

An evaluation of portable electronic device usage by mature nurse lecturers: a Participatory Narrative Inquiry

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Abstract

Portable electronic devices are increasingly used in education (Livingstone 2012), practice (Bogossian et al 2009) and research (Johnson et al 2010). Within this context, and against the backdrop of the Learning and Teaching Strategy 2012-15 emphasis on mobile learning (University of Brighton 2012) we carried out a Participatory Narrative Inquiry (PNI) exploring the recommendations of Willmer et al (2014). Nine participants, who were mature nurse lecturers, volunteered to take part in the inquiry in exchange for being loaned a tablet device. Our aim was to evaluate the use of tablet devices in higher education, specifically as a resource for blended learning and teaching within nursing education. We opted to adopt an approach that allowed each participant to express their own engagement with the technology, including the problems they had faced. The participants took part in three group sessions that resulted in a collective narrative that highlighted issues around infrastructure and support; digital literacy; utility; embodiment and limitations.

The Learning and Teaching Conference session aimed to share our results and also to extend them by posing similar questions to those who attended the session. Our intention was to demonstrate how we generated understanding of, and made use of the tablet devices in evolving our work practices. We were particularly interested in sharing our responses to the new knowledge and the confidence that it engendered

Conference participants' responses were consistent with the datasets from our original PNI process, which confirmed that the themes that emerged were valid outside of the mature nurse lecturers' experiences. Moreover, applying the PNI process at the conference reaffirmed the strength of the approach in co-construction, collaboration and engagement in getting people to think about how they engage with portable electronic devices.

Introduction

Technological advances mean that students increasingly access their learning material via hand held devices, encouraging the demand for online learning (Willmer et al 2014). Mobile devices are at the forefront of this change and household tablet device uptake doubled (to 44 per cent) in 2013-14 with nearly six in ten consumers accessing the internet via a handheld screen (Ofcom 2014). When approximately 45 per cent of learners claim to regularly use a tablet device and eight in ten (86 per cent) regularly use a smartphone (Pearson 2015), mobile learning technologies offer great potential. The challenge is for lecturers to consider the pedagogy before considering the use of technology to support it in order to promote higher order thinking and deep learning (Entwistle and Ramsden 1983). The danger in being led by the technology is that it can be levered into teaching with potentially little or no added value. However, it is important to recognise that there is often a perceived pressure to adopt new technology without an objective analysis of the benefits to pedagogy.

As the market for mobile technologies has grown so have the expectations of learners in higher education, requiring higher education institutions (HEIs) to keep pace with developing technology and skill (HEFCE 2010, Kukulska-Hulme 2011). Web 2.0 technologies afford learners the collaborative opportunity to develop their scholarly content (Minocha and Roberts 2008) and some 83 per cent of US college learners believe that the use of them transforms their learning, perhaps because 79 per cent claim tablet device use makes learning more fun (Pearson 2015). Making learning fun was also identified by Baid and Lambert (2010) and Willmer et al (2014). However, there is evidence to suggest that levels of technological knowledge and confidence decreases with age (Ofcom 2014), which was of particular concern for this group of nurse educators due to their older age profile. Nevertheless, this profile corresponded to the majority of UK academic staff who are over 36 years of age (Higher Education Statistics Agency 2014). Whilst achieving high levels of technological knowledge and confidence may be due to the way that technology is introduced and supported, the participants in the Participatory Narrative Inquiry (PNI) reflected this profile; being digital immigrants according to Prensky (2001).

As a consequence of a successful Centre for Learning and Teaching managed scholarship award, a number of tablet devices were purchased. There were no identified aims for the use of the devices beyond the support of blended learning in line with the University of Brighton Strategic Plan (2012) for the work of nurse educators. A number of nurse educators expressed interest in having a tablet device and in order to understand how they engaged with the new technology, a PNI (Hooley 2009; Kurtz 2014) approach was used. Stories were shared in group format using the approaches of Kurtz (2014) and Bruner (1991) with an emphasis on the way in which stories reflected how individuals generated knowledge and made sense of using a tablet device. The stories explained how participants created and developed their knowledge, acting on it to become more confident in the use of their device. The PNI set out to capture these learning experiences, enhancing the co-construction through engagement with participants at the CLT conference session.

