National Malcolm Baldrige Criteria for Performance Excellence. Since 1992, the Florida Sterling Council has assisted organizations in utilizing proven standards of excellence as a guide to making improvements that generate better operations, customer value, and overall results. Specifically, the Florida model has three components including the Governor's Sterling Award, Stirling Challenge and Sterling Navigator. Each of these components (See Figure 2) affords an opportunity with a systematic approach to understanding and improving quality in respect to goods and services.
In the case of online education, there has clearly been increased interest in the use of these types of models to frame quality and develop continuous improvement strategies. The key criteria in the Sterling model (See Figure 2) are: leadership; strategic planning; customer focus; measurement and analysis; workforce focus; process management; and results. It is important to note that these elements are inter-connected and that they must be considered as a holistic system.

One example of an innovative and leading institution that has successfully applied the Sterling model is that of Saint Leo University (SLU) located in Florida, USA. SLU was the recipient of the Sterling Navigator award in 2011. In particular, the Master of Business Administration (MBA) program utilized the Sterling system from 2007-2011 during which time the program enrollments grew by more than 300%; and faculty and students were actively engaged in strategically improving the quality of the program. In terms of the application of the Sterling model there were numerous steps that are important in understanding the context and importance of the use of the model. The following provides an overview of the Sterling model using the SLU experience to:

1. **Leadership**
   
The leadership category examines how the senior leadership personal actions guide and sustain the organization.
At the outset there was clearly an institutional interest in systematically improving the MBA program and the outcomes of the program. The MBA Program Director completed the Sterling Auditor training. In addition, to ensure that the leadership was distributed to capture relevant stakeholders within the institution an inter-departmental “Team MBA” was established. The purpose of the team was simply to ensure all relevant leaders in key departments (stakeholders) were pulling in the same direction. Also, key leaders “walked the talk” by including quality in a variety of different communications to ensure that the topic was seen as important by all stakeholders. In addition, key leaders were identified and supported in securing specific training in quality principles.

2. Strategic planning
The strategic planning category is designed to examine how the organization develops strategic objectives and action plans.

The MBA program developed a strategic plan which was regularly used to develop action plans for each academic cycle. The strategic plan canvassed the input of key stakeholders and included an environmental scan which is vitally important in a period of considerable change. Interestingly, many academic units do not use formal strategic planning regularly to assess constraints and opportunities. However, this type of structured, fact based methodology to frame decision-making is very important to all organizations particularly in times of resource constraints.

3. Customer focus
In many organizations and institutions there are impediments to the identification and understanding of the concept of “customer”. Specifically, the category examines how the organization engages its customers for long term marketplace success. In the online education environment, we see that there are considerable and increasing options available for students. Of course students must be seen as a fundamental customer in respect to online education. These students are not geographically bound to a physical place. The range
of choice for these customers/students is substantial and growing. In that regard, understanding the customer is crucial. To that end, the use of focus groups and surveys were key ways used to address the need to clearly focus on customer service in the MBA program. Indeed, during this period, a specific student satisfaction survey was designed to assist in the identification of specific opportunities for improvement and student participation and satisfaction results consistently improved on a year-to-year basis. In large part, the focus on students was designed to assess the critical needs of the customer and look to ways to address those needs by developing specific action plans.

4. Measurement and analysis
The category is designed to assess how the organization selects, gathers, analyzes, manages and improves its data information and how it manages information technology. In the case of SLU, there were a number of sources that generated data on the programs. These included new student surveys, an annual student satisfaction survey, in-class surveys of instructor performance, focus groups and alumnae surveys. All of these were discussed by the program management team and common themes identified for action. All of the main observations or “results” from surveys were reported back to stakeholders.

In terms of in-class issues, one key area that online classes have generally identified as important is the provision of timely and detailed feedback. To structure efforts in this area a series of “team leaders” were assigned to monitor 5-8 individual faculty members. The team leads would trouble shoot for the faculty members and conduct regular in-class audits. The in-class audit included a variety of measures to ensure that faculty was actively engaged in the class and supportive of student success. To assist in this requirement, faculty was encouraged to use the PICMV system. This system encouraged faculty to be Personal, Informational, Corrective, and Motivational and include Value Added Content within their feedback on discussions and assignments.
5. Workforce focus
The category addresses how the organization engages, manages and develops the workforce in alignment with organizational mission, strategy and action plans.
At the outset regular meetings were scheduled with everyone in the workforce - faculty and staff. The meetings were held twice per term and attendance was required. These meetings took the form of online recorded sessions to enable attendance, particularly by faculty working remotely. The focus of these meetings was to maintain open lines of communication and to ensure that all faculties were aware of key dates and required processes and procedures such as grading deadlines. In the Navigator results report this is an area identified as one that could be improved. In part, this reflects the fact that many of the faculty was adjunct and working from remote locations. However, the results in this area are important and instructive.

