

Unveiling the Mobile Learning Paradox

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Abstract. A mobile learning paradox exists in Australian healthcare settings. Although it is increasingly acknowledged that timely, easy, and convenient access to health information using mobile learning technologies can enhance care and improve patient outcomes, currently there is an inability for nurses to access information at the point of care. Rapid growth in the use of mobile technology has created challenges for learning and teaching in the workplace. Easy access to educational resources via mobile devices challenges traditional strategies of knowledge and skill acquisition. Redesign of learning and teaching in the undergraduate curriculum and the development of policies to support the use of mobile learning at point of care is overdue. This study explored mobile learning opportunities used by clinical supervisors in tertiary and community-based facilities in two Australian States. Individual, organisation and systems level *governance* were sub-themes of *professionalism* that emerged as the main theme and impacts on learning and teaching *in situ* in healthcare environments. It is imperative healthcare work redesign includes learning and teaching that supports professional identity formation of students during work integrated learning.

Keywords: Mobile learning, mlearning, clinical supervision, work integrated learning, learning in situ.

Introduction

Access by health professionals to mobile learning (mlearning) through the use of mobile or portable devices in healthcare settings is mixed [1]. Mobile learning in this context is defined as accessing or browsing content for the purpose of learning using a mobile or portable device, in situ, at point of care, in the workplace. Opportunities for mlearning are increasing, however, currently there are no standards, guidelines or protocols directing the use of mobile devices for nurses in the workplace [2, 3]. Currently, in Australia, there is a mobile learning paradox in healthcare settings. There is an inability of nurses to access mlearning, while it is increasingly recognised that utilisation of mobile or portable devices at point of care can improve care and improve patient outcomes [4, 5]. These studies demonstrate that further understanding about how mlearning and teaching (L&T) is currently undertaken by clinical supervisors who guide, support and facilitate learning of students and remain contemporary in their role is required. Additionally, modelling of professionalism to students by clinical supervisors has become increasingly important to promote work-readiness at registration. This qualitative study explored the current mlearning strategies undertaken by a group of clinical supervisors in tertiary and community-based healthcare settings to understand how they navigate L&T opportunities within the current mlearning paradox that exists in healthcare environments in Australia.

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1. Background

Previous research undertaken by the authors indicated there was a need to ensure clinical supervisors had an understanding of University requirements and they were competent and contemporary in theoretical knowledge and skills [1]. Continuing professional development of clinical supervisors was necessary to enable high quality clinical experiences for students. Further exploration of this issue to develop strategies to provide appropriate resources and strengthen partnerships between the University and supervisors of students in the workplace, found there were barriers and challenges, at individual, organisation and systems levels, to the use of mlearning by learners and teachers in a range of healthcare settings. Clinical supervisors were impeded through lack of educational preparation and confidence at an individual level [1]. Recent research demonstrated that support of clinical supervisors to become conversant with mobile technology can enable them to become 'change champions' to model and lead in the appropriate use of mobile technology within the workplace [1]. Although digital strategies used to inform and up-skill clinicians were well received, an evaluation found there was limited adoption in the workplace due to organisation and systems barriers. Impediments included inability to use mobile devices, peer disapproval and lack of access to data within healthcare settings. However, due to the distributed nature of work integrated learning (WIL) it remains essential that clinical supervisors and students have access to L&T resources. Undergraduate nurses' current and preferred use of mobile devices demonstrated an expectation of timely, easy, and convenient access to information to augment their learning. Clinical supervisors modelling behaviours that prepared students to transition to registered nurse during WIL and minimise transition shock was valuable [6].

Previous studies have indicated information communication technology (ICT) literacy among health professionals is mixed [4, 7]. The emergence and rapid adoption of the use of ICT now provides opportunity for deployment of mlearning within healthcare settings. Sharples, Taylor and Vavoula [8] offered a framework for theorising about mlearning that described the convergence between learning and technology, indicating it is the learning that is important rather than the technology afforded by its use. They identified that context is constructivist, as learners build knowledge through interacting with their environment [8]. The co-evolution of L&T and acceptance of mobile technology has implications for the integration of mlearning at the workplace. It could promote habits by students that support continuing professional development and life-long learning which are requirements for continuing registration [9].

