

# **Assessing the need for a quality framework designed specifically for managing the provision of online distance education in developing countries**

**Theme: Formal Education, Subtheme: Quality Issues**

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## **ABSTRACT**

Quality assurance and quality improvement processes employ quality frameworks to ensure comprehensive coverage of the factors affecting students' experiences of learning. The importance of quality frameworks has increased with the shift to online delivery of courses.

A number of quality frameworks for use in quality management in relation to delivery of courses online at a distance may be found in the educational literature. However, most of these frameworks have been designed for use in a developed country context. Such frameworks may not be suitable for use in a developing country context where factors such as the robustness of the communications infrastructure, capacity of teachers to use technology, students' access to technology, the affordability of technology, and a range of other factors can have a much greater impact on students' learning experiences.

Designing a new quality framework for use specifically in a developing country context is a substantial project. Before embarking on such an enterprise one needs to be satisfied that existing frameworks are unsuitable for the task and that adapting an existing framework would not offer a most cost-effective solution than moving on to the development of a new framework.

This paper draws on the research literature to identify the range of known challenges faced in delivering programs by online distance education in a developing country context. It then examines the extent to which a number of existing quality frameworks capture information on institutional performance in relation to these challenges. Finally, it considers whether a case can be made for development of a new quality framework specifically designed for use in a developing country context.

## **QUALITY IN ONLINE DISTANCE EDUCATION**

Quality has always been seen as an issue in distance education. It was recognition of the importance of addressing issues of quality and the effectiveness with which these issues were subsequently tackled that led to the success of the UK Open University. With the exponential growth of online distance education that following the establishment of the World Wide Web, quality has once again become a topic of keen interest.

Quality is not something that can be measured along a single dimension. Many factors contribute to quality. A quality framework is a conceptual structure that identifies the factors impacting quality in a particular context (Inglis, 2008, Inglis, Ling & Joosten, 2002). The purpose of a quality framework is to ensure that the full range of factors known to impact quality are taken into consideration in managing quality assurance and quality improvement.

Over the past fifteen years a number of quality frameworks have been developed for use in relation to online learning (Chua & Lam, 2007; Inglis, et al, 2002; Masoumi, 2010, Phipps & Merisotis, 2000). Most published frameworks have been developed and validated in

developed country contexts. In much of the quality literature a tacit assumption is made that the factors impacting quality apply equally throughout the world. Yet in the area of online distance education it is well known that there are substantial differences between developed and developing country contexts in the ways courses are delivered. While undoubtedly there are factors that are universal (McLoughlin & Visser, 2003) there are also many factors that are specific to developing countries (Masoumi, 2010).

The scope for using quality frameworks is arguably much greater in developing countries than it is in developed countries. The challenges in developing countries are greater than those in developed countries and therefore present a greater threat to the quality of students' learning experiences. There is a widely-held belief in developing countries that the quality of courses taught online is lower than that are taught face-to-face (Wright, Dhanarajan & Reju, 2009) and therefore the advantages of being able to demonstrate the quality of what is being offered are greater.

Recently, Masoumi (2010) has reviewed the literature on quality frameworks for the purpose of designing a quality framework for use in the developing country of Iran. Masoumi concluded that the type of quality framework required for use in a developing country is quite different from the quality frameworks that are presently available. He argued that a quality framework is a cultural artefact, and as such needs to reflect the cultural context in which it is being applied.

Designing a quality framework is a substantial project. Before embarking on such a project it is important to establish that the need is justified. The purpose of this paper is to examine how adequately existing quality frameworks meet the needs of developing countries.

## **CHALLENGES FOR DEVELOPING COUNTRIES**

In order to establish whether the challenges of implementing online learning in developing countries are sufficiently different from those in developed countries as to justify development of new quality frameworks, one should first consult the literature. A worthwhile place at which to start is with the work of Andersson & Grönlund (2009) examining the types of challenges faced in developing countries in the area of online learning. These researchers began by developing a conceptual framework for describing the types of challenges involved in implementing online learning as revealed by the research literature. They then used this framework to identify the differences between the challenges faced in developing countries compared with those faced in developed countries. The conceptual framework they developed comprises thirty challenges divided into four main categories: individual, course, contextual, and technological. The categories where developing countries were found to be facing much greater challenges were technological and contextual. The technology category included infrastructure, costs, useability and appropriateness of technology, while contextual challenges included organisational, and cultural/societal challenges. Both developed and developing countries were found to be experiencing course-related challenges, while individual challenges did not show up strongly in the research related to developing countries.

