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**Using SMS to support reflection in health professional students on placement in an
Aboriginal and Torres Strait Islander health context**

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Abstract

Reflective practice is a crucial aspect of being a health professional and needs to be developed throughout one's career, starting as a student. However, it can be difficult for clinical educators to facilitate student engagement in reflection whilst on placement across a variety of locations. This action research study aimed to develop and explore the use of SMS as a tool to facilitate reflective practice for health professional students on clinical placement in an Aboriginal and Torres Strait Islander context. Following three action research phases, this paper focuses on the most recent (fourth) research phase. In this phase, ten health professional students were sent a series of three reflective SMS messages per week structured around a commonly used framework within this health context, the Making Connections Framework. A focus group was utilized to explore the collective experiences of five students and evaluated using thematic analysis. Four key themes emerged: 1) transition of SMS from a personal to a professional technology, 2) benefits and limitations of the professional use of SMS, 3) SMS for reflective dialogue, and 4) SMS and reflection 'on' and 'in' practice. SMS was found to be a viable tool for prompting reflection for students on placement in an Aboriginal and Torres Strait Islander setting when embedded within a broader organisation-wide cultural integrity framework and structure.

I INTRODUCTION AND AIMS

Reflective practice is an important process for health professionals to develop throughout their career, starting as a student. Reflective practice is the process of thoughtfully considering, and learning from one's experiences (Finlay, 2008). This can be further explained as 'reflection in practice' and 'reflection on practice'. 'Reflection in practice' is reflection that occurs in the practice situation, and results in behaviour change in the moment (Tabuenca, Kalx, & Ternier, 2014). 'Reflection on practice' is a reflection that occurs after the practice situation has finished and informs future practice (Tabuenca et al., 2014). Reflective practice is important for the development of professional reasoning (Karvonen, Paatelma, Laitinen-Vaananen, & Piirainen, 2017), as previous knowledge and skills can be applied to the current situation through reflection, and past experiences are given new meanings and extended to future contexts (Kolb, 1984). Reflective practice helps clinicians develop their professional identity (Grant, McKimm, & Murphy, 2017), leads to improved professional competence and contributes to ongoing professional development (Wong, Whitcombe, & Boniface, 2016; Booth & Nelson, 2013). Student reflective practice should occur through personal experience and under appropriate guidance in a supportive and non-judgemental environment (Wong et al., 2016).

The development of reflective practice is important for health professional students as they learn to adapt and respond to diverse clinical contexts, leading to effective health service delivery (Howells, Barton, & Westerveld, 2016; Wong et al., 2016). Reflective practice can be developed through working in a culturally diverse setting while simultaneously being given an opportunity to reflect on the attitudes and values present within both the individual and the context (Booth & Nelson, 2013). These reflections are key in developing cultural responsiveness, where health professionals consider and reflect on their own and their client's social, professional and cultural context, and adapt their practice to meet their client's needs (Indigenous Allied Health Australia [IAHA], 2015; Nelson, McLaren, Lewis, & Iwama, 2017).

Reflection aimed at developing cultural responsiveness seeks to transform a student's understanding of their personal beliefs, assumptions, values, perceptions, attitudes and expectations, and how they impact their relationships with others, including an understanding of the interrelationships between power and the structures of race, class and gender (Bennett, Redfern, & Zubrzycki, 2018; IAHA, 2015; Mackinlay and Barney, 2014). Within the context of our project, cultural responsiveness places Aboriginal and Torres Strait Islander knowledge at the centre of all practice. Cultural responsiveness is an ongoing process that requires regular self-reflection and proactive responses to the person, family or community with whom the student is working to ensure practice is aligned with Aboriginal ways of seeing, knowing, being, doing and belonging (IAHA, 2015; Brown and Graham, 2016). This might include reflecting on changes to assessment processes and tools, information gathering and communication approaches.

