Australian Government
Australian Research Council

EI 2018 ENGAGEMENT AND IMPACT

Engagement and Impact 2018

Central Queensland University

CQU13 (SS) - Impact

Overview

Title

(Title of the impact study)

Simulation innovation in teaching and learning – Mask-Ed and Pup-Ed (KRS Simulation)

Unit of Assessment

13 - Education

Additional FoR codes

(Identify up to two additional two-digit FoRs that relate to the overall content of the impact study.)

11 - Medical and Health Sciences

Socio-Economic Objective (SEO) Codes

(Choose from the list of two-digit SEO codes that are relevant to the impact study.)

93 - Education and Training
92 - Health

Australian and New Zealand Standard Industrial Classification (ANZSIC) Codes

(Choose from the list of two-digit ANZSIC codes that are relevant to the impact study.)

84 - Hospitals
85 - Medical and Other Health Care Services
86 - Residential Care Services
90 - Creative and Performing Arts Activities
81 - Tertiary Education

Keywords

(List up to 10 keywords related to the impact described in Part A.)

simulation learning

innovative teaching

health education

improved healthcare outcomes

Mask-Ed

Pup-Ed

Sensitivities

Commercially sensitive

No

Culturally sensitive

No

Sensitivities description

(Please describe any sensitivities in relation to the impact study that need to be considered, including any particular instructions for ARC staff or assessors, or for the impact study to be made publicly available after EI 2018.)

Aboriginal and Torres Strait Islander research flag

(Is this impact study associated with Aboriginal and Torres Strait Islander content?
NOTE - institutions may identify impact studies where the impact, associated research and/or approach to impact relates to Aboriginal and Torres Strait Islander peoples, nations, communities, language, place, culture and knowledges and/or is undertaken with Aboriginal and Torres Strait Islander peoples, nations, and/or communities.)

No

Science and Research Priorities

(Does this impact study fall within one or more of the Science and Research Priorities?)

No

Impact

Summary of the impact

(Briefly describe the specific impact in simple, clear English. This will enable the general community to understand the impact of the research.)

CQU researchers are at the forefront of innovative teaching and learning simulation techniques through an inventive training approach that is humanising healthcare and improving patient safety.

Mask-Ed and Pup Ed use silicone props and puppets to transform the educator into a character. The character has a history that is relevant to the learning experience. This character is used as the platform for learning and conduit for the education between the learner and educator.

Patents have been secured and international licenses issued to providers in the UK and USA. In-service training has been provided to clinicians at over 25 hospitals in Australia, Nepal, Singapore, UK and the USA. Domestically the technique is being used as a training aid to address the National Patient Safety Standards.

Beneficiaries

(List up to 10 beneficiaries related to the impact study)

Medical and healthcare clinicians

Patients

Healthcare providers

Educators

Educational institutions

Aged care providers

Countries in which the impact occurred

(Search the list of countries and add as many as relate to the location of the impact)

Australia
England
Northern Ireland
Scotland
Wales
United States of America
New Zealand

Canada
Nepal
Japan

Details of the impact

(Provide a narrative that clearly outlines the research impact. The narrative should explain the relationship between the associated research and the impact. It should also identify the contribution the research has made beyond academia, including:
- who or what has benefitted from the results of the research (this should identify relevant research end-users, or beneficiaries from industry, the community, government, wider public etc.)
- the nature or type of impact and how the research made a social, economic, cultural, and/or environmental impact
- the extent of the impact (with specific references to appropriate evidence, such as cost-benefit-analysis, quantity of those affected, reported benefits etc.)
- the dates and time period in which the impact occurred.

NOTE - the narrative must describe only impact that has occurred within the reference period, and must not make aspirational claims.)

Simulation has become a ubiquitous teaching approach in many healthcare training programs to afford learners the opportunity to practice technical care skills and interventions. Even though numerous strategies have been developed to mimic or amplify clinical situations, a common problem is that learners realise the setting is artificial and fail to fully engage, remember or apply the learning. Another problem is that students may learn technical competence but remain uncertain about communicating with the person.

