

# Building & Implementation of Quality Assurance Model on e-Learning Platform

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**Abstract:** - Over the past decade, the coupling of technology with enhanced use of Internet has emerged at the fore of business and academics, making E-learning emerge as a respectable means to obtain higher education, worldwide. However, a major concern remains with regards to the monitoring of the Quality aspect. That is, can agencies that monitor quality assurance (QA) vouch for the current and emerging E-learning provisions to be reliable and effective? Quality, in education, is a prime issue considered by present thinkers and scholars who deal with the sphere of international-level education, and its resources. In this increasingly fierce environment, high quality is also the main competitive advantage factor. Universities, in their managerial and teaching staff should administer the learning process efficiently, and also work towards improving the level of competition, which pose an inherent requirement to focus on enhancing the quality in their educational offerings. This is primarily the reason for the rapid expansion of accreditation agencies that are responsible for quality evaluation and in turn, quality assurance (QA), in the field of education, over the past few decades.

Quality of education describes the relation between Learning, that is usually considered in the form of results, or even through the different academic processes that comprise the education system, and the Deliverables, as set by the various groups of stakeholders (Individuals, business organizations, community members and the Nation, generally), viz. outcomes, goals, regulations, etc.

This paper evaluates diverse experiences in the monitoring of quality assurance in different web-based and E-learning programmes, being offered at several institutions worldwide, studies the effect of the implementation of certain web-based tools, and also provides a justification for the need of particular International standards, for accreditation and evaluation, in the realm of E-learning.

The paper suggests an E-QUAL (Quality in E-Learning) model to assess the quality of education disseminated through on-line, E-learning platforms, globally.

**Keywords**—E-Learning; Evaluation; Quality Assurance; Accreditation; E-QUAL Model

## I. INTRODUCTION

Over the past decade, the coupling of technology with enhanced use of Internet has emerged at the fore of business and academics, making E-learning emerge as a respectable means to obtain higher education, worldwide. However, a major concern remains with regards to the monitoring of the Quality aspect. That is, can agencies that

monitor quality assurance (QA) vouch for the current and emerging E-learning provisions to be reliable and effective?

Quality, in education, is a prime issue considered by present thinkers and scholars who deal with the sphere of international-level education, and its resources. In this increasingly fierce environment, high quality is also the main competitive advantage factor. Universities, in their managerial and teaching staff should administer the learning process efficiently, and also work towards improving the level of competition, which pose an inherent requirement to focus on enhancing the quality in their educational offerings. This is primarily the reason for the rapid expansion of accreditation agencies that are responsible for quality evaluation and in turn, quality assurance (QA), in the field of education, over the past few decades.

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Firstly, they started with branches, remote offices, and even off-shore campuses. Almost 3/4th of the programmes in global education are delivered through overseas franchisees of the universities, as well as through local offices of the institutes offering distance education courses. Global education courses thus could be any of the traditional, on-line, or even integrated learning programmes.

So, policies for quality assurance require to devise questions on the inclusion of e-learning methods in regular educational courses, and also whether the new technologies and pedagogical approaches are adequate, considering the concepts like teaching efficiency, learning effectiveness or even educational parity.

## II. E-LEARNING AS A GLOBAL TOOL

E-learning should not be an exclusive methodology for particular courses. On the contrary, e-learning strategies are highly essential in recent educational activities. It is quite arduous to be able to predict the evolution of modern

technologies for use in the teaching and learning process. They are so rapidly changing that even experts find it difficult to make a general composition of future trends expected in even as near as the next decade. This poses a great challenge to the planning activities of our educational managers and policymakers.

Consider the enhancement in the processing ability of computers, or the recent innovations in the field of artificial intelligence. Then, is it not possible to expect that students could study courses that are being delivered in numerous languages, after being directly translated into their mother tongues? This technology is currently non-existent, but it is certainly a future possibility. Such technologies will surely help to start new, diverse learning communities that are able to work with novel parameters, in turn effecting the way that quality is perceived in teaching and learning.