Participatory Narrative Inquiry

The project started in an incremental and emergent way (Grundy 1993) and expanded over time. The project could be viewed as an example of technological determinism (Weller 2011) since it would not have begun had the tablet devices been unavailable. More importantly, however, is the recognition of the role that the project team members played in the context in which the tablet devices were being used. Initially, three tablet devices were available for use across the school (Willmer et al 2014). Subsequently, 12 additional tablet devices were made available to staff in order to aid their teaching, learning and assessment activities. Participants taught a range of subjects that included health law and ethics, child health and infection prevention and control. The level of digital literacy amongst the group was variable. All were accepted into the study with the single condition that they had to use their experiences to contribute to the evaluation. Six participants are excluded from this data because they did not continue to share their learning through to the final evaluation event. It soon became apparent that there was a need for the structure, direction and evaluation of this learning process.

Nine members took part in the PNI that consisted of four group sessions, which ran over a period of eight months. Each session lasted three to four hours where participants produced and analysed the narrative accounts.

At the first group session 'prompt questions' (below) assisted participants to produce narratives of how they used their tablet device for work purposes. Participants answered these in written narrative accounts that reflected their experiences.

- 1. Tell me the story of how you were given the tablet device and what were the expectations of using it, in terms of:**
 - a. what you thought the school's expectations were?
 - b. your expectations of the support you would receive for its use
 - c. how were these expectations met?
 - d. what are you using the tablet device for in your work and in your teaching?
- 2. How has the tablet device changed how you work, mark or teach?**
- 3. What is your vision of how you would like to use the tablet device?**

Prompt questions from group session 1

After writing a response to each question, participants shared their writing with the group participants. Together they discussed and agreed on the content meaning. Field notes were generated by a facilitator during these discussions and the written narratives were collated and stored on a password protected central database.

At group session 2, the agreed narratives from session 1 were provided for each participant and together participants made sense of the content. Group members read and loosely interpreted the content of the narratives according to patterns, themes,

regularities, contrasts and paradoxes and irregularities (Bruner 1991). Each participant wrote their interpretations down, and these were discussed during the group session, enabling the interpretations to be seen as co-created by the participants and the group facilitator. These interpretations were combined with those from the first session field notes. Themes were identified across these data sets and written up according to categories: Infrastructure and support; Digital literacy; Utility; Embodiment and limitations.

At group session 3 participants generated a joint narrative. This collective narrative was refined, shared and discussed at length by group members at group session 4.

Results from Participatory Narrative Inquiry

The experience of the project group was that by using PNI we were able to explore the issues raised by each participant. These were broad and variable and depended to some extent on the level of digital literacy of each participant.

Infrastructure and support

In order to fully embrace the use of the tablet device there was a requirement for both infrastructure and support (Willmer et al 2014). In terms of our experience of infrastructure, participants fell into two groups. The first two tablet devices were allocated to staff who had acquired them using funds from a successful CLT Fellowship Award. At this time, there was little structured infrastructure and support for mobile devices, for instance poor availability of university WiFi across and within university campuses (Willmer et al 2014). When the next tranche of tablet devices were made available, the infrastructure and support was more developed for example, app swap drop-in sessions, and increased WiFi coverage. Moreover, there was a greater recognition of the importance of support for engagement with technology in learning and teaching (University of Brighton 2014). The PNI process acted as both a form of peer support through 'project meetings' and the process of undertaking the evaluation. This sharing of experiences and the products of that experience (for example, new apps) became important for all nine participants.

Digital literacy

Although levels of digital literacy varied amongst participants, this played a small part in terms of how willing they were to embrace the process. Familiarity with the technology helped navigational issues but, with IT support, the more important issue was each participant's mindset: the extent to which each was open to experiment with the tablet as expressed through PNI by levels of self-confidence.

Utility

The narrative evaluation made visible how communication had changed due to the ease of access to email (synced and therefore 'always on') on the tablet device. All participants noted the improved accessibility across geographical distance. The ease with which it gave access to email and other modes of electronic communication meant that participants quickly felt 'ownership' of their device. Notably this was expressed through the downloading of apps. Additionally, the mobile device positively changed the work processes of participants in terms of access to information (minutes of meetings, marking students' work and supervision processes with students).

