

# Chapter 10

## Introducing Educational Technology into the Higher Education Environment: A Professional Development Framework

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### ABSTRACT

*Over the past decade or two advancements in educational technology have taken place so swiftly that it threatens to revolutionize the education system. This phenomena seem to drive higher education institutions to respond with costly roll out plans that bring state of the art computing hard- and software, together with other highly specialized educational technologies, to their campuses. The dilemma is that these investments in educational technology are often made in isolation, without consideration for imperative aspects such as professional development. To progress, educators need to acquire the skills, knowledge and attitudes necessary to make optimal use of the technology. This can be achieved, among other, by means of well-structured professional development programmes. In this chapter the author explores the role of educational technology in higher education and establishes the need for capacity building by means of carefully designed professional development programmes. It furthermore suggests an alternative professional development framework.*

### INTRODUCTION

Over the past decade or two advancements in educational technology have taken place so swiftly that it threatens to revolutionize the education system (Quinn, 2003). This phenomena seem to drive higher education institutions to respond with costly roll out plans that bring state of the art computing hard- and software, together with

other highly specialized educational technologies, to their campuses. The dilemma is that these investments in educational technology are often made in isolation, without consideration for imperative aspects such as professional development (Tlhoale & Van Ryneveld, 2007).

Cuban (2001) makes a strong case when he argues that the mere fact that educational technologies are available, does not, by itself, change the

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educational practices inherent in an institution. In fact, there is little conclusive evidence that investments in hard- and software alone, make any significant difference in the teaching and learning practices of Universities. To progress, educators need to acquire the skills, knowledge and attitudes necessary to make optimal use of the technology. This can be achieved, among other, by means of well-structured professional development programmes.

In order to teach effectively in the current networked educational environment, educators require applied knowledge, coupled with a functional awareness of the potential of the various technologies. They need a sound educational foundation, as well as practical skills to meaningfully integrate the technology into their learning programmes. Ignoring the need for professional development may therefore come at a high cost for institutions that expect a return on their initial investment in educational technologies. The anticipated results are unlikely to materialise without the proper empowerment of staff.

As a result of this threat, some institutions do, in fact, launch impressive training programmes which normally take the form of a series of workshops and seminars scheduled throughout the academic year. The effectiveness and value of such a decontextualised approach is questionable with practitioners labelling them as '*hit-and-run*' (Darling-Hammond and Ball, 1997), or '*learning-where-to-click*' workshops (Greyling, 2007) and '*button pushing clinics*' (Carlson, 2002).

This chapter first explores the role of educational technology in higher education and establishes the need for capacity building by means of carefully designed professional development programmes. It highlights the outdated elements of the workshop approach and suggests an alternative professional development framework. The chapter concludes with a summary of lessons learnt and recommendations for professional development practice aimed at integrating technology into higher education.

## **TEACHING AND LEARNING WITH TECHNOLOGY AT A UNIVERSITY OF TECHNOLOGY**

At one of the prominent Universities of Technology (UoT) in South Africa, a variety of educational technologies was introduced over time, with the aim to improve student success rates and to address challenges that surfaced due to abnormally large classes. In some cases, educational technology was brought in to address quality assurance issues, for example, standardising the teaching of similar courses across geographically dispersed campuses. Online tutorials, simulations and drills were introduced to provide additional support to underprepared learners, whilst online assessment opportunities were utilised by lecturers for continuous and formative assessment purposes.

### **Rethinking Traditional Professional Development Activities**

In an attempt to get lecturing staff on board, workshops and training programmes were developed and offered each time when a new technology or a new functionality became available. Frustrations with the workshop format of professional development, however, included the fact that these sessions often only focussed on the 'Click here, click there' activities and as such lacked the educational/pedagogical grounding that was required to make the outcome of the workshop optimal. Furthermore, lecturers had difficulty to attend workshops that spread over anything from 3 hours to 3 days due to their own heavy workloads and teaching schedules.

Due to these time constraints, lecturers also struggled to find the time needed to develop their teaching and learning materials, using the skills they mastered at the workshop. As such, months sometimes passed before a lecturer would have the time to sit down and develop learning materials or opportunities, by which time they had long since forgotten what they have learnt in the workshop.

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