The educational technique called Mask-Ed™ (KRS Simulation) is a world-leading innovative simulation approach to healthcare training that is helping to improve patient outcomes, enhance quality of care and provide a more compassionate healthcare workforce. Developed by CQUniversity (CQU) researcher Professor Kerry Reid-Searl, Mask-Ed uses realistic silicone props to transform educators into carefully designed characters with a history that is relevant to the learning experience. The character becomes a coach who guides and directs the learner through the simulation.

This technique is innovative because the simulation device becomes a platform for teaching and serves as the conduit for the educator to draw on their expertise to guide the learning. The learner cares for a realistic simulated patient (a carefully disguised educator).

Mask-Ed has gained momentum and attracted a growing reputation for excellence based on learner feedback. It received the Simulation Australia Achievement Award in 2013 which demonstrated excellence in simulation in all disciplines including medicine and military. There is a growing demand for hospital educators trained in Mask-Ed and the technique is increasingly used in health care facilities.

Two Patents and five trademarks have been secured and international licenses issued to providers in the UK and USA to teach the technique. In-service training has been provided to clinicians at more than 25 hospitals in Australia, Nepal, Singapore, UK and the USA. Domestically the technique being used as a training aid to address the National Patient Safety Standards.

New Zealand Mask-Ed educator Joanna Rhodes describes Mask-Ed as, “providing the ‘missing’ realism element of simulation. The bridge between the simulated teaching platform, and the clinical platform has in effect narrowed. Mask-Ed in our opinion has irrevocably transformed the learning potential of simulated learning."

The Mask-Ed approach is also improving patient outcomes in aged care settings. In 2014, the training technique was used in an industry collaborative research project with Pres-Care to reduce the number of unnecessary transfers of aged-care residents to hospital. Evaluation of the program indicated that it was successful in reducing hospital admissions and led to a reduction in length of hospital stay for elderly patients.

Extending the Mask-Ed pedagogy, Prof Reid-Searl created Pup-Ed. This approach uses puppets as the simulated character. It is particularly useful for educating healthcare professionals who work with children and has been incorporated into annual mandatory training for paediatric nurses nationally. Initially cloth puppets were used, but research conducted with clinicians in hospitals identified the need to create puppets that could be handled by children without risking infection transfer. As a result Prof Reid-Searl and puppeteer Richard Mueck designed a world first silicone procedural puppet. There are now over 50 cloth character/patient puppets and 10 silicone

procedural puppets used in paediatric wards across Australia.

The puppets are used in several ways. A nurse can use them to communicate effectively with a child, reassure them, or assist them through a procedure. Alternatively, a sick child can perform procedures on the puppet. This gives the opportunity for the child to be in control as opposed to the child always having procedures on them.

Pup-Ed's impact is demonstrated in the words of Lea Vieth, Paediatric Nurse Rockhampton Hospital, "When I walk into a child's room holding a puppet, the focus is not on me. These little puppet characters become the person the child wants to engage with. Paediatric nurses can be scary people to children – they are the ones who may have 'hurt' them, through injections, NG tubes, yucky medicine…The puppets allow the nurse to disappear and the non-threatening, fun little character can become the confidante, the one who has been in their position, who can share what they have learnt about their illness...In a 5 minute session, there can be laughter, cuddles, sharing of ventolin spacers, and parents who just appreciate seeing their child with a smile. Another bonus is the child loves the nurse who has brought the puppet – a bond is built where once there may have been apprehension or discomfort".

Mask-Ed and Pup-Ed's impact extends beyond education, health and aged care to have a broader societal impact to the community. Puppets and characters are now used widely in educational presentations, school visits, open days and community demonstrations to groups such as Probus, Zonta, Rotary and U3A. Over the reference period, Mask-Ed and Pup-Ed characters have been presented in a variety of ways at more than 100 community engagements.

Feedback from industry peers and professional groups confirm not only the impact but their vision of what this technique can do for others. Professor Patrick McGorry (Australian of the Year 2010) wrote to Prof Reid-Searl after witnessing her opening keynote address at the International Australian College of Mental Health Nurses. He stated, "I just wanted to say again that I was thoroughly impressed and inspired. The originality and talent that you displayed was unique and has massive potential in the training and engagement of health professionals including mental health professionals of all kinds."

Associated research

(Briefly describe the research that led to the impact presented for the UoA. The research must meet the definition of research in Section 1.9 of the EI 2018 Submission Guidelines. The description should include details of:
- what was researched
- when the research occurred
- who conducted the research and what is the association with the institution)

Initial research focused on the impact of the technique to learners and learning outcomes. A 2009 study examining students' perceptions of the technique confirmed its effectiveness. To further validate effectiveness on learners, a second study (2013) examined perceptions of learners in medical imaging and sonography.

Reflective of current issues in health care Mask-Ed research has moved into patient safety, recognition of deterioration, and intimate human care. Of particular note is intimate human care. No other modalities of simulation provide students opportunities to practice such levels of sensitive care in the safety net of a training environment. Mask-Ed pioneers this aspect of care in nurse training programs. Thus far three studies at CQU confirm the impact on learning in a positive way. Prof Reid-Searl has presented her work in this unique area at 5 national/international conferences and has peer reviewed publications.

Pup-Ed research to understand nurse's experiences using puppets identified the technique's strengths but also the need for nurses to be prepared and the concerns of infection control with cloth puppets. Prof Reid-Searl involved nurses in industry to be co-investigators. The outcomes of the study led to publications, conference presentations by nurses and also addressed issues of infection control with children handling the puppets. This led Prof Reid-Searl to design and co-create with puppeteer Richard Mueck a world first silicone procedural puppet.

FoR of associated research

(Up to three two-digit FoRs that best describe the associated research)

11 - Medical and Health Sciences
13 - Education

References (up to 10 references, 350 characters per reference)

(This section should include a list of up to 10 of the most relevant research outputs associated with the impact)

Rhodes, J., & Reid-Searl, K. (2015). Masked tutor brings patient to 'life'. Nursing New Zealand, 21(1), 14-15.

Dwyer, T., Reid-Searl, K. R., McAllister, M., Guerin, M., & Friel, D. (2015). Advanced life simulation: High-fidelity simulation without the high technology. Nurse education in practice, 15(6), 430-436.

ReidSearl, K., Bowman, A., McAllister, M., Cowling, C., & Spuur, K. (2014). The masked educatorinnovative simulation in an Australian undergraduate Medical Sonography and Medical Imaging program. Journal of Medical Radiation Sciences, 61(4), 233-240.

Reid-Searl, K., Levett-Jones, T., Cooper, S., & Happell, B. (2014). The implementation of Mask-Ed: Reflections of academic participants. Nurse Education in Practice, 14(5), 485-490.

Reid Searl, K., McAllister, M., Dwyer, T., Krebs, K. L., Anderson, C., Quinney, L., & McLellan, S. (2014). Little people, big lessons: An innovative strategy to develop interpersonal skills in undergraduate nursing students. Nurse education today, 34(9), 1201-1206.

McAllister, M., Reid-Searl, K., & Davis, S, (2013). Who is that masked educator? Deconstructing the teaching and learning processes of an innovative humanistic simulation technique. Nurse Education Today, 33(12), 1453-1458.

Reid-Searl, K., Happell, B., Vieth, L., & Eaton, A. (2012). High Fidelity Patient Silicone Simulation: a qualitative evaluation of nursing students' experiences. Collegian: Journal of the Royal College of Nursing Australia, 19(2), 77-83.

Reid-Searl, K., Happell, B., Vieth, L., & Eaton, A. (2011). The Educator inside the patient: Students insights into high fidelity silicone simulation. Journal of Clinical Nursing, 20(19-20), 2752-60.

Reid-Searl, K. (2010). De-Masking Cyril Smith: How the use of role play became a serious educational tool. Connections, Royal College of Nursing Australia, 13(2), 34-35.

Additional impact indicator information

Additional impact indicator information

(Provide information about any indicators not captured above that are relevant to the impact study, for example return on investment, jobs created, improvements in quality of life years (QALYs). Additional indicators should be quantitative in nature and include:
- name of indicator (100 characters)
- data for indicator (200 characters)
- brief description of indicator and how it is calculated (300 characters).)