



## eSimulations for blended learning in professional education: Capacity building, knowledge transfer and dissemination

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A two-year collaborative project by Deakin, RMIT and Charles Sturt universities aims to build in each institution, the academic and professional staff capacities for developing and using a form of online, goal-based, role-play simulation (eSimulation/eSim). While the project embraces 'knowledge transfer', 'capacity building' and 'embedded dissemination', a greater challenge is transforming *perceptions* of eSims in blended learning contexts to improve flexible learning designs across the higher education sector.

The project addresses the need for coordinated research and development in the field of eSimulations in Australian higher education. It aligns the educational, technical, evaluation and research strengths of the three parties to build academic and professional staff capacities for the 'local' development and use of an already successful approach to simulating 'professional workplace experiences' for student learning.

This poster presents the ALTC Competitive Grants Program project (2008-2010): 'Building academic staff capacity for using eSimulations in professional education for experience transfer'. The project's website is <http://www.deakin.edu.au/itl/insims/altc-project/>

Keywords: digital simulation, blended learning, capacity building, knowledge transfer, dissemination

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### Introduction

Rather than taking the familiar 'product centric' approach (Corbitt, Holt, & Segrave, 2006) to innovations in educational technologies for flexible eLearning, this collaborative project builds staff capacities in creating, using and evaluating eSims through a participative, action research approach. This involves the 'local' development and use of new eSims based on an already successful *general approach* to simulating 'consultancy interviewing' in various professional contexts. The respective university participants have built and are trialling eSims over two action research cycles in a twelve month period. This poster provides an opportunity for discussions around the collaborative processes, technology developments, learning designs, research agendas, and the scalability and sustainability of the eSim approach along with the current and planned dissemination methods.

### Background

The eSims are based on a relatively distinct 'learning design', involving a blended learning model, which has been successfully used by four disciplines in three faculties at Deakin university (Cybulski, Parker & Segrave, 2006). The new eSims have been created using Flash-based, synthetic characters and 'text-to-speech' (TTS) voices for web delivery and, if desired, online database tracking of student interactions with the eSims. New implementations in RMIT and Charles Sturt universities expand the model and curricula applications. Briefly, the recently created eSims include:

DEAKIN – Business Analysis eSim: ‘Blue Cut Fashions – Chain and Store’  
RMIT – Project Management eSim: ‘Ringo Robotics’ (a series of events)  
RMIT – Systems Analysis and Design eSim ‘Purple Integrated Taxi Service’ (PITS)  
CSU – Mental Health eSim: ‘Suicide Risk Assessment’ (a patient interview)  
CSU – Policing eSim: ‘What if’

Student cohorts across the three universities vary considerably and include undergraduate years, honours and masters students, large groups of on-campus students, many off-campus students (some interstate and overseas) and a number of students from remote campuses taking subjects fully online. Some students are also working professionals.

## **Project objectives**

The objectives of the project are:

1. to facilitate the 'transfer' of professional experience (in the real world) to student learning experiences in a university setting via an expanded range of types of eSimulations;
2. to facilitate student learning experiences in a university setting via eSimulations to encourage the 'transfer' of learned professional experience and capabilities to the real world;
3. to develop capacities across three universities in the development and use of eSimulations through the use of action research and action learning approaches and to share capacity building approaches between themselves and with the rest of the sector;
4. to build capacities in the development and use of eSimulations created locally for university academic and professional staff to facilitate real work learning experiences;
5. to evaluate the dissemination of eSimulations in three universities for the successful transfer of professional experience;
6. to use this partnership for propagating a national community of practice in eSimulations and extend this through the ALTC Exchange. (Lefoe, G. et.al., 2009)

## **Research on student perceptions**

A research component of the project examines the educational congruity and efficacy of the individual learning designs represented by the use of eSims in the unit contexts and also the eSim learning design strategy as a whole. The eSims apply different educational objectives, are embedded differently into units, have distinct interactive functions, and present students with unique challenges and opportunities to experientially practice elements of their chosen profession. A generic online survey used across institutional contexts, examines 'perceived experiences and responses' of students. The overarching research question is: Do the eSims provide opportunities to practise (for assessable tasks) the learning and performance of the key professional capabilities identified in the curricula as requirements of the respective professions?

## **Dissemination of project outcomes**

The knowledge transfer and capacity building elements in the project strategy prepare a strong local platform for dissemination of project successes, a core goal of the ALTC. The ALTC framework document (p.1) states: 'Dissemination is more than distribution of information or making it available in some way. While embracing this aspect, dissemination also requires that some action has been taken to embed and upscale the innovation within its own context (discipline or institution) and/or to replicate or transform an innovation in a new context and to embed the innovation in the new context'.

## **Conclusion**

The use of eSims for education in the professions is a significant technology innovation in mainstream university learning and teaching that requires cooperative trialling and validation of local applications based on research evidence. This ALTC project expects to create and disseminate new learning designs for flexible education and evaluate the effectiveness of both of the newly created eSims and the processes of knowledge transfer and capacity building. As wider dissemination lies in fostering communities of practice, this project promotes the development of staff capabilities and innovative eLearning designs and resources in a well seeded community of practice spanning three very different universities. Successful embedding will make eSimulations a supported, valued and enduring feature of the eLearning technology

landscapes in each of the three partner universities and potentially improve the general acceptance and varied use of eSimulations across the sector.

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