This project is based on a collaborative partnership between researchers at The University of Queensland (UQ) and the Institute for Urban Indigenous Health (IUIH). In keeping with National Health and Medical Council (NHMRC) guidelines for research with Aboriginal and Torres Strait Islander people, the research was initiated by IUIH to meet an identified need for increased opportunities for reflection in a dispersed student group (NHMRC, 2018). Increasing reflective practice was seen as a key vehicle for ensuring greater cultural responsiveness for a population who have often experienced discrimination and racism in the health care system. Given the national promotion of cultural responsiveness or competence in most university curricula and national accrediting bodies, the project was seen as a valuable opportunity by both parties. The IUIH provides planning, development and delivery of comprehensive primary health care services to Aboriginal and Torres Strait Islander people in South-East Queensland (IUIH, 2019). Annually, over 350 university students across 20 disciplines (and approximately 8 institutions) undertake a placement at one of 19 Aboriginal and Torres Strait Islander Community-Controlled Community Health Services (ATSICCHS's), an Aboriginal and Torres Strait Islander School or the IUIH head office (IUIH, 2019). University placement schedules are varied and do not often coincide with

other discipline's placement dates. There is, therefore, a need to explore how reflection can be facilitated within the geographical and timetabling constraints of university placements.

Before the commencement of placement through the UIIH, students participate in an orientation process that introduces them to culturally responsive practice (IAHA, 2015), and the Making Connections Framework (Nelson, McLaren, Lewis & Iwama, 2017). This Framework was developed to guide students and health professionals in culturally responsive practice when working with Aboriginal and Torres Strait Islander families (Nelson et al., 2017). The framework describes four aspects (getting connected, being connected, staying connected and building connections) to achieve within practice, acknowledging the importance of reflection on process and practices to ensure families' needs are met (Nelson et al., 2017). Placements across 19 locations and 20 disciplines present unique challenges in providing consistent support to facilitate students' ongoing reflective practice, particularly in an inter-professional context.

Information and Communication Technologies (ICTs) are potential tools for engaging students in guided reflection (Fisher & Baird, 2006; Goh, Seet, & Chen, 2012). Short Message Service (SMS, also known as a text message) is one of the most commonly used features on a mobile phone and with a potential 99% read rate, SMS is a reliable method of information sharing (Gow et al., 2015). Given the prevalence of mobile phones, SMS is a potential tool for engaging students in guided reflective practice. Mobile devices allow students the opportunity and potential to learn regardless of location by creating opportunities for interaction and collaboration and allowing for engagement in course content, reflection and communication (Gikas & Grant, 2013). SMS in particular has been found to promote, encourage and complement learning (Goh et al., 2012).

SMS can be a useful and effective tool to engage and stimulate learning for students in tertiary education (Brett, 2011; Fisher & Baird, 2006; Goh et al., 2012). Mobile notifications sent via SMS can encourage reflective practice about learning activities that occur throughout the day (both reflection on and in action), as they prompt students to evaluate their own learning (Tabuenca et al., 2014). Fisher and Baird (2006) theorised that the method of mobile learning is useful because it allows students time to process comments and digest reflections. Further to this, mobile learning has the potential to elicit faster communication and feedback (enabling rapid dialogue) and the opportunity for having reflective dialogue, especially for students across different clinical placements (Grant et al., 2017). In addition to the higher education literature, community-based research on the use of SMS for information sharing recommends using existing resources (i.e., the Making Connections Framework) whenever possible (Barlott, Adams, Diaz, & Molina, 2015). While there is limited literature on the use of SMS for encouraging reflective practice for health practitioners on placement, SMS messaging is a promising tool to facilitate reflective practice in this context.

This study aimed to develop and evaluate the use of SMS as a tool for encouraging reflective practice and reflective dialogue among health professional students on placement in Aboriginal and Torres Strait Islander health settings, guided by the following research question:

What is the experience of students on placement using SMS as a tool to facilitate reflective practice?

II METHODS

This qualitative research study used an action research approach. Action research consists of a cyclic process of *planning, acting, observing, reflecting*: planning a change; implementing the change; observing the process and outcomes; and reflecting on the process and outcomes (Kemmis & McTaggart, 2005). This study went through four action research phases, the fourth phase being the focus of this paper. Additionally, this study was guided by a community-based research (CBR) approach (Israel et al., 1998) and the National Health and Medical Research Council's (2018) Guidelines for researchers on the ethical conduct of research with Aboriginal and Torres Strait Islander people and communities. CBR is a participatory method that collaboratively engages community partners in all aspects of the research process (Israel et al., 1998). In our study, the research aims originated with community research partners (UIIH) and all

research activities were completed collaboratively. Action research is a common method in CBR projects as it provides a framework for incorporating the participatory involvement of community research partners (Israel et al., 1998) and was used in our project to iteratively develop the use of SMS as a reflective tool.