An assumption that Andersson & Grönlund (2009) made in their study was that the challenges that researchers choose to investigate will be the same challenges with which practitioners have to contend. In discussing possible uses of their framework, they suggested that it could be employed as a checklist of the factors that would need to be considered when designing a project.

### **Challenges related to the technology**

It is widely recognised that the standard of telecommunications infrastructure in developing countries falls well below that in developed countries. In those countries in which the telecommunications infrastructure is deficient, institutions will face much greater problems in delivering courses online. In developing countries, the strength of the terrestrial telecommunications infrastructure drops as soon as one moves away from the main population centres. Developing countries therefore place much greater reliance on satellite telecommunications than do developed countries. However, many of the satellites that are

being used are over 20 years old and because of their age their capacity is quite limited (Wright, et al., 2009).

It is not just the availability of telecommunications infrastructure that affects whether students in rural and remote areas can learn online, but also the reliability of the infrastructure. Loss of access to online delivery systems is more often caused by interruptions to the electricity supply than by failure of the infrastructure itself. The ability of authorities to maintain the telecommunications and electricity infrastructure is often limited by the lack of availability of appropriately qualified technical staff. In many countries, attempts to improve the telecommunications infrastructure are thwarted by the lack of systematic approach to the implementation of ICT projects (Sife, Lwoga & Sanga, 2007).

Other technological challenges include ensuring that delivery systems fit the chosen learning modals and are easy to use, and adapting technology and software to fit local culture and language (Andersson & Grönlund, 2009).

### **Contextual challenges**

Amongst the contextual challenges identified by Andersson & Grönlund (2009) were organisational challenges, including the challenges of managing and building knowledge, the economics of delivery and the and the training of teachers and staff, and societal/cultural challenges including the roles of teacher and student, attitudes to distance education and online learning and rules and regulations.

Knowledge of the factors impacting students' learning is built up through research. It has been recognised that one of the factors that has been handicapping the advance of online learning in developing countries has been the paucity of empirical research and the fact that such research as is undertaken often reports positive or inconclusive findings (Latchem, 2007). While obtaining access to the Internet is a critical issue in many developing countries, the cost of access often presents almost as great a challenge. Telecommunications costs are often higher than in developed countries, especially if telecommunications services rely on the limited bandwidth of aging satellites. Although the arrival of inexpensive netbook computers has lowered the cost of hardware, the cost of even the least expensive computers is still well out of reach of a large proportion of the population in many developing countries. One way in which governments and institutions are responding to the issue of cost is by fostering the development of neighbourhood learning centres (Wright, et al., 2009). Another response has been to take advantage of the available but less capable technologies such as cell phones (Balasubramanian, Thamizoli, Umar, & Kanwar, 2010; Vyas, Albright, Walker, Zacchariah, & Lee, 2010). However, using cell phones for delivery presents its own range of challenges and greatly alters the nature of the learning interactions. Staff development generally presents greater challenges because of the lack of skilled trainers. In addition, because of the lack of technical support, faculty need to learn how to install and maintain computers and software, and troubleshoot problems that they and their students encounter (Wright, 2007).

The power relationship between teacher and students is another factor that varies considerably between developing and developed countries, providing a challenge to those teaching in developing countries who are striving to foster active learning. One of the fundamental cultural challenges facing those who wish to take advantage of the potential of online learning for benefiting developing countries is the commonly-held belief that learning at a distance and particularly learning online is inferior to learning face-to-face in a classroom (Wright, et al., 2009). Evidence for this attitude was found in Andersson's (2008) study involving staff and students at the University of Colombo. Finally, the different laws that govern matters such as copyright and intellectual property, and the practice of censoring of access to content delivered over the Internet represent significant societal differences.

### **IMPLICATIONS OF CHALLENGES FOR QUALITY FRAMEWORKS**

Andersson & Grönlund (2009) acknowledged that the range of challenges that they identified may not be completely comprehensive because it is derived from the literature that they

sourced and this may not have covered the entire field of e-learning. Nevertheless, it appears that the framework probably offers as comprehensive a compilation of the challenges as is currently available in the literature. A greater threat to the comprehensiveness of the framework is the possibility that there are challenges that have not yet been reported in the literature.