In addition, participants were able to personalise their device, and in doing so, faced another dilemma: how to handle the reality of ownership, specifically the 'always on' capability. This continues to present a challenge in terms of work-life balance that remains unresolved, although at least one participant felt that the ability to be able to easily check and respond to email outside 'regular' working hours was an advantage.

The narratives demonstrated how using the tablet changed the way participants communicated. For example, linking to other people via a range of electronic formats that included email, Skype, Google Hangout, blogs, Wikis and social networks such as Twitter. Participants often felt privileged and found that communication quickly became immediate with the portability of the mobile device. Although there were challenges (the burden of owning a scarce resource) confidence grew over time and, unlike the findings of Giddens and Sutton (2013) participants did not find their interpersonal communications were decreased.

Embodiment

Due to the portability of the tablet device, some participants recounted that they changed position more often when using it, resulting in better posture, which in turn reduced eyestrain and back pain. To the contrary for others, the tablet device led to posture issues due to looking down when using the device resulting in neck, head and back pain. For some participants, the tablet device amounted to another technological tool to be mastered; whilst for others, the device was not separate from them, and they were 'changed' by using it.

Participants' narratives included accounts of how the use of the tablet device impacted on their cultural and social identities in the work environment. Tablet device users were the pioneers in our school, leading to questions such as, 'Are we perceived as cutting edge if we have tablet devices?' And 'If we don't have tablet devices how will we be perceived by students who are using them?' Other narratives reflected on how participants felt challenged by the device when having to learn how to use it. Reflection on the experience of learning something new acted as a reminder of how students may feel when faced with new learning. Some participants felt out of their comfort zone and internalised feelings of insecurity, doubting their ability to master the new learning. Confidence grew over time as they became more comfortable with using the device for its myriad of functions, for example, online supervision with students via Skype.

Limitations of tablet devices

The following limitations were recounted in narratives: stories reflected how time consuming participants found downloading an app for each functionality, for example, online assessment, accessing email, opening .pdf documents, opening MS Word documents and editing via the Pages app. Each app had to be searched for and downloaded individually to expand the functionality of the device.

Participants spoke of the dangers of open free Wi-Fi zones. The risks involved have been linked to private information being intercepted, for example, banking details, over open networks that may compromise end user privacy. Private networks at home were regarded as safer.

The tablet device had memory restrictions which prevent larger documents and files from being saved on it. The Cloud can be used for this function by storing information remotely. Confusion arose about the use of Cloud computing for work, and in response, the university developed Cloud access to a SharePoint® site where documents can be stored.

The teaching and learning purposes that participants originally anticipated that they would be able to develop, have not come to fruition. Other limitations, described in the participants' narratives were mostly overcome, with support from the project meetings and deeper understanding of the functionality of the device.

The CLT conference session

The session at the CLT conference presented the findings of the PNI described above, and requested participants to contribute in a similar way to continue co-construction by answering the following three questions:

Question:	Themed responses:
What is your vision on using a tablet device?	<ul style="list-style-type: none"> ▪ Fully integrated ▪ Convenience and confidence, utility and ability to share ▪ Portability and ease of use
What are others' expectations of your use of a tablet device?	<ul style="list-style-type: none"> ▪ 24/7 availability ▪ Expertise ▪ Expectations to use to full capacity for both admin and teaching to be valuable
What support would facilitate you to realise your vision?	<ul style="list-style-type: none"> ▪ Infrastructure and support when required or identified responsiveness to request for support ▪ Limitations of working on long documents

Learning and Teaching Conference questionnaire

The themed responses from conference participants are consistent with the PNI datasets from the original PNI process: specifically around infrastructure and nature of support; levels of digital literacy real and perceived; utility in terms of ease of use and ability to share; and embodiment in relation to convenience and confidence. The only limitation identified was the difficulty of working on long documents, in contrast to the original PNI process which included difficulties in finding and downloading apps; risks of free Wi-Fi zones and confusion about Cloud computing. This may have been reflective of the levels of digital literacy of participants at the conference compared to those included in the original PNI process.