A Participants

A convenience sample of health professional students from UQ were participants in each phase of this study. Following ethics committee approval, participants were recruited on a voluntary basis and not compensated in any way. All participants consented for their information to be used for the purposes of this study. Refer to Table 1 for information regarding participants and program of study for each of the phases.

Table 1: Phases and Related Participants

	<i>Phase One</i>	<i>Phase Two</i>	<i>Phase Three</i>	<i>Phase Four</i>
Number of Participants	8	6	9	10
Professional area of study	Dentistry, Dietetics, Occupational Therapy, Speech Pathology	Dentistry, Occupational Therapy, Speech Pathology	Dentistry, Dietetics, Social Work	Dietetics, Health Psychology, Occupational Therapy

Ten students participated in phase four of the reflective practice project, and of these, five students participated in the focus group evaluation. Participants were between 21-40 years of age. All participants met the following inclusion criteria: completing a health professional program at the university currently on placement with the partnered Aboriginal and Torres Strait Islander health organisation and have a mobile phone subscription. It is important to note that whilst students may have had university requirements for generic reflection on their practice, the disparate, diverse and interprofessional nature of placements in the community organization necessitated a vehicle for encouraging reflective practice that was *common* across disciplines.

B Materials

This project used a combination of two low-cost software applications to facilitate SMS messaging. The software used for the first three project phases was Frontline Cloud, a free and open-sourced software often used in community projects (FrontlineSMS, 2016). Frontline Cloud is an online system that connects remotely to an Android smartphone and relays SMS messages (FrontlineSMS, 2016). This system served as a two-way SMS-messaging hub used to distribute SMS messages to participants and facilitate interactive SMS messages. Whereas the online system used for SMS messaging in phase four was Textit (Textit, 2017), as it provided added functionality necessary for the project (e.g., message scheduling). The six-week guided SMS reflection project was developed based on the Making Connections Framework (Nelson et al., 2017), as a way to use existing resources and reinforce existing practices (Unwin, 2009). Additionally, the Making Connections Framework was deemed as the most appropriate tool to base reflections on because it was developed by and for urban Aboriginal and Torres Strait Islander people and is based on Aboriginal terms of reference (Nelson, McLaren, Lewis & Iwama, 2017).

C Design

Following initial project planning in early 2015, the following action research phases informed the development of the project and led to the most recent phase, which is the focus of this paper.

Phase one (September-October, 2015). Students participated in a six-week guided reflection project that involved reflective questions, resources, and an invitation to participate in reflective dialogue using SMS. During this first phase, messaging was unstructured, unscheduled, and did not draw upon the Making Connections framework. Results of a wrap-up survey found that SMS was effective for sharing information but less effective for having reflective dialogue. Recommendations for the next phase included implementing a structured format for messaging that followed the Making Connections Framework and implementing a Facebook discussion group for reflective dialogue.

Phase two (April-May, 2016). Students participated in a six-week guided reflection project. Students were sent a series of SMS that encouraged guided reflection based on the Making Connections Framework. Students were also invited to participate in a Facebook discussion group for reflective dialogue. Results of a wrap-up survey found that using the Making Connections Framework was beneficial and reiterated the usefulness of SMS to encourage individual reflection. There was a limited engagement in reflective dialogue on Facebook as students felt less inclined to reflect openly on Facebook with researchers in the group observing.

Phase three (September-October, 2016). Phase three was identical to phase two, with the exception of an adjustment to increase the privacy of the Facebook discussion group. Results found very limited engagement in reflective dialogue on the private Facebook discussion group. Based on key learnings from phase one to three, it was determined that phase four would consist of a six-week program utilising only SMS for both guided reflection and reflective dialogue. The research team also decided to implement a focus group for participants to engage in reflective dialogue at the end of the six-week guided reflection program.