The E-Quality Framework developed by Masoumi (2010) was specifically intended to address the needs of developing countries. However, Masoumi investigated these needs from a logical standpoint. He did not make reference. He did not make reference to the work of Andersson & Grönlund (2009).

## CAPACITY TO ENCOMPASS CHALLENGES OF DEVELOPING COUNTRIES

To evaluate how adequately a sample of existing quality frameworks are able to encompass the challenges of developing countries, the key components of the conceptual framework developed by Andersson & Grönlund (2009) were mapped against the elements of a number of previously-published frameworks (Table 1). The frameworks chosen for this purpose were the Quality improvement framework (Inglis, et al., 2002), Benchmarks for success in Internet-based distance education (Phipps & Merisotis, 2000), Universitas 21 framework for quality assurance (Chua & Lam, 2007), Proactive evaluation framework (Sims, Dobbs & Hand, 2002) and E-Quality framework (Masoumi, 2010). The strength of representation is indicated by a rating on a three-point scale, ranging from strongly represented to weakly represented.

Table 1. Subcategories of developing country challenges mapped to quality frameworks

	Quality improvement framework (Inglis, Ling & Joosten, 2002)	Benchmarks for success in Internet-based distance education (Phipps & Merisotis, 2000)	Universitas 21 framework for quality assurance (Chua & Lam, 2007)	Proactive evaluation framework (Sims, Dobbs & Hand, 2002)	E-Quality framework (Masoumi, 2010)
<b>Contextual</b>					
<i>Organisations</i>					
Knowledge management	+				+
Economy and funding	+++				++
Training of teachers and staff	+++	+++	+++		+++
<i>Societal/Cultural</i>					
Role of teacher and student	+++	+++	+++	+++	+++
Attitudes to e-learning and IT			+		
Rules and regulations	+++				+
<b>Technological</b>					
Access	+++	+	+++		+
Cost	+++				
Software and interface design	++			+++	+++
Localisation					

Key: +++ = strongly represented; ++ = moderately represented; + = weakly represented

Attempting to map the components of one framework on the components of another is fraught with difficulties. Amongst the factors that have the potential to affect the result are the lack of one-to-one correspondence between components of different frameworks, the differences in level of specificity, the grouping of components, and differences in the use of terminology. It is possible also that the same process undertaken by different raters may produce some variation in ratings of the strength of representation. The results of such a mapping process should therefore be regarded as indicative rather than definitive.

What is apparent from the information presented here is that the capacity of the quality frameworks that have been examined here to encompass the challenges of developing countries is quite variable. While technological challenges feature prominently amongst the types of challenges faced in developing countries, the framework published by The Institute of Higher Education Quality (Phipps & Merisotis, 2000) that was developed for use in the United States where technological support is strong, fails to encompass these types of challenges. It is noteworthy that only one of the quality frameworks that were compared considered attitudes to technology-delivered learning. It is possible that this omission reflects the difficulty in framing an institutional response to a factor that is so culturally-determined.

It is particularly worth noting is that the quality framework developed by Masoumi (2010), which specifically aimed to address the needs of developing countries does not appear to encompass some of the factors identified by Andersson & Grönlund (2009). In particular it misses the need for development of a knowledgebase, the need to consider the impact of cost of use of technology on students, and the issues concerned with localisation of technology.

## CONCLUSION

There are obviously some key differences in the provision of online distance education between developed and developing countries, and these differences have important implications for the ways in which quality is managed. While it may be argued that the existence of such differences, on its own, justifies the need for developing a quality framework specifically for use in a developing country context, the critical issue is whether existing quality frameworks are capable of capturing information on institutional performance in relation to these challenges. Based on the comparisons provided here existing quality frameworks do not appear to encompass the challenges faced in developing country contexts adequately. There may therefore be a need for a new quality framework or some adaptation of existing frameworks.

Finally, it should be said that the focus in this paper has not been on factors that affect quality in developing country contexts but points of difference between developing countries and developed countries. There are other factors that contribute to the overall quality of students' learning experiences, but these impact students' experiences in developed countries as well.

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