Lambert and Glacken [10] discussed the importance of the role of clinical supervisor for supporting and guiding high quality clinical placements for learners. Research into factors that contribute to optimal WIL environments has indicated that if students receive more than clinical guidance and support from their supervisors, their experience is more positive [11, 12]. Enhanced learning by students created by the development of partnerships between supervisor, patient and learner is becoming more recognised as a learning strategy that assists with modelling of attributes that contribute to the formation of professional identity and minimise transition shock [11]. Enabling the use of mlearning at the workplace is a component of professional identity formation that needs exploring [13].

Over time, there is the expectation that deployment of mlearning in situ will become more common. It is imperative to understand how this activity can be

incorporated into L&T, informal learning and for professional development and be integral within the formation of professional identity. The aim of this qualitative study was to explore current mlearning strategies employed by clinical supervisors to augment learning in tertiary and community-based healthcare settings in two Australian States.

2. Methodology

Six focus groups were conducted between July and November 2014 by one researcher to elicit information about the use of mlearning strategies by clinical supervisors. Invitations to participate were emailed to clinical supervisors involved with guiding and supporting undergraduate students from one University. Each group was a mix from tertiary and community-based facilities and were comprised of between three and 7 participants. Focus groups were up to one-hour duration and audio-recorded, then transcribed verbatim. Data analysis was undertaken using thematic analysis. Themes were developed independently by two researchers and then cross-checked, to ensure validity. Minimum risk ethics committee approval was gained for this study (H13729).

3. Results

Six focus groups were held with 27 clinical supervisors participating. Approximately half of the respondents were from each State and were an equal mix of clinicians from tertiary and community-based facilities. The theme of *professionalism* was key to addressing mlearning opportunities used by clinical supervisors in situ, at point of care in the workplace. The key theme *professionalism* embodies competence and behaviour ascribed by the nursing profession. Student nurses develop their professional identity through a range of strategies including modelling behaviours they observe and perceive to be professional. Similarly, clinical supervisors recognise there is a standard of behaviour they are expected model with students. In Australia there is an identified minimum standard of knowledge, skills, attitudes and behaviour of nurses guided by the Australian and Midwifery Council Competency Standards [14] and Code of Professional Conduct [15]. Clinical supervisors in this study recognised 'workarounds' were developing when engaging in L&T in the workplace. Strategies used to solve limitations created by lack of, or access to mlearning impacted on clinical supervisors' emic perspective of the standard of professionalism.

Analysis of the data identified there were a range of positive and negative behaviours that impacted on the perception of *professionalism* by clinical supervisors. The capacity of them to model appropriate learning behaviour to students to assist with the formation of professional identity at an individual level created by the current mlearning paradox was arrested.

3.1. Individual Governance: Positive Professional Identity Formation

Positive attributes that access to mobile or portable devices in situ enabled included increased time with patients at the bedside; reducing the need to look up information away from point of care; and the potential to involve patients in their own care.

“I would like to see not so much phones but things like iPads used for patient education. I think it would be really valuable... we tend, when patients ask things, to go back to the desk, look it up, and then print something out... patients are far more educated now than they’ve been but not always with the right sources... it would be nice to be able to give an iPad to a patient and say well, you know have a bit of a read...you could do that together as well... and actually point them in the right kind of information”.

Clinical supervisors indicated there were opportunities to reduce errors as information could be looked up or verified in real-time and also prevent duplication. Mobile learning information could be used for prompting appropriate sequences when undertaking clinical procedures. Participants considered mobile devices could improve collegiality within teams by enabling communication with their peers even when absent from the workplace. Participants also indicated the provision of another learning style afforded by using mobile devices for patient education could strengthen the nurse-patient relationship. Furthermore, inclusion of students in this new pedagogical approach to learning was viewed as positive for the development of rapport with patients and clinical supervisors.

3.2. *Individual Governance: Negative Professional Identity Formation*

Negative attributes impeding opportunities for positive professional identity formation of students, were identified by clinical supervisors. Participants from organisations where mlearning was dissuaded were conscious of the ‘ducking out’, ‘toilet learning’ or ‘loitering in their lockers’ that occurred when a knowledge deficit, clarification or verification of information was identified by students or clinical supervisors. Focus group participants indicated they felt guilty “when actually I’m desperately trying to look up what something in handover meant”. Clinical supervisors reported students were perplexed by some of their behaviour, which the clinicians construed as poor role modelling:

“it’s like well why can’t you just bring that out and we can all learn from that because there’s only, you know, a certain number of computers on the ward that students can look things up on... we’ve got so much access to information now, if an iPhone or iPad’s the way to get that information why not just use it... I just find it very hidden”.

Participants indicated they felt it was unprofessional to use mlearning when they were aware organisational policy precluded its use. Clinical supervisors were also conscious of body language that indicated peer disapproval when they undertook mlearning activities. Clinical supervisors reported the mlearning paradox created by inability to access information prevented the “side to side thing” of developing a learning partnership with students and patients.

3.3. *Organisation Governance*

Organisation governance directed *individual governance* at the workplace. Clinical supervisors suggested strategies to integrate mlearning into healthcare work. Participants indicated the need for presence when using mobile devices for mlearning. There was discussion about the need to “announce use” to avoid the assumption they were using their mobile device inappropriately. One participant noted that: “...if you’re on a landline it’d probably be alright, she must be talking to a doctor or something. It’s a difference without having a cord on it, isn’t it?”

Some participants indicated using a mobile device for learning should be seen as a “tool of trade just like taking a blood pressure”. Clinical supervisors agreed mobile devices needed to be used properly and “ground rules” were necessary to legitimise its use and ensure entrustability.

4. Discussion

This research demonstrates that professionalism issues at systems and organisation levels, impact on *individual governance* and will continue to impede the progression of mlearning in the workplace until there is the development of policies and standards to guide its use in healthcare settings. Lloyd-Williams and Denz [16] indicate there is acceptance of the value of ICT in healthcare, however, they propose deployment will be more problematic. Raman [2] suggests organisations need to permit student access to institutional information technology and develop policies on use of the internet/social media in clinical agencies. Role modelling of appropriate mlearning behaviour is imperative to ensure the next generation of nurses are prepared for their role as registered practitioners. They must be conversant with accepted professional standards of behaviour expected when accessing mlearning. Integration of mlearning can only become embedded when organisations enable professional identity formation about learning in situ to occur during WIL.

This study demonstrated healthcare organisations in Australia are yet to understand traditional pedagogical methods are no longer sufficient for preparation of work-readiness of students in the workplace. Whilst formation of professional identity occurs during WIL the quality of workplace-learning environments are affected by the culture and routine practices [12]. E-conversations and developing virtual communities of practice may be a strategy to ameliorate some of the communication issues and promote professional identity development. The findings of this study concurs clinical supervisors welcome the opportunity to engage with each other at, and away from the workplace. Furthermore, role modelling behaviours that promote communication, informal learning, and continuing professional development will be positive for clinical supervisors, students and patients. Empowerment of nurses to use mlearning may promote the socialisation necessary for positive professional identity formation and development of lifelong learning behaviours. Integrating mlearning as a legitimate nursing function will enable clinical supervisors to guide nursing student behaviour when learning to use mlearning during healthcare work.

For progression of the use of mobile technology to become the norm in healthcare environments, and accepted as part of healthcare work, there is a need to further unveil the mlearning paradox by developing strategies for deployment of mlearning, in situ at point of care. For development of a culture of learning, there needs to be development of policies and guidelines at an organisation and systems level to support and guide students and health professionals in the governance of using mobile devices at an individual level. The usability of mlearning networks will only be effective when appropriate and robust policy is developed to guide and support clinicians to learn how to use digital technology during healthcare work. Upholding the tenet of professional identity by conducting mlearning within an overt L&T framework in the workplace will assist in integrating this new pedagogical approach to learning in healthcare settings.

5. Conclusion

Organisation governance impacts on *individual governance* in mlearning. The study found that ‘workarounds’ are used by clinical supervisors to solve issues of timely, easy, access to information in the workplace. This group of clinicians are concerned about the impact of this behaviour on others view, especially students, on their professionalism. Redesign of L&T to include mlearning is overdue. Suggestions to enable legitimisation of mlearning as an integral nursing function during healthcare work were provided by clinical supervisors. Enabling mlearning to become an overt activity that is part of formation of professional identity will promote appropriate behaviour and empower the next generation of nurses to seek information in real-time and solve the mobile learning paradox.

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