Phase four (May-June, 2017). For six weeks, students were sent a series of three SMS messages per week. The SMS followed a consistent structure based on the 'Making Connections' framework. Each Monday, the weekly topic was introduced via SMS, with the inclusion of a media resource. On Wednesday the SMS provided an invitation for individual reflection (e.g., As you go about your week reflect on why "Being Connected" is so important within the context of an Aboriginal Health Service). On Friday, there was an invitation to share a reflection with other students via SMS. All SMS messages were sent at the same time (12 noon) each day to ensure consistency. At the end of the six-week period, the students were invited to participate in a focus group. See Figure 1 for the action research phases.

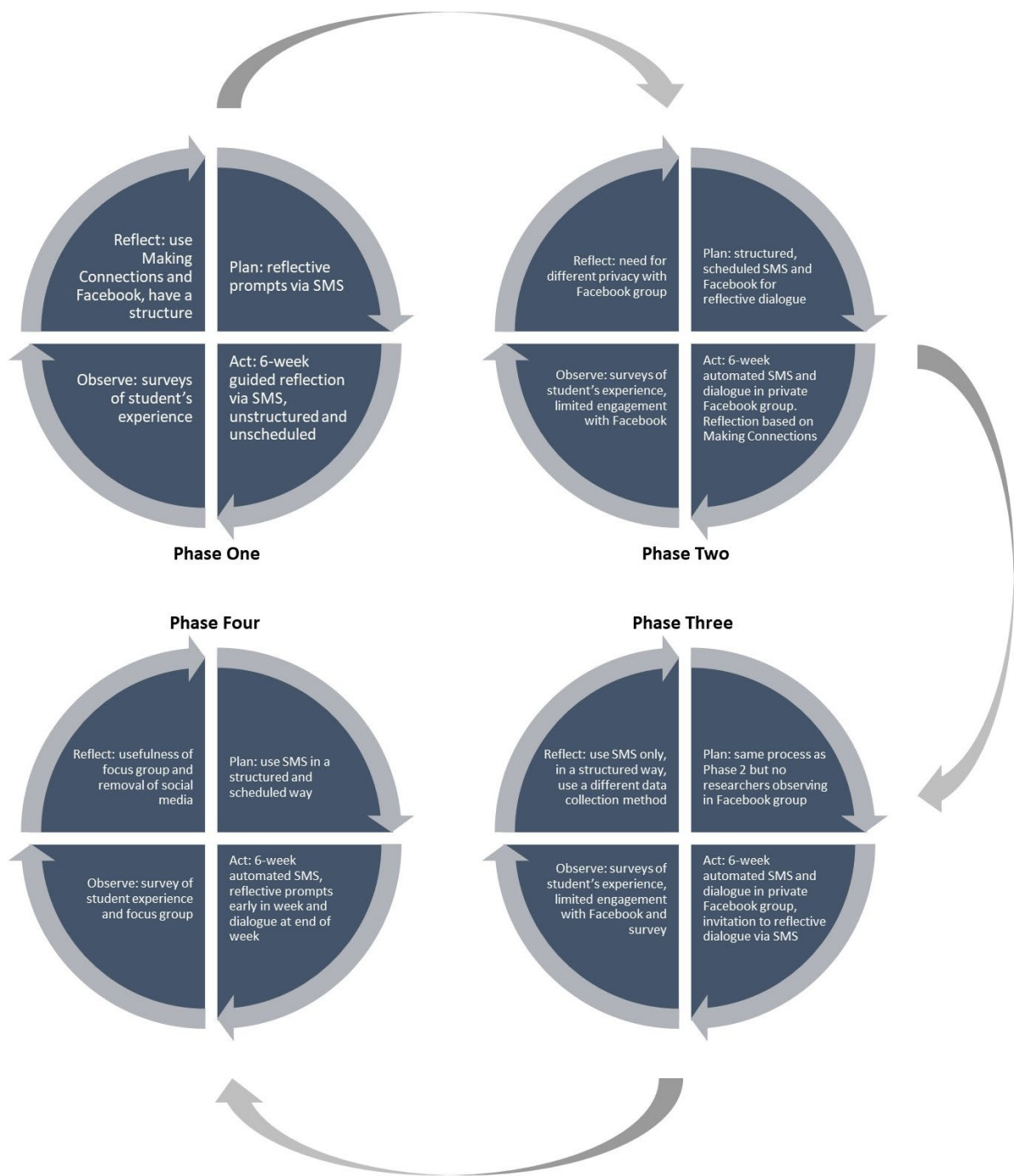


Figure 1: Action Research Phases for SMS use in Aboriginal Health

D Data Collection

The primary method of data collection used in phase four of this project was a focus group. This collaborative qualitative method was useful to explore students' collective experiences, foster the co-creation of knowledge, and was congruent with a community-based research approach (Breen, 2007). The focus group was conducted at the UIIH head office and was facilitated by members of the research team, Tim Barlott and Renée Brown. A semi-structured open-ended format was used to guide the focus group discussion. These questions were pre-determined by the research team to align with the research questions. The focus group was transcribed verbatim and de-identified for analysis. Questions explored the utility of SMS messaging for students as well as students' perceptions of both SMS and the Making Connections Framework as a tool for

reflection. Focus group question examples include: “Let’s talk about what it was like to receive SMS messages on placement”; “Tell us about your reflective practice on placement and the role the SMS messages played”, “Describe an example when an SMS message prompted you to reflect about something on placement”, “Describe an example of how you used the Making Connections Framework on placement.

E Data Analysis

Following transcription, the focus group data was co-analysed following Braun and Clarke’s (2006) thematic analysis. Both university and community partners participated in the co-analysis of focus group data, a method that has been used in previous CBR projects (Makosky et al., 2010; Barlott et al., 2015). Pursuant to trustworthy findings (Shenton, 2004), this study employed analyst triangulation (co-analysis) to ensure credibility and reduce the effect of researcher bias. University staff on the research team were not involved in clinical placement coordination which also helped in reducing researcher bias.