In a similar sense, let us consider the developments in another associated field, virtual reality. The technology of video games is truly captivating, and it could be effectively leveraged to provide modern applications to support education, by the introduction of virtual laboratories, to increase learner engagement, as well as to enhance the understanding of the learners for the concerned course. Internet technology, through the medium of social networks, is already being used for e-learning programs and is apparently quite fruitful. We also need to be aware of the risks associated with such networks, or educational communities, as it could have impact on the freedom as well as privacy of the learners.

This introduces the need for students to be ethically aligned and raises the point again, as to what is the quality of such learning networks?

Essentially, we thus need to ponder about the introduction of modern concepts of quality. For example, it is possible that such learner networks become a probable future campus, or in fact, e-campus, of the university, and also that it could be actually rewarding at an individual, as well as, institutional level. So, does this stress upon the need for new concepts in order to reinvent the teaching-learning process?

Traditional teaching could be useful for fresh learners, though experienced students would be looking for that additional edge they would be able to gather while pursuing their higher education, to not just learn the present knowledge in some particular, prescribed format, but also be able to contribute towards the furthering of that knowledge through engagement in some form of research, while being enrolled for any of those courses. This brings us to a very fundamental aspect with regards to learning, in the modern context.

Do we expect our students of the future to be explorers rather than just be simple learners? What could be the possible effects of the use of such novel interfaces among people, and computers, that would be utilized to make it easier to acquire knowledge, in general? In such case, how would we evaluate

the contribution made by people towards the society, and its progress? Could these tools, in fact, usher significant change in the mechanism of information processing, in our teaching pedagogy, in our learning methodology, and also in the organization of research initiatives? In addition, translation tools also need to be considered while trying to maximize the global perspective of offering e-Learning programs.

### III. E-LEARNING AS A GLOBAL ACCESS OPPORTUNITY

We should however maintain that quality assurance needs to acknowledge the fact that ICT are providing alternative options for teaching, as well as, learning in universities, in addition to several associated challenges, for the higher education segment. Universities make use of E-learning tools with the practical aim of reaching some level of competition, which is acceptable. This often is regarded as the need to facilitate access to education, in turn providing some means to bridge the distance factor. In the case of a large country like India, for example, it is highly plausible that E-learning may be the only possible way for the citizens in few of our remotest areas to avail the facility of high-quality education.

While speaking about easy access to educational and training options, we must of course include global higher education. These usually include all kinds of courses, study programs, as well as educational services, including distance-learning courses offered for learners belonging to other nations. The study programs could be a part of the education system of another foreign country, or they could be offered without any regard to the features available in the education system of any particular country.

Internationalization of any education system, needs to be closely linked to the use of new ICT, to be able to elaborately design a scheme of global education scheme. As the educational marketplace is largely going global, there is a continued struggle to increase the market space for all providers. The rise in demand for higher education is almost 6% per year, and the demand is growing at a rate better than that of the education market, globally. Totally, almost about 2 million international students were studying worldwide, in 2003. The number of international students, it is estimated, would be around 7.2 to 7.3 million by 2025, as a majority of students would be availing global courses.

### IV. QUALITY OF GLOBAL ACCESS

E-learning, to a large extent, is a result of technological advancements, and this would create a phenomenon of 'technological determinism'. This is more pronounced in countries of Western European and the U.S., which are in the process of creating a platform to define the common standards for this field. Standards used for data exchange, such as SCORM, LOM/LRM, IEEE LTSC or IMS standards, could be considered to be the desired E-learning standards. In India, however, local educational standards normally are concerned

with just the content of these study programs. The methodology and technology that must be prescribed to conduct the teaching process may have been defined well, but it needs a standard method of implementation to be followed. Standards laid down by the UGC, as well as, ISO 9001, have however been regarded as a viable alternative to the local educational standards.

With reference from the education systems of the US & Europe, there is a probability of defining standards for E-Learning, based on the ISO 19796-1 standards. Although the quality of provision can be expected to be high, on the basis of content and technology, it is also true that the influence of human factors cannot be ignored.

