

Chapter 42

Designing Simulations for Professional Skill Development in Distance Education: A Holistic Approach for Blended Learning

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ABSTRACT

Designing simulations for higher education requires planning. This chapter explores the use of a design process of an iterative model with frequent evaluation of the process to ensure strong design in blended and flexible learning. Two case studies are used to demonstrate how the ADDIE process is used in an iterative method to develop simulations to teach and refine professional practice in distance learning situations, from both a course and subject perspective. The authors argue that if a strong development and evaluation process is followed, sustainable simulations can be developed. Results show that students have a positive response to simulation use in learning and appreciate a well structured simulation to aid in professional practice development.

INTRODUCTION

Charles Sturt University (CSU) is a regional university in Australia committed to achieving excellence in education for the professions and

leadership in flexible and distance education (Charles Sturt University, 2010b). The university delivers courses through internal and distance education modes of delivery, providing material through a range of methods including print, multimedia, and online delivery through a learning management system (LMS). More than half of

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the university's students study by distance which offers them flexibility in completing a degree from anywhere in the world. The university has five main campuses and four specialist campuses across the state of New South Wales (NSW). The two schools discussed in this chapter offer degrees through both modes of delivery, internal and distance, and cater to students who are geographically dispersed throughout Australia. The School of Policing Studies offers training to the recruits of the NSW Police Force who attend the university as internal students for the first two sessions, then are sent to both country and metropolitan locations by the NSW Police Force for the remainder of the time and consequently study by distance, often from remote areas. The School of Humanities and Social Sciences offers degrees in Social Work which include the subject area of Mental Health. Many of these students work in regional areas and attend residential schools as part of their degree. It is because of these situations that simulations were developed to better serve students studying at a distance in their gaining and refining of professional skills.

The simulations were developed to improve student understanding of issues in subject content and to expand professional skills in application to authentic contexts. In both policing and mental health professions, it is not always possible to put students into a real situation, due to safety concerns for both the student and the client, so simulations were developed to give students opportunity to practice and hone skills in a safe and supportive environment (Chen, 2007).

Blended learning at CSU refers to learning and teaching which may blend elements of internal, on-line and distance education to enhance student learning (Charles Sturt University, 2010a). In each case, the simulations developed were fine-tuned to fit into existing courses where theory, practice, and assessment were already part of the course but practice and refinement of practical professional skills were missing and were designed to complement the face-to-face delivery, print ma-

terial, and online resources already in existence. The e-simulations were delivered online and by CD-ROM.

The main purpose of this chapter is to demonstrate to academics, designers, and developers how the use of a design process directed the design of simulations for blended learning into two subjects in a way that considered all aspects of the learning environment and simulation design. The processes are illustrated through case studies of two simulations developed to meet different needs, and issues are discussed with suggested solutions. This chapter presents a narrative that demonstrates through case studies the processes followed.

The chapter emphasises the importance of the analysis and mapping of existing resources to ensure the seamless fit of new resources into an existing course, and also suggests the use of this process as a method of planning for a new course. It discusses the application of the SOLO taxonomy (Biggs, 2008) to developing a type of simulation for professional practice and the learning theories that influenced the learning designs for the simulations. It also discusses issues in implementation and deployment of the e-simulation to remote and rural students, who may have difficulties in access and technology, and how the design process ensured that factors that might affect these issues were considered. Finally the issue of simulation development that is sustainable, reusable, and transferable to other disciplines and context is discussed and related to its position in the design process.

PLANNING PROCESS

Planning and organisation is paramount in the success of any project and the use of a design process helps ensure that all aspects of design and project management are covered, and quality teaching materials are created that blend seamlessly into the course or subject. The process used

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