III RESULTS

Participants described their experiences using SMS when on placement. Following thematic analysis, four key themes emerged: 1) transition of SMS from a personal to a professional technology, 2) benefits and limitations of the professional use of SMS, 3) SMS for reflective dialogue, and 4) SMS or reflection ‘on’ and ‘in’ practice. The following results describe each theme with quotes used to illustrate key points. Pseudonyms were chosen by researchers to protect the anonymity of participants.

A Transition of SMS from a personal to a professional technology

Participants described the characteristics of SMS as personal technology. They found SMS to be a social medium and a casual and informal communication method. One participant referred to SMS as a “chatty” technology, best used to facilitate “in the moment” communication, noting “it’s almost like texting is such a social... thing, and it’s sort of like ‘oh I’m going to see what my friends are up to” (Kate).

Further to the personal nature of SMS, participants identified the accessibility and portability of mobile phone technology as an advantage and reported they “liked how accessible it was, everyone takes their phone everywhere with them. So, you have access to it all the time” (Kate).

Whilst all participants were familiar with using SMS in a personal situation, they were less experienced in using SMS in a professional situation. Some participants felt uncomfortable using their mobile phone on placement. Participants identified that using SMS may be considered unprofessional and not appropriate to a student placement setting.

I also just culturally feel so uncomfortable texting at work. I’ll text if my kid’s sick and I have to contact a teacher, and that’s really the only time that I’ll respond ... not wanting to appear unprofessional (Tamara).

However, despite initial reluctance and unfamiliarity with using SMS as a professional tool, participants identified that with time they were able to make the transition.

It was something that was ‘different’, as anything that’s new can be challenging. But as I got more used to it I came to see the importance of it more and more and it became easier (Kate).

In order to enable the effective use of SMS in a professional context, participants identified the importance of considering the timing as well as the unique professional context when sending messages. SMS sent at an inconvenient time were not going to be prioritized by participants who noted, “when you get an SMS ...you forget about it because it’s not what you are concentrating on at that time” (Lillian).

They [the SMS] were coming through at midday --- lunch time.. which was somewhat... AGAINST what we'd been advised to do [on placement], which was not to be staring at screens (Tamara).