The declaration of such goals can never be overlooked, although there are no globally accepted concepts or theories, that could be aligned with the practical aspects, which would improve the quality of provision, with the support of E-learning. Moreover, there is a lack of a comprehensive system for quality evaluation, for E-learning, which would truly work, by taking all major functional aspects, as well as, important characteristics of the system, into consideration.

V. DESIGNING THE MODEL: E-QUAL

Quality of education describes the relation between learning (observed through results, processes or even an entire education system) as well as the demands, goals, regulatory standards, as well as the requirements defined by individuals, organizations, businesses, local community members and the nation, at large. Using the approach described above, we should descriptively define the term ‘quality of education’ as comprising of the following:

1. Quality of Teaching pedagogy (learning process, teaching methods)
2. Quality of Academic faculty
3. Quality of Study programs
4. Quality of Equipment, and the maintenance and support provided
5. Quality characteristics of the Environment for learning
6. Quality characteristics of Learners (college and school students, university entrants)
7. Quality of University management, and
8. Quality of Research.

The analysis of these quality models affirms the research done by Ossiannilsson (2012), which comments that most of the quality standard assessment models correspond to around three to six major dimensions, such as those described by the E-xcellence, from EADTU (Williams, Kear & Rosewell 2012), which is also been confirmed by Bacsich (2009-2011). These three major domains are further sub-divided in six areas, as shown in Figure 1 below:



Fig 1. Three Significant main areas related to quality in online learning, including e-learning by Ossiannilsson (2012).

The first part on Strategic Management and the first Benchmark no 1, from EADTU E-xcellence (Williams, Kear & Rosewell 2012). The assessment of these parameters could then be understood by the analysis of responses, from the given scale, as follows:

<b>All excellent</b>	<b>Some excellent</b>	<b>Adequate</b>	<b>Mainly adequate</b>	<b>Inadequate</b>
<input type="checkbox"/>				

Please add your comments or refer to evidence

Fig 2. Assessment Scale for parameters.

Based on these six areas, described by Ossiannilsson (2012), that are given above, and also the ten criteria that have been suggested, in order to obtain a holistic perspective (NAHE, 2008), we have designed the E-QUAL framework to assess the quality of E-Learning worldwide:

Criteria	Parameter	Satisfactory / Low	Good / Medium	Excellent / High
Trust	Organization & Learning Environment			
Access	Content & Material			
Learner Satisfaction	Collaborative Support			
Learning Effectiveness	Interaction & Communication Ability			
Excellence	Student Assessment Capability			
Innovation	Flexibility & Adaptivity			

Support	Assistance for Student & Staff, Resource Allotment		
Leadership, Excellence & Continuous Improvement	Institutional Vision & Quality Policy		
Globalization	Holistic Approach		

Fig. 3 – E-QUAL Framework Model to assess quality of E-Learning

## VI. CONCLUSIONS AND RECOMMENDATIONS

E-Learning provides several advantages by eradicating topographical constraints, defeating issues of distance as well as resolving problems of scheduling, thereby breaking through physical barriers of space, resulting in liberalized learning, effectively delivering quality education, to several million learners, while providing a cost-effective solution breaking through boundaries of religious, cultural and political concerns for developing nations. It provides an opportunity to many people to continue or resume their education, in turn, enabling lifelong learning. Quality evaluation of these E-learning programmes, as well as university practices, need be based on equitable principles of transparency in external quality evaluation, accreditation, as well as self-evaluation of the university.

It is therefore imperative to consider the e-learning phenomenon during the creation of the evaluation scheme correlated to the descriptions of achievement for the various educational institutions. It is clear that quality assurance efforts which do not align with the usual notion of e-learning, that is, those which do not include evaluation of the universities, based on their e-learning prospects, cannot thereby guarantee to their stakeholders that the E-learning programmes provided by the institution are coherent with globally-accepted best practices. Comprehensive evaluation of the quality of the course provision methodology, and the quality assurance systems, which could be used to assess the

E-learning programmes provided by the universities, surely have their own clear advantages. They can also be used on international scales too, as depicted by the E-QUAL model here.

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