6. Process management
The process management category examines how your organization designs its work systems and how it designs manages and improves its key processes.
At the outset, the identification of key processes was an important task that was assigned to the entire MBA program team. Key processes were identified and mapped which illustrated to the team the complexity of the overall system. Delivering 100 online sections to approximately 2,000 every eight weeks requires that systems and standard operating procedures be developed and used to ensure timely and effective delivery of the classes and the program. A series of “key dates” were established to assist in developing a systematic and timely approach to meeting crucial deadlines. Team members were cross trained to ensure that coverage was available at all times.
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7. Results
This category examines the organizations performance and improvement in all key areas.
One of the main initiatives undertaken in this area of results was the production of an annual report that provided details on the performance of the program during the preceding year. The annual report included metrics such as enrollments and key data from the student satisfaction survey. Also, it identified main focus areas that had been identified for improvement and action. An example was the identified need for attention on the internationalization of the program. As a way to address this identified need the institution developed an international business conference with the generous financial support from outside firms. The financial support enabled the production of peer reviewed proceedings. Overall, the annual report was a way to capture the relevant changes during the past year. To ensure that the information in the report was widely available it was posted online and the Program Director held a virtual town hall meeting to present it and discuss the results.

Of particular importance in the area of results was the identification of success. The program celebrated the achievements of the many individuals who supported the success of the MBA program. It was very important to acknowledge the achievement of incremental goals and highlight that these achievements were very much a team effort.

In terms of the Sterling process itself, the Navigator phase, which is the preliminary step, is a survey of all key stakeholders. The survey provides data that can be benchmarked both internally and to other organizations and it is designed to assist in the identification of specific improvement areas. In the case of SLU, the Navigator was administered in late 2010. One hundred surveys were distributed and 100 surveys were completed. Overall, the organizational score was 72% with a category range of 66% to 77%. Detailed feedback was generated in a 75 page report for each of the main elements of the model. The feedback included statistical analysis and pareto charts which included very specific improvement recommendations. Essentially, this phase is an assessment
of the understanding and commitment to strategic quality improvement across all segments of the organization. The next step in the Sterling process is the organization wide development of an improvement plan with detailed, specific action items to address these identified improvement areas in a systematic and inclusive manner. The overall quality initiative remains a work in progress; however, the MBA program has grown to in both size and substance. Annual student satisfaction surveys continue to show increasing participation and satisfaction with the online courses and the overall program. In part, these achievements are the direct result of the application of the Sterling Navigator model.

Summary

In summary, the development of quality as an increasingly important component in the education environment should not come as a surprise. Many products and services do follow quality principles to build more rigor into their systems; and, of course, to ensure that they remain in business. Organizations of all types from public institutions to not-for-profits to for profits must be cognizant of their contribution to the bottom line. For some academic institutions this link has become less clear over time. However, recent global economic turmoil has meant that all organizations are subject to more rigorous oversight and indeed budget reductions. Education is similar to the extent that there are “customers” of the service and their behaviors will increasingly mirror those of standard consumers. In addition, we do see that technology has impacted organizations in all sectors. In that regard, online education parallels the types of changes we see in many organizations. More education options (like MOOC’s) are opening up on a regular basis.

As we see in this report, quality in the United States follows a layered approach with various contributors all increasing their focus on defining and delivering “better” education. Indeed, all of the main regulatory bodies have placed an emphasis on the concept of continuous improvement using formalized strategies to set the goals and objectives of their organizations; to acquire data and use a fact based decision system that can track and monitor
improvement; and, to craft specific improvement plans that are used regularly.
Clearly, the dialogue around quality and quality assurance with respect to online education will undoubtedly continue. We see that online education is a maturing industry and this important topic will no doubt continue to receive considerable public attention within the context of global higher education.

Note

The six regional accrediting associations are the Middle States Association of Colleges and Schools; New England Association of Schools and Colleges; North Central Association of Colleges and Schools; Northwest Commission on Colleges and Universities; Southern Association of Colleges and Schools; and the Western Association of Schools and Colleges.

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La diffusione della formazione a distanza ha imposto ormai da tempo la necessità di individuare gli standard condivisi della qualità dell’esperienza formativa in modalità telematica. Negli Stati Uniti, in risposta a questa necessità, sono nate diverse istituzioni di valutazione della qualità educativa dei processi e dei contenuti erogati a distanza, tra i quali The American Society for Quality (ASQ). In molti casi, le stesse istituzioni accademiche si sono messe in rete per condividere buone pratiche e definire gli obiettivi formativi, in un’ottica di continuo aggiornamento. Su questa linea operano lo Sloan Consortium, che ha avviato un ampio dibattito in primis sulla definizione del concetto di qualità educativa; il Council for Higher Education Accreditation (CHEA), che riunisce venti college nord americani di formazione sia in presenza sia online; il Distance Education and Training Council (DETC) che si occupa in maniera esclusiva della definizione degli standard per la formazione a distanza. Il modello formale di accreditamento negli Stati Uniti a livello governativo - valido per le telematiche e per le università tradizionali - si basa sulla "Regional accreditation" con sei agenzie territoriali e un complesso processo di accreditamento delle istituzioni formative. In parallelo con il percorso governativo di accreditamento, sono attivi anche numerosi organismi di natura professionale che svolgono un simile compito di valutazione e accreditamento, tra i quali The Association to Advance the Collegiate Schools of Business (AACSB), operativo in oltre 50 paesi, con forte vocazione internazionale. Esistono, infine, enti territoriali, tra i quali in particolare il Florida Sterling Council, di cui fa parte la Saint Leo University, e che ha elaborato un modello di eccellenza della performance delle istituzioni formative a distanza basato su leadership, programmazione strategica, centralità dell’utente, gestione dell’informazione, gestione della forza lavoro, gestione dei processi e risultati.