B Benefits and limitations of the professional use of SMS

Participants detailed both benefits and limitations of how SMS was used in this project for encouraging reflective practice. The benefits were its accessibility, prompting nature, and potential for peer support. Limitations included the use of embedded web links and incongruence between technology and task. These benefits and limitations have been expanded upon in this section.

The prompting nature of SMS provided participants with a quick, easily accessible reminder to consider aspects of the Making Connections Framework whilst on placement, with one participant reporting "it was reminding me that the framework existed, and it was like something to consider in practice" (Virginia). Considering the use of SMS in the project to support reflective dialogue, participants also identified that SMS was a valuable tool for providing peer support through group discussion.

I looked forward to other people's input. I was genuinely curious as to what other people would say... So, there was an element of peer support... which SMS can do really nicely if the conversation is flowing (Tamara).

Participants also identified some limitations to how SMS was used in the project. The Making Connections Framework resources were shared via embedded links within the SMS messages, requiring students to have internet access. Whilst the SMS message itself was accessible, the use of embedded web links posed an issue in some contexts.

I think it wasn't really accessible with having to have the link and having to have WIFI, and so I think 9 times of out 10 [it didn't work]... I had really dodgy WIFI for some reason and so that was definitely a challenge (Lillian).

Whilst the instant accessibility of SMS was considered an advantage, there was also a limitation noted by participants that they received an overwhelming number of instant notifications during the day. This could be detrimental when project messages competed with other similar notifications. If the SMS was pushed to the bottom of the notification list, it was common for the message to be forgotten at times.

I'd read it, it would come in while I was with a client or doing something else and then a couple of other messages would come through, and it wouldn't be at the top, and it wouldn't draw my attention to it so I might forget completely (Virginia).

C Use of SMS for reflective dialogue

The participants detailed their experience of using SMS professionally for reflective dialogue. Findings included how the group norms influenced participation in responses, the perceived response requirements and additional suggestions for improvement. Participants identified that norms for participating in reflective dialogue (i.e., replying to the SMS messages) were established early in the project. When someone replied, this increased the likelihood of other people participating in the group conversation. However, if no one replied initially, then other participants were less likely to provide a response, and participants felt this set the tone for the rest of the project. One participant commented that "I think I noticed as well though that ...once one person put their input in, everyone suddenly did for that week" (Virginia).

In response to the reflective prompts and questions posed in the SMS messages, participants felt that an appropriate response required reflection and a large time commitment to construct a suitable response. This well thought out, reflective response required by the project was challenging via SMS as a form of technology.

All of the responses we did get were really brilliant and well thought out and a little paragraph. So that was kind of the tone that was set. So, if you had a sentence, it was kind of like 'oh well I can't just write my one sentence that's not good enough' (Kate).

SMS seemed to be a suitable medium when a short response was required, however, there was adjustment required when a longer response was warranted, commenting that “I felt like I wanted to.. you know, designate the time and think about it and formulate a thoughtful response, but I didn’t feel like I had the time to formulate that response” (Lisa). This comment highlights a potential limitation of using SMS for ‘on the job’ reflective dialogue, where there isn’t enough time to share a well-considered response. Participants noted they would have appreciated more specific questions to narrow the required response to a more direct line of thinking.

Participants identified that working to the strengths of SMS as a ‘chatty medium’ could have encouraged more reflective dialogue. Participants requested increased facilitator involvement to model examples and demonstrate short conversational responses.

D SMS for reflection ‘on’ and ‘in’ practice

At times, participants articulated a link between receiving an SMS and the corresponding reflective practice, noting “reading the text messages and reading the little chapters associated would allow me to reflect back to the framework and think about how I’m working through that element of the framework in my practice” (Kate). This is an example of reflection ‘on’ practice, where Kate is using the SMS message to think about her practice broadly speaking. Whereas, the following quote from Lisa highlights how the SMS messages can prompt and influence reflection in the moment (reflection ‘in’ practice).

If I got a message between a client and another client and.. I had maybe quickly opened it and re-jogged my memory ...because I remember a lot was about making sure you really build that connection, it’s not about ticking off an initial assessment form, it’s about making sure they come back and they really feel connected to you. (Lisa).

