

## Chapter 12

# The Role of Technology in Improving Quality of Teaching in Higher Education: An International Perspective

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### ABSTRACT

*Students are the future of any country. They are the leaders and entrepreneurs of tomorrow. If teaching quality is undermined, so is the country's overall education system, and therefore, so is a country's future. In this chapter, the role of technology in improving quality of teaching in higher education, which has been declining over the years internationally including in the US, is reviewed. Databases EBSCOhost and Academic Search Complete were employed in this review. Empirical studies have revealed that e-learning technologies such as Moodle improve teaching quality. Given the advancement in technology, institutions of higher learning the world over are challenged to embrace technology as a strategy to engage students and enhance learning.*

### INTRODUCTION

Education uplifts a country. A country in which a large percentage of its people are educated prospers, as the future of a country lies in the production of highly educated people (European Commission Report, 2011; Ololube, 2009). Education, especially higher education (HE), is critical to the development of a country. Sadly however, the quality of HE teaching in most countries is in decline (Matoti, 2010). Consequently, improved quality of HE teaching continues to be a priority internationally. Reasons for the decline in quality of HE teaching in most countries, including the United States of America (US), are many and varied but often cited are: a general decrease in the quality of teachers, including their lack of enthusiasm and lack of the right levels of qualification, use of inappropriate teaching methods, inadequate or lack of teaching resources, and the effect of the environment in which teaching is conducted when

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substandard (Ololube, 2009; Saville, 2009; US Education Policy Briefing Sheet, 2009). In the case of developing countries, inadequate funding for purchasing resources can also be a factor (Ocholla, 2003).

Although teaching quality in HE is said to be a function of several factors, however, of the reasons for the decline in quality of HE teaching mentioned above, inappropriate teaching methods are said to have contributed the most to the decline in the education systems of most countries, and especially that of the United States (Saville, 2009). Internationally, especially in the developing world, use of inappropriate teaching methods are certainly a part of the decline, though the picture is more complicated (Beaudoin, 2007; Ocholla, 2003). In these countries, lack of teaching resources compounds the situation even further.

Improving teaching methods through implementation of teaching strategies that are effective is therefore key to improving the situation and subsequently reversing the decline. Currently, traditional teaching methods, such as lecture-based teaching methods, are being challenged by alternative methods that are increasingly showing to be more effective; methods that have been made possible through advances in information and communication technology (Alonso et al., 2010; Saville, 2009; Wu et al., 2013), methods that make possible student participation and are student centered.

The purpose of this study was to examine how technology has improved quality of teaching in higher education, by looking at one technology in particular as an example; Moodle, an e-learning technology systems tool. Knowledge of which technology to use when and how to use it not only has the potential to improve quality of HE teaching, but also it is important to both teachers and instructional leaders for them to be able to make informed choices about an educational technology in order to bring about the required change to teaching quality to improve it. Beatty and Ulasewicz (2012) stated that “having the right tool for the job makes teaching more effective and learning by students more successful” (p. 45). Knowledge and use of appropriate and effective teaching methods, together with the right technologies is especially important in bringing about quality to teaching in HE institutions.

Postarref, Lindblom-Ylanne, and Nevgi (2007) said “teacher education is a theme that is constantly being echoed in many countries of the world the past decade, ...that although traditionally the expertise in one’s own discipline has been the most respected feature of a university, in recent years however, discussions have been about the need to improve university teachers’ pedagogical thinking and skills” (p. 557). This statement is supported by Ho, Watkins and Kelly (2001) who pointed out that there was an immediate need for methods that can bring teaching excellence in HE teachers. Also in support of this statement is Mateiro (2011). In elaboration, Gibbs and Coffey (2004) stated that training of university teachers in many countries was as a matter of fact, now oriented towards developing teacher teaching skills to improve student learning and identified student focused approaches as approaches that can improve the quality of student learning outcomes.

Student-centered teaching methods “where students play a more active role in their learning process, with the instructor facilitating the learning rather than just providing content” (Smith, Ferguson, & Caris, 2002, p. 355) as is usually the case in traditional face-to-face lecture setting, have been identified to be very effective in improving teaching for they allow for greater student participation. From the existing literature, it has been found that student-centered learning activities, including discussion boards and group-based learning activities have been found to promote a number of aspects that positively impact teaching quality (Crosling & Heagney, 2009); enhancement of student participation being one. In this respect, Pedro (2005) wrote “it is the change in the teaching method, and not the adoption of technology (per se) that results in a higher quality of teaching, measured by student satisfaction” (p. 403).

However, it must be said, that for there to be quality to teaching, teachers need also to have the right qualifications. Since teaching quality impacts the quality of students that the school as an institution

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