Chapter 10

Blended Learning Designs Facilitated by New Media Technologies Including E-Simulations for Pharmacy and Other Health Sciences

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ABSTRACT

This chapter explores the use of innovative technologies that facilitate blended learning approaches to meet contemporary educational challenges and the modern learning needs of a new generation of students. An underpinning framework for development and delivery of these contemporary programs is applied consistently across them. This framework is represented as Pedagogy > Space > Technology (Radcliffe, 2008), a guiding principle which reinforces the essential educational design with space and technology considered as supporting tools not as driving forces for course design. Three case studies describe the development, design, and delivery of innovative curricula framed round this model. Case 1 demonstrates the enhancement of an existing space to deliver an existing curriculum and to improve the experience of students, with inherent capacity for adaptation to other professional environments. Case 2 represents a functional response to an essentially logistical problem of lack of space, resources, and time to deliver a process-oriented activity. Case 3 is unique in that it describes a new curriculum to be delivered entirely in a new “space” with a broad set of objectives that go beyond mere functionality.

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In each case, while the technology enhances the overall experience for both educators and learners, the technology is not the focus for either; nor is it the point of the spaces and activities. Significant benefits are gained in terms of student experiences and outcomes, efficiencies in delivery and overcoming a range of barriers such as class sizes. There are also significant challenges to be faced in development and implementation as well, including a potentially large financial burden, need for expertise, ongoing support, and changing technologies. An important caveat is to not let the technologies distract from the educational goals and student needs.

INTRODUCTION

“Technologies can help faculty and students carry on kinds of conversations that couldn’t easily have happened otherwise” (Ehrmann, 2010, p19).

As a commentator, researcher, and educator focused on the use (and misuse) of technologies for learning, Stephen Ehrmann sets a positive tone for this chapter and his years of research and reflection on the concepts for this chapter also provide useful caveats and strategies for effective implementation. The chapter will explore the use of innovative technologies that facilitate blended learning approaches to meet contemporary educational challenges and the modern learning needs of a new generation of students in pharmacy and the wider health care education setting. While various e-simulations will be the focus, they are no more than a model for exploring technologies facilitating and/or complementing blended learning.

Resources such as learning management systems (LMS) that can facilitate the integration of e-simulations with other contemporary learning resources, including more traditional didactic approaches, allow for an apparently seamless blending of resources used, with the capacity to integrate any number of them. While the LMS may have this integrative capacity, it is unlikely that students do, so it is important to be conscious of the inherent risk of using too many elements and making the learning process even more complex than it might already be.

E-simulations, whether they are virtual worlds, virtual people, virtual processes, or other electronic representations of some real-world element, present an opportunity for contextualisation of learning activities, engaging learners in a new and realistic way of learning, and delivering content in a dynamic and interactive environment. While there are many educationally sound reasons for using e-simulations, the drivers from an organisational perspective usually go beyond enhancement of the educational experience and outcome. In pharmacy and other healthcare settings, dramatic increases in student numbers, limited space, and other resources, along with increased demands by professional and other groups for patient-based (experiential) learning have further pressed universities and other organisations to explore creative, dynamic, flexible education especially for technical and clinical teaching. In an experiential learning context, for which each of the educational activities described in this chapter is planned, blended learning stimulates interaction and engagement with content and between students. E-simulations allow for better preparation for real world experiences, including familiarisation with environments, process, and people involved, and decision-making practice in a situation that puts neither patients, students, nor teachers at any form of risk.

Developing these projects exposed educators to a number of significant challenges, many of which were predictable: costs, resources, time, resistance to change, and so on. One critical challenge to keep in mind and be alert to was not predictable. It is important not to be distracted or even mesmerised by the WOW factor of new technologies at the expense of a sound educational framework. New technologies can be distracting from the point of mere curiosity through to totally mesmerising because of a variety of aspects: visual