Tamara noted that “it [the SMS intervention] picked up on the content that we were exposed to at orientation helped reinforce and encouraged us to actually apply it”.

The SMS messages encouraged students to both stop and consider their actions in the moment and reflect on past actions, and appeared to play a role in enabling and encouraging students’ reflection whilst on placement.

IV DISCUSSION

This study is the first known use of SMS and mobile technology to facilitate reflective practice for health professional students on placement in an Aboriginal and Torres Strait Islander health setting. This study aimed to explore the experience of students on placement using SMS as a tool to facilitate reflective practice. Findings indicated that students found the accessibility and prompting nature of SMS helpful to encourage reflection, although some limitations were found when using SMS in a professional context.

This study found that SMS encouraged reflective practice throughout the day (reflection on action), as they prompted or reminded students to evaluate their practice and align it with the Making Connections Framework. This prompted reflection was helpful for reinforcing students’ understanding of context-specific tools and ongoing self-appraisal of cultural responsiveness, consistent with the work of Wong et al. (2016), who highlight the value of SMS for encouraging learning and fostering student development. SMS appeared to be useful to support reflection by building on activities beyond the project such as orientation and previous learning experiences. Once students adapted to the use of SMS professionally, it was found to be a viable tool to facilitate reflective practice by providing prompts and reminders to stop and reflect whilst on placement. This reflects previous literature stating that mobile phones were effective tools to prompt and encourage student reflections (Fisher & Baird, 2006; Tabuenca et al., 2015). In particular, findings indicated that the SMS messages reminded students to have an intentional focus on ‘caring’ through all stages of therapy and encouraged students to continually reflect on how connections could be improved (Nelson et al., 2017).

SMS was characterised in this study as being a social and 'chatty' personal technology that was useful for casual and informal communication. Its instantaneous, portable and accessible characteristics were valued by participants. This is consistent with findings from Gikas and Grant (2013) who found the accessibility of information and constant ability to communicate is an advantage of the use of mobile devices for student learning. SMS was seen as an instant form of communication that prompted students to consider how their practice could enhance the connection-making process when working with Aboriginal and Torres Strait Islander people. Our findings suggest there is value in building on the strengths of SMS, as an instant form of communication, to enhance how students connected with each other and with information, particularly when spread across multiple locations, from multiple disciplines and multiple placement lengths.

However, findings from this study indicated a potential incongruence between the personal nature of SMS and its use as a professional tool for connecting with colleagues. Even when using the tool as advised by clinical educators, students perceived the use of SMS at work to be unprofessional. SMS was perceived to potentially have a negative impact on participants' credibility and ability to establish initial connections. This is consistent with findings from other studies where students expressed concerns with mobile devices compromising professional behaviour or blurring boundaries between technology used for learning and technology used for social purposes (Campbell, 2008; Tabuenca et al., 2014; Wallace, Clark & White, 2012).

The perception of SMS as a 'chatty' communication tool limited participants' ability to articulate thoughtful reflections in the group discussion using SMS. Previous research has suggested that messages should be concise and easily convey information at a glance and that perceived playfulness was a significant predictor for the use of mobile technology for learning, potentially bridging the gap between the personal and professional use of technology (Gow et al., 2015; Wang, Wu & Wang, 2009). In addition, highlighting the personal and casual nature of SMS has been found to increase tertiary student engagement with this mode (Jones, Edwards, and Reid, 2009). Personalised messages (e.g., Hi Julie!) were found to increase educator immediacy (Jones, Edwards & Reid, 2009), a concept used to describe the perceived "physical or psychological closeness between communicators" (Allen, Witt & Wheelless, 2006, p. 22). This perceived immediacy and subsequent increase in student engagement resulted in increased reflection on learning material (Jones, Edwards & Reid, 2009). Findings from this study suggest that increased engagement in reflective dialogue could have been encouraged through more personal and conversational dialogue and shorter responses, embracing the personal and playful nature of SMS. In doing so, students may have been less worried that their messages were not at a high enough standard to share with the group and more able to more naturally engage with SMS as a reflective tool in clinical education, and also deepen their connection with others in the project. Given the potential limitation of SMS as a 'chatty' mode of communication, it is important to embed the use of SMS within a broader reflective context. SMS may be helpful for initial reflective prompts or short reflective dialogue, with additional strategies in place to foster further reflective practice (e.g., face to face, journaling, etc).

