



The Ripple Effect: Building academic staff capacity for using eSimulations in professional education for experience transfer - a professional journey of development

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This poster presents the process of developing academic staff capacity in using eSimulations in professional education. Its focus is on the conditions needed to be able to develop the knowledge and skills for developing eSimulations for teaching and the impacts on colleagues. The project final report has indicated the importance of a range of forces that must be in place for knowledge transfer and organisational capacity building to occur (Cybulski, et al., 2010). The inclusion of operational leadership, keen competence and understanding of learning design, supporting infrastructure, technology development knowledge and content knowledge are integral components of the ability to build capacity in others.

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Into the calm pond of university life dropped a stone, a presentation by Deakin University to introduce Charles Sturt University (CSU) to their use of eSimulations for teaching and learning. The ripples caused by this presentation spread to include an educational technologist, and two academics all interested in gaining and improving their knowledge and understanding of using eSimulations for teaching professional practice.

The ALTC funded the project, 'Building academic staff capacity for using eSimulations in professional education for experience transfer', and CSU was invited to be part of that project and build capacity in academic staff to plan, design, develop and implement eSimulations for teaching. CSU had encouraged professional development in using eSimulations by assigning project time to an educational technologist who was able to join the ALTC project and encourage other academics to develop capacity in eSimulation use in their teaching.

The project final report has indicated the importance of a range of forces that must be in place for knowledge transfer and organisational capacity building to occur (Cybulski, et al., 2010). The inclusion of operational leadership, keen competence and understanding of learning design, supporting infrastructure, technology development knowledge and content knowledge are integral components of the ability to build capacity in others. In this case, CSU was able to work in concert with Deakin to develop greater capacity in some of these areas. Leadership encouraged the development of capacity with time and technology

allowed, support from the project team assisted in knowledge transfer and capacity building and the content expertise was supplied by the academics involved.

This poster tells the story of how capacity building in one educational technologist and two academics came about through involvement in the eSimulation project.

After the first presentation about eSimulations, the educational technologist was able to demonstrate several of Deakin University's simulations and to trial one to determine student interest and enthusiasm for the use of eSimulations and from this emerged the desire of one academic to use eSimulations in her teaching. Analysis was done of the subject and it was determined that a gap existed between students learning the theory of eliciting information from clients and practicing it through role play at a residential school. This analysis meant that an understanding of subject mapping was required and skills built in this area. In line with constructivist theory where students build their knowledge and skills through meaningful experience (Jonassen, Peck, & Wilson) it was felt that filling the gap where students could practice and develop confidence in interview skills in a environment that was safe for both students and client would be a positive building block in student learning. Consequently, the experience of the lecturer was channelled into developing an authentic script that exposed students to realistic dialogue between client and counsellor. As an experienced counsellor, and not an experience script writer, this was the first step in building capacity in one of the components needed for eSimulation development.

Another academic expressed interest in providing students with experience in managing regular police incidents common in professional life. Analysis of the course involved showed that although students were taught theory and demonstrated procedures through the use of multimedia, and practiced in professional life, once again there was no opportunity for students to practice in authentic situations in a protected environment. In both simulations described here, clients and students are potentially at risk if mistakes occur. Again the experience of the lecturer as a professional and their knowledge of content as well as the input from professional bodies meant that content material was assured but that an understanding of simulation development and flow had to be learned. Through project meetings, trial and error, and feedback from project colleagues, skills and a greater understanding of what was required for eSimulation development were gained.

Through all the process it cannot be emphasised enough that the support and mentoring of other more experienced people was vital to the capacity building of all participants and the development of their understanding and knowledge of simulation use, design, development, implementation and evaluation. The combination of all people involved in the simulation development demonstrates the advantage of TPCK, technological, pedagogical and content knowledge experts joining together to combine skills and knowledge to form a greater whole (Roblyer & Doering, 2010).

At the same time, presentations of the simulations were offered in the academics' schools and others became interested. This led to development of skills in other academics and further simulations and scenarios have been developed. The involvement of other professionals such as educational designers and media technologists has caused a greater capacity for understanding processes and skills required for simulation development. As each one learnt more, the knowledge was generously shared with others, pooling information and improving each one's capacity and knowledge. The use of regular meetings, the ability to call for assistance in any area including software use, infrastructure development, implementation issues and evaluation measures was the lynch pin in developing capacity. However, it should be noted that without strategic leadership to support eSimulation development, such occurrences may not occur.

As the project continued, those involved continued to build expertise in the area of eSimulation design and development and to develop a stronger knowledge of the learning theories and taxonomies that guided the use of eSimulations in learning and teaching. Presenting papers and writing a guide to the design and development of eSimulations in professional learning also exhibited the continuing growth of capacity of all concerned in this project. There also continues to be a refining of skills and a opportunity for the development of templates in order to share the knowledge and build capacity in others at the university. The presentation of the eSimulations and the use of the templates at an in-house conference at CSU and its

very positive reception indicates the interest of other academics in using technology that can be form fitted to their requirements.

Evaluation of each simulation has continued with each iteration and conclusions drawn from the results. Greater understanding of how the simulations can continue to develop are being made and consequent improvements agreed upon.

Recommendations from the project include:

- The need for strategic leadership
- Operational leadership
- Well developed expertise in teaching and learning design, IT infrastructure, media technology production and discipline or professional expertise; and
- The alignment of these four areas across the university (Cybulski, et al., 2010)

From this story, it can be seen that capacity building and knowledge transfer has occurred throughout the duration of this project and continues to grow through transfer of gained knowledge to others. Exposure of the eSimulations to others through a range of methods continues to raise awareness and development of new simulations shows the continuing capacity building in academics at CSU.

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