The use of high fidelity simulation (HFS) has quickly gained prominence as a key teaching and learning strategy in many health professions, including nursing. High fidelity simulation, or HFS, is a relatively recent ‘high-tech’ innovation that involves sophisticated computer-based mannequins driven by pre-designed scenarios that enable students to interact with the ‘patient’ as they would in a real environment. A growing body of literature reports a range of learning outcomes gained through HFS (e.g. Gegenfurtner et al., 2013; Boet et al., 2014). However, whilst it may be assumed that students will transfer what they have learned in an HFS context to the real world of clinical practice, relatively little is known about the nature of such transfer, particularly in relation to complex cognitive processes such as clinical reasoning, clinical judgement, ethical decision making etc. The question of what facilitates transfer of learning from practice settings to the workplace is not new. However, with the rise of HFS as a key learning and teaching strategy in health professional education, the ‘transfer problem’, as described in Baldwin and Ford’s seminal work (1988, p. 63) has become an important question in this context.

Transfer of learning can be described as the process of ‘applying knowledge, experience, skills and competence learned in one situation to a new situation’ (Eraut, 2004, p.212). When the new situation is similar to what has been previously experienced, the transfer process can be relatively straightforward. However, when it’s less familiar and possibly more complicated, transfer becomes more challenging. Salomon and Perkins’ low road/high road theory (1989) is a well-known transfer of learning theory. Low-road transfer refers to situations that are relatively similar to the learning context which trigger well developed, semi-automatic responses, whereas high-road transfer relates to less familiar, more complex situations, eg. clinical reasoning, which require mindful abstraction from what has been learned and a deliberate search for connections. With the increasing scarcity and cost of clinical placements, HFS has emerged as a possible substitute for actual practice. Questions about the transferability of knowledge and skills are therefore very important.

The study was undertaken in an Australian School of Nursing that offers a Bachelor of Nursing course. The HFS learning activities in this study were undertaken utilising Laerdal’s 3G SimManTM which is a life-like mannequin with embedded software that can be remotely controlled by a computer (located in a separate control room in this setting) to facilitate programmed scenarios that allow the operator to set physiological parameters and respond to learners’ actions with changes in voice, heart rate, blood pressure, oxygen saturation and other physiological indicators. The HFS session followed a 3-part process which included 1) preparation and briefing, 2) the simulation/observation session and 3) debriefing. Students were briefed about the scenario, given a nursing handover and randomly placed into simulation or observer roles. The HFS facilitator, an academic staff member, ran the simulation from a control room, and did not have contact (as a ‘teacher’) with students during the simulation. Debriefing by the facilitator occurred as a whole group activity outside of the simulation room. The facilitator used a debriefing framework, developed by the academic staff, which the facilitator had been trained to use. The scenario had been previously pilot tested with minor revisions made as a result of the feedback received from students and academic staff.

Following ethical approval a series of focus groups was conducted with students who agreed to participate in the study (n=25). The focus group discussions were conducted in the clinical facility where students were undertaking their scheduled placements following the SIM session. To facilitate the discussions, 5 key questions were adapted from Baldwin and Ford (1988) and Kirwan and Birchall (2006). Thematic analysis was used to identify patterns in the transcribed data yielded from the focus group discussions. Procedures adapted from Braun and Clark (2006) were used to guide the analytic process.
Three key themes emerged from the analysis: But it's not the same on prac, Opportunities to apply what we've learned and Making better connections. Whilst students identified several learning outcomes they believed had accrued from their participation in the SiM session, eg. communication with patients, they found it very difficult to identify any learnings that they had actually transferred to the practice setting. When prompted, some students indicated they had been 'working on their documentation skills' and 'searching out the pumps', but the predominant view was a perceived 'disconnect' between SiM participation and clinical practice. Factors that students perceived to facilitate/inhibit learning transfer to practice were identified.

An important limitation that should be noted was that this project did not have an observational component. Thus, there may have been differences between what students perceived they were/weren't transferring and what was actually being transferred. Nonetheless, the findings highlight that transfer of learning is not a straight forward process, particularly when real world practice is situated in settings that are dissimilar to the HFS scenarios that have been experienced. This has important implications for curriculum development and the provision of learning support in practice settings. The findings also raise new questions for research which have the potential to deepen our understanding of simulation practice and enhance students’ application of their learning in the varied settings in which they practice.

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

Keywords:
high fidelity simulation, nursing education and transfer of learning

References:


**Abstract Summary:**
This project explored the perceptions of third year Bachelor of Nursing students regarding their transfer of knowledge and skills from a High Fidelity Simulation (HFS) experience to clinical practice. Several factors that facilitate and/or inhibit learning transfer were identified. There are implications for debriefing and support in the practice setting.

**Content Outline:**
**Introduction**
- Significance of the topic
- Transfer of learning theory
- High Fidelity Simulation (HFS) and learning transfer

**Body**
- Aims of the project
- Project context - setting, sample, HFS scenario process
- Data collection and analysis
- Results - key themes identified

**Conclusion**
- Issues raised by the study findings
- Implications for transfer of learning
- Questions for further research

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