Participation in reflective dialogue throughout this study was impacted by group norms and perceived required response length. Interestingly, it was found that once one student replied to a group message, other students were more likely to respond. Likewise, when there were no responses to the first messages, then it became the unspoken group norm not to respond. This finding is consistent with previous research which found that an individual will follow the group norm and if participants did not feel connected to the group, they were less likely to participate (Chu & Chen, 2016; Nelson, et al., 2017). In order to facilitate participation in reflection, Grant et al. (2017) suggested that the first reflective tasks should be easy and simple so that learners can have an immediate positive association with involvement. Like Grant et al. (2017) this study also identified that having facilitators model responses may encourage participation with reflective dialogue between group members on placement. Our findings extend upon the use of facilitator input to encourage reflective dialogue by applying this concept to the use of SMS for students on placement in an Aboriginal and Torres Strait Islander context. Further, by modelling reflective

responses, facilitators are demonstrating vulnerability and engaging in a mutual exchange of information, important aspects of 'being connected'.

Interestingly, the focus group itself, whilst a research exercise, encouraged reflection on practice. The focus group brought participants together in person to discuss and share information together, 'building connections' in a way that was not possible during the project. Participants were observed exchanging placement stories, learning about each other's profession, and discussing their future careers in allied health. These findings seem to suggest that a multimodal approach to developing reflective practice may be ideal, as recommended by Barton and Ryan (2014). In doing so, the use of SMS for guided reflective practice would be part of a broader approach that incorporates face to face interaction. This emphasis on a multimodal approach is consistent with previous literature which found the integrated use of e-learning, peer learning, and keeping a reflective journal effectively enhanced reflective practice (Grant et al., 2017). Our study extends on these modalities suggesting face to face group reflections may be key in developing reflective practice and making connections.

A Limitations and future recommendations

A limitation of this study is the small sample size, as a focus group of five participants may be perceived to have limited generalisability. Due to the complexity of coordinating student placements, having a larger sample size was not feasible. However, despite limited generalisability, our qualitative study pursued an in-depth understanding of the collective experiences of participants.

This study did not isolate SMS from other kinds of reflection, so it is difficult to conclude how much reflection was due to SMS solely, as opposed to the influence of other factors. As this study primarily looked at the feasibility of using SMS for reflective practice, it did not consider the quality of student reflections. Future research should consider the quality of student reflection when using digital technology to facilitate reflective practice.

It is recommended that future use of SMS should be designed in a way that promotes increased engagement in conversation. This may involve shorter reflective responses, or research into the creation and implementation of playful messages, such as quizzes or educational entertainment media. Furthermore, future research should evaluate the use of modelling reflective responses with increased facilitator involvement in the group reflective discussion. This research could also be conducted into clinical educator and client perceptions of whether SMS fostered increased cultural responsiveness. Further research should investigate the ideal time to receive messages and the effectiveness of user-launched notifications.

V CONCLUSION

This study is the first known use of SMS and mobile technology to facilitate reflective practice for health professional students on placement, particularly in an Aboriginal and Torres Strait Islander health setting. This study found that SMS was useful in encouraging reflective practice due to its accessibility, the potential for peer support and prompting nature. Whilst some participants perceived using SMS as unprofessional, students were able to transition to use this personal technology in a professional way with clinical educator and peer support. This study reinforced that for SMS to be used effectively, educators need to work within its strengths, with short, focused prompts or questions. SMS was helpful to reinforce and remind students of key aspects of the Making Connections framework, which led students to consider how to integrate this framework into practice. SMS was found to be a viable tool for facilitating reflection for students on placement in an Aboriginal and Torres Strait Islander setting.

Acknowledgement

We honour the many Goori Tribal Nations whose territories we work across within South-East Queensland. We honour the legacy and the vision of those who paved the way and those who continue to guide us. We honour our future generations by maintaining the vision with focused determination.

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