Chapter 7

Opportunities and Challenges of Emerging Technologies in Higher Education:
Future Directions

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ABSTRACT

Recent unprecedented advances in digital technologies and their concomitant affordances in education seem to be a great opportunity to adequately address burgeoning demand for high quality higher education (HE) and the changing educational preferences. It is increasingly being recognised that using new technology effectively in HE is essential to prepare students for its increasing demand. E-learning is an integral component of the University of Botswana's teaching and learning culture, however, teachers who are from a traditional educational system are often ill-prepared to change their role from the all-knowing "sage on the stage" who operated under the "transmission" model, to the "guide on the side" which adopts new technologies effectively for student learning. Therefore, this paper argues that one of the ways to achieve substantial pedagogical innovations is to bring a significant change in the understanding of the processes of the scholarship of teaching and learning (SoTL). This paper explores new directions for conducting scholarly activities at the University of Botswana (UB) to address the needs of today's students, concluding with a call for a collaborative approach to teaching, research, and publishing to enhance student learning experience in diversified and socially rich collaborative learning contexts.

INTRODUCTION

As one of the main roles of higher education (HE) is considered to be preparing skilled workforces, there is a huge demand for relevant high quality education at this level all over the world. As a result, the HE landscape around the world is in a constant state of flux and evolution, mainly as a result of significant challenges arising from:

(i)   increasing demand for education, dwindling budgets, and burgeoning calls for *better quality* education;

(ii) changing learning preferences and needs of the *net generation* 'Generation Y'[1] students such as increased flexibility in their acquisition of (new) knowledge and competencies as a result of new and emerging interactive technologies and socially networked life experiences.

This paper focuses on issues around providing 'better quality' education to the 'net generation' students in a HE context. The knowledge, skills and attitudes to be acquired by these students are vastly different from their predecessors of the last century. Today most of them come to class mainly to demonstrate their understanding developed as a result of their interactions with not only the content, but also with experts in the field, and this has important implications on the new roles of teachers and their instructional strategies.

Since the advance in educational technology was so rapid recently, and took teachers from traditional environment by surprise, they did not have adequate time to experience, practise and embrace it; as a result, teaching in a digital environment is an uncharted territory for most of them. The paradox of technology-enhanced education is that technology changes very rapidly and human beings very slowly (Bates & Poole, 2003, p. xiii). In order to fully tap the pedagogical potential of emerging technology towards achieving an organisation's vision and strategic goals, the paper suggests that the traditional practice of developing instruction individually based only on one's own understanding of teaching and learning, and not subjecting it for scholarly review and analysis have to change, and should be in line with the ideals of the scholarship of teaching and learning (SoTL) which among other things, also focuses on the impact of teaching methods on the quality of student learning. It requires increased engagement among educational researchers and educators to better understand and improve their practice, and to meet the learning needs and preferences of today's students. By this, teachers must take

initiative in developing instructional materials through collaboration with colleagues with the aim of improving their instructional effectiveness. Thus the paper emphasises the need for collaboration among educators, research-oriented teaching, team enterprise or a community of practice culture, peer support and administrative leadership as major factors for advancing a culture of digital scholarship at the University of Botswana (UB).

EVOLUTION OF EDUCATIONAL TECHNOLOGIES AND THEIR PEDAGOGICAL POTENTIAL

In the world's first university, *The Academy*, established by Plato in 387 BC, teaching was conducted through storytelling and lecturing. Over the years, increasing demands for access to Higher Education (HE), dwindling resources, and burgeoning calls for better quality education have led universities to explore alternative methods of teaching and course offerings. A wide range of technologies in the past such as print, radio, audiotapes, videotapes, television, audio-teleconferencing, etc promised to improve the quality of teaching and learning, and access to education, but the outcome has not always matched with their initial promises and expectations.

In the past fifty years, the landscape of digital technology has been fast advancing at an unprecedented rate, from the mainframes of the 1960s to personal computers in the 1980s, and the mobile technologies of today, causing the biggest change in education since the advent of the printed book in the mid-15th century. Such an impact of technology on education has been due to the dramatic growth of social networking media and the emerging Web 2.0 tools[2] and the finding from the literature that social interaction is critical for successful learning. These networking technologies allow for discussion, collaboration, collective research and publishing, and the possibility to easily update online materials, thus technology serving

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