Conclusion and the way forward

An emergent change strategy (Grundy 1993) was appropriate because of the varied levels of digital literacy amongst participants and the need to support participation. The tablet devices were acquired and issued with no strict ideation in relation to pedagogy. The nature and experience of the mature nurse lecturers was varied, as all were digital immigrants (Prensky 2001). Rather than be viewed negatively as having a technologically deterministic approach, our experience of using PNI has been positive, supporting our engagement with technological development. We found PNI aided participants' support to each other to work more efficiently. The provision of tablet devices within our school triggered the growth of a new learning community (University of Brighton 2014), where participants gathered and collaborated over time, in order to become more proficient in using tablet devices. The process was aided by regular group meetings where participants shared narratives and exchanged information. Sharing of the PNI process, through presentation at the CLT conference, enhanced the notion of co-construction, collaboration and engagement. So, PNI enabled experiences to be shared and constructed, maximising the opportunity to work collaboratively for teaching and learning purposes.

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Biographies

Marian Willmer is Principal Lecturer in the School of Health Sciences at the University of Brighton. She has been teaching in the area of health technologies since that late 1990's, adapting and responding to learning needs in this area. Marian has published articles on the challenges of engaging student nurses with the use of Information and Communication Technology (ICT) in clinical practice, and latterly in using digital technologies to support learning. Marian is a Registered Nurse and teaches the application of health technologies across academic levels and to both pre-registration, qualified health professionals and managers.

Simon Whiffin is a part-time Senior Lecturer in the School in Health Sciences. He teaches in the area of health technologies and academic skills across a number of programmes in the school. Simon has an interest in how technology can be used to enhance teaching and learning. In his other role in the school, Simon develops information systems that are used principally to support practice placement learning.

Maggie Stewart has been a Senior Nurse Lecturer since 1991. Her previous clinical experience as a health visitor and research clinician with The Lullaby Trust informs most of her teaching within Public Health. Her masters is in health promotion and her additional scholarly interests are the safeguarding of children and other vulnerable groups. She leads two level-7 modules on these topics. Prior to this project she was talent-free in relation to IT issues and it was for this lack of competence that the project leader invited her to participate.

Linnette King is a Principal Lecturer and manages a special interest group for health law and ethics alongside facilitation of this subject area across a range of academic levels and courses. She is a Registered Nurse with a Postgraduate Diploma in Education, MSc Nursing, Masters in Laws (Legal Aspects Medical Practice) and Masters in Research. Her research and professional interests are in confidentiality, making concerns known, professional responsibility and health, safety and welfare matters.

Dr Ian Taylor is a Senior Lecturer in the School of Health Sciences. His professional nursing background is in acute inpatient and community mental health nursing. Ian moved into nurse education in 1996. His current interests include undergraduate research and evidence based practice teaching. Ian developed expertise in blended learning approaches and has designed and implemented an innovative Clinical Nurse Research Careers module for pre-registration nurses for which he was commended. Ian received an Excellence in Facilitating/Empowering Learning award from the university in 2014, recognising his commitment to students to work creatively to improve the quality of their learning.

Patrick Saintas, Principal Lecturer is Course Leader for MSc Clinical studies. He has a keen interest in the use of digital technologies to facilitate learning and has a Postgraduate Certificate in e-Learning design from the University of Sussex. He is a Registered Nurse with a Master's in Business Administration from the Open Business School. His research and professional interests are online Learning, Leadership and Change Management and the use of digital technologies in Healthcare delivery and Information Management.

Dr Laetitia Zeeman has developed a research and scholarly focus in the field of gender, sexuality and health at the University of Brighton. The central principles of this work question dominant discourses of health to recognise the strengths and abilities of people when they face adversity. When health discourses are actively deconstructed via the narratives people tell of their lives, we make visible how these stories inform identity formation and wellbeing. The overarching aim of this work is to reduce the health inequalities that underpin adversity. By opening up discourses of health and healthcare, and by tackling health inequalities, we can re-imagine participatory and socially just healthcare systems and clