

# Mobile learning: A workforce development strategy for nurse supervisors

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**Abstract.** Digital technology provides opportunities for using mobile learning strategies in healthcare environments. To realise the vision of the National Workforce Development Strategy there needs to be innovation of health professionals to further develop knowledge and skills of clinical supervisors to access and gain an understanding of the value of mobile learning at the workplace. The use of digital technology by clinical supervisors was explored in 2012 as part of a teaching development grant to evaluate the use of Web 2.0 technology to develop a community of practice about clinical supervision. Prior to developing the virtual network of clinical supervisors, feedback about the use of Web 2.0 technology by clinicians was sought via an online survey. Over 90% of respondents used social media, 85% understood what a blog and wiki were and approximately half of the respondents used smart phones. More than one-third indicated they would participate in a virtual community of practice and would like to receive information about clinical facilitation at least once per week. Findings indicate both inhibitors and opportunities for workforce development within healthcare environments that need to be addressed. Support of graduate-ready nurses can be achieved through an integrated outlook that enables health professionals within organisations to undertake mobile learning in situ. A flexible and collaborative approach to continuing professional development within organisations could enhance practice development and could positively impact on workforce development.

**Keywords.** mlearning, clinical supervision, digital technology, work integrated learning

## Introduction

The emergence and growth of digital technology in healthcare and education has created opportunities for learning and teaching that extend beyond traditional boundaries [1-4]. The rapid change in modes of healthcare delivery and communication presents challenges and solutions that were outlined in the Australian National E-Health Strategy. It identified that a health workforce skilled in information communication technology (ICT) was a key area for driving change and adoption [5]. The Australian Workforce Development Discussion paper [6] forecast there could be strong increases in employment within professional occupations and registered nurses were identified to lead employment growth across all four projected scenarios described in the Paper. The Paper revealed the expectation of skills deepening will be required in the health sector. It also outlined the recognition of innovation driven by leadership and management skills, was desirable. To meet this aim consideration of a holistic three-pronged approach was suggested. It included the need to ensure

continuing professional development is relevant, high quality, collaborative and flexible [6].

Work integrated learning (WIL) enables theory to inform work practice within formal curriculum or co-curricular activities to prepare for work readiness. Importantly, the Strategy outlined the imperative for creative and effective use of ICT in learning and teaching (L&T) and the need to improve digital literacy [7]. Exploring the use of digital technology has provided information that can be used to develop innovations in mobile learning (mlearning) within the workplace that can assist with realising the vision of the Workforce Development Strategy [7].

Literature indicates that ICT literacy among health professionals, especially nurses is mixed [1-4, 8-11]. Hegney et al [4] recommended promotion of ICT literacy and workforce development strategies that have resulted in changes to ensure health professionals become more digital literate. The Australian Health Practitioner Regulation Agency (AHPRA) [12] has mandated continuing professional development of its members and the Nursing and Midwifery Accreditation Council (ANMAC) [13] now requires ICT competency to be included in all undergraduate nursing programs. Educational programs need to meet the demand for improving digital literacy by developing opportunities and minimising inhibitors to learning in the workplace.

Sharples, Taylor and Vavoula [14] offered a framework for theorising about mlearning which described the convergence between learning and technology and noted that it was the learner that is mobile, rather than the technology; the learning is interwoven with other activities; it can be distributed across a range of learners, teachers, resources and technologies. Importantly, Sharples et al [14] indicated context is constructivist as learners build knowledge through interacting with their environment. The co-evolution of L&T has implications for the development of a new mobile approach at the workplace that could encourage life-long learning and strengthen workforce development opportunities.

Research undertaken during 2009 to determine the needs of organisations that support undergraduate student nurses during WIL indicated that supervising clinicians employed by organisations would like more support and guidance from the University [15]. The study also found they would like to be informed about contemporary nursing and supervision issues. There was also a desire by supervisors to be aligned with University guidelines relating to students and WIL and be informed of updates. Clinical supervisors within organisations also indicated they would like to develop stronger partnerships with each other [15]. A need to explore the knowledge, skills, behaviour and attitudes of nurses to facilitate support and guidance was identified. A grant to evaluate an intervention to support clinical supervisors in practice was successful. The aim of this cross-sectional study was to investigate the use of digital technology and literacy of clinical supervisors.

## **1. Methods**

An online questionnaire was developed to gather data about digital media use by clinical supervisors who supervised undergraduate nursing students at this University. Recruitment of respondents was through direct contact before, or at one of seven workshops conducted as part of a project to facilitate a community of practice for clinical supervisors. Descriptive analysis was conducted using Microsoft Excel (Version 14.2.5). A minimal risk ethics application was approved (H12527).

## 2. Results

There was a high recruitment rate to the survey with 27 (N=34) respondents completing the entire survey and a further seven partial completions (n=34). Demographic data were analysed for the complete data set. Incomplete surveys were excluded from the digital use analysis.

Demographically, 66% of respondents were aged over 46 years, and 90% were female. In relation to their roles more than half (52%) were nurse educators or clinical supervisors. The majority of respondents (59%) had mentored nursing students for more than five years, and only 10% for less than one year. Participants were from a range of facilities including: tertiary (38%), primary care (24%), or residential aged care (12%), with the majority (72%) being from regional and rural areas.

Of the respondents (n=27) that completed the digital use section of the survey 93% indicated they had been using a computer and the Internet for more than five years. One respondent indicated they had used a computer or the Internet less than two years and one respondent did not answer. Of the participants 52% indicated they owned a smart phone and 44% indicated they had purchased applications. Fifty-six per cent also reported they owned an iTunes account and over 70% indicated they owned a Skype account.

