What Learning Do Students Transfer to Practice Following Simulation? A Qualitative Exploration

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QUT - one of Australia’s largest universities:

- approx. 48,000 students
- located primarily on 2 inner city campuses
- 6 faculties including the Faculty of Health
- **School of Nursing** is the largest school in the Faculty of Health with approx. 3,000 students
Background

• High Fidelity Simulation (HFS) – has emerged as a core teaching and learning strategy in multiple health disciplines

• Provides realistic, non-threatening experiential learning experience in a safe environment

• Expected that learning is transferred to practice

• In some disciplines is used as a substitute for actual clinical practice
Background

Reported student outcomes include:

- increased self-confidence,
- clinical reasoning,
- self-efficacy,
- problem solving & decision making,
- improved communication skills,
- teamwork,
- technical skills required for patient care

(eg. Kaddoura, 2010; Gegenfurtner et al., 2013; Boet, et al., 2014)
About transfer of learning

… the process of applying knowledge, experience, skills and competence learned in one situation to a new situation.

Eraut (2009)
About transfer of learning

- In situations that are very similar to what has been previously experienced, transfer can be relatively straightforward

but ........

- when the new situation is less familiar, transfer becomes more challenging and typically involves five inter-related stages

Eraut (2004)
Issues and questions

Issues:

• Health care settings are typically complex learning environments
• Clinical activities are frequently unpredictable, and can be cognitively, emotionally and practically challenging
• The range of student placement settings is diverse
• Relatively little is known about TOL from simulation to practice in the ‘real world’.

Our questions:

• To what extent are knowledge and skills gained through HFS transferred to the real world of practice?
• What promotes/inhibits effective transfer?
Research methods

• Qualitative research design using focus group methodology

• Sample comprised **25 final year undergraduate students** enrolled in a Bachelor of Nursing course in a large Australian university.

• Participation was voluntary. Students were recruited via email invitation.

• Focus groups (x 3) conducted in the clinical facility where students were on placement – conducted by an experienced person independent from the research team and students’ curriculum.

• Ethical approval granted by the University’s Research Ethics Committee.
Research methods (HFS learning experience)

Simulation (SIM) protocol

- SIMs undertaken in a single bed unit that authentically simulates a patient care area.
- Laerdal’s 3G SimManTM which is a life-like mannequin with embedded software that is remotely controlled by a computer.
- Run from a control room by the teacher who does not have direct contact with students during the simulation.

Image: UT Austin School of Nursing – The University of Texas at Austin
Research methods (HFS learning experience)

- The HFS learning experience related to a patient scenario which was customised to meet particular curriculum objectives.

- Operationalised using a standard 3-part process:
  1) preparation and briefing,
  2) the simulation session and
  3) debriefing.

- Debriefing occurred outside the simulation room, facilitated by a staff member using a debriefing framework which he/she had been trained to use.
Research methods (data collection & analysis)

- Focus group in interview guide was developed by the researchers with questions adapted from Baldwin and Ford (1988) and Kirwan and Birchall (2006):

  Thinking back to the Simulated Learning Experience (SIM) that you participated in as part of your clinical subject last semester .............

  - Describe something that you learned through your participation in that learning experience?
  - Have you been able to apply that learning in some way during this clinical practice? If yes, please describe how you have used what you learned during the SIM session?
  - What do you think makes it easier to apply SIM learning in the prac setting?
  - What do you think makes it more difficult to use SIM learning in the prac setting?
  - What advice would you give other students in order to facilitate their application of SIM learning in the clinical setting?

- Focus group discussions recorded and transcribed

- Data analysed using thematic analysis (Braun & Clark, 2006)
Results

3 key themes identified:

- But it’s not the same on prac
- No opportunities to apply what we’ve learned
- Making better connections
Theme 1: But it’s not the same on ‘real’ clinical practice

Students perceived a ‘disconnect’ between HFS participation and clinical practice:

‘... there is a gap between real hospital situations and the simulations. So doing it in a controlled environment is not the same as a real patient.’

‘during the Sim there wasn’t a lot of things, a lot of skills we can use during prac here. I don’t think there was a lot.’

‘now we’re talking about it, I can think yeah, I can relate it better. But if I hadn’t come to this [focus group] I wouldn’t have looked back on it [HFS experience].’
Theme 2: No opportunities to apply what we’ve learned

Students perceived a lack of opportunities to apply what they learned ‘in the SIM’:

‘… I didn’t get any chance to practise any of the SIM stuff …. the patients here are different to what we learned’

‘you come out here (clinical practice) and it’s all new. Everything’s new. It’s all new stuff and then you go to another ward in a couple of weeks time…and start all over again …. last time I was in orthopaedics this time I’m in neurology. Everything is completely different’

‘every nurse has their own way of doing things….that’s what they want you to do….it’s a baptism by fire, so is difficult to know how you should do things’.
Theme 3: Making better connections

Students highlighted the importance of SIMS and de-briefing to assist in making connections between ‘the SIM’ and clinical practice:

‘It’s all about the regular learning…different simulations with different conditions would help knowing what to do instinctively’

‘There was, you know, hardly any debriefing afterwards. It could have just been a tute. We felt we just has to go through it and that was it? That’s what it felt like’

‘It’s our responsibility to learn afterwards and to pre-empt what may happen next time… the type of morbidities that are in the ward where we’re assigned… and to reflect on maybe what’s gone wrong or the areas that we’re not so confident with. But there’s also what you don’t know. You don’t know what you don’t know.’
Our learnings so far.....

- Transfer of learning is *not* a straightforward process, particularly when real world practice is located in settings that are *dissimilar* to HFS scenarios.

- Understanding the complexity of learning transfer, and principles that can assist students to make relevant connections, is likely to maximise the potential of HFS in facilitating practice in diverse real-world settings.

- The importance of effective metacognitive guidance by academic staff during post-HFS debriefings cannot be underestimated.

- Given the significant take-up of HFS within nursing curricula, there are implications for scenario design and the provision of learning support in the practice environment.
Questions???

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