Ninety-three per cent of participants used social media such as Facebook, Twitter, Google+ and LinkedIn. Two-thirds (67%) indicated Google+ was their most preferred method of networked social media, while only 18% used Facebook; 11% used Twitter and nil reported using LinkedIn. The second preference was Facebook 67%; Google+ and LinkedIn (11%); and Twitter (7%). Twitter (41%) was the most preferred third choice with LinkedIn (37%) and the remainder did not answer, suggesting they did not use these Web 2.0 platforms. Over 56% indicated they used YouTube less than once per month; 30% used YouTube between one and three times per month or once per week; and 15% used YouTube more than twice per week and up to two or three times per day.

Respondents were asked a series of questions regarding their understanding of Web 2.0 terminology. Eighty-five per cent provided a brief description of what is meant by the term blogging. Twenty-six per cent indicated they had tried blogging and only 16% had previously contributed to a wiki project.

### 2.1. Limitations

The small sample size precluded generalisability of the study. Respondents were self-selected and may have been innovators within their field. This cohort may have artificially increased the use of digital technology responses and skewed the results.

## 3. Discussion

The results indicate there are inhibitors and opportunities for workforce development of clinical supervisors. Although the number of respondents was low, the findings provided useful feedback about the demographics of the cohort who were initially involved with the implementation of the digital communication strategy. The age and gender profile of respondents mirrors the National average [16]. The implications of this finding suggest there could be a generational difference impacting on the uptake of

technology use by this cohort [17, 18]. The majority of these senior clinicians indicated had been clinical supervisors for more than five years. They also indicated that they had used computers and the Internet for at least the same period. Therefore these clinicians are well positioned to be change champions [19] to promote improvements in digital literacy through policy development, role modelling and L&T. There is an opportunity to support this endeavour to be contemporary in clinical supervision by using mlearning strategies [20, 21].

### *3.1. Potential Inhibitors for Workforce Development*

There are potential inhibitors for realisation of the vision of the workforce development strategy. The age of this cohort may inhibit the adoption of mlearning in the workplace because these clinicians are not 'digital natives' [22] and may not understand the value of enabling mlearning in situ. The lower than average uptake of smart phone use [14] may further impede the acceptance of the Web 2.0 platforms that could enhance learning and continuing professional development at the workplace. These clinicians are used to accessing desktop-based digital technology, and may not fully understand the functionality of smart computers. Moreover, access to resources via a mobile device could be more appropriate or timely than access via a desktop computer away from the learning opportunity. This cohort indicated they did not regularly use YouTube. There is a growing body of literature [23, 24] indicating that YouTube is becoming an accepted source of credible learning resources. This form of media may be an untapped resource for learning in situ or at point of care. The development and provision of guidance about access to appropriate and credible sites for use could be required. Again the age of the cohort may preclude the promotion of using YouTube media clips as an mlearning strategy for continuing professional development.

This cohort indicated the majority used social media. Clinical supervisors were found to prefer using Google+ in preference to Facebook. The use of a different platform from many of their peers may be an inhibitor for sharing of information or resources. LinkedIn was ranked lower than Twitter, suggesting it was not recognised for networking by these nurse leaders and may reduce their opportunity to network with other senior members within the health field.

### *3.2. Potential Opportunities*

The findings indicate there are potential opportunities for advancing the use of mlearning by clinical supervisors at the workplace. This cohort indicated almost half used a smart phone and were familiar with social media platforms. Respondents were familiar with purchasing applications. Harnessing and extending the understanding of Web 2.0 technologies by clinical supervisors could lead to gaining confidence in sharing and contributing to the community of practice, rather than only receiving information. By promoting the use of social media to exchange information among clinicians could assist to upskill their colleagues and model appropriate use of mobile technology. Furthermore, this process of diffusion of innovation [25] could enable adoption of mlearning strategies to other clinicians. Respondents indicated they used Skype for communication. This platform has the potential to link isolated or geographically dispersed practitioners in synchronous dialogue, whereas other asynchronous forms could be useful for part-time staff or shift workers. Respondents were familiar with blogs and wikis predominantly as 'lurkers' or non-participants.

There is potential to engage clinicians to contribute to these forms of mlearning, which could strengthen networks within and between organisations and contribute to workforce development. The use of mlearning platforms may contribute to retention of staff and improve undergraduate completion rates as appropriate pedagogy can be attended during WIL through learning in situ [6]. Technology drives change [7] and over time, the promotion of appropriate mlearning strategies in the workplace could create a cultural shift of acceptance of the use of mobile devices by registered nurses in healthcare settings. The increased connectivity may unlock productive potential of clinicians, improve quality of experience and enable mastery of digital technology use [7] by clinical supervisors.

### 3.3. Future Directions

Technology will influence workplaces of the future [6]. The results of this study indicate there is a need to focus on mlearning strategies, promote digital literacy and enable knowledge work of health professionals [6]. There is a need to provide opportunity for accessing mlearning strategies and sharing of information or resources in the workplace. The acceptance of using mobile technology in situ will facilitate the cultural shift required to prepare clinical supervisors for this innovative method of learning. To further this aim the development of codes of practice or conduct to guide acceptable behaviour while using mobile technology or mlearning in the workplace is imperative. Furthermore, upskilling of clinicians about appropriate conduct, so they can model behaviour at point of care is necessary. Lastly, the evaluation of the implementation of any mlearning code is required to ensure outcomes for patients and learners in the workplace are improved.

## 4. Conclusion

Changing skill requirements in healthcare settings have created new professional standards within the health professions. The availability of mlearning opportunities will ensure clinical supervisors remain leaders in their field. Modelling the use of mobile technology in the workplace will promote a desirable cultural shift towards appropriate and safe use by clinicians. Further research to investigate how mlearning can become embedded in the workplace will enable the development of robust policy that will ensure safe and appropriate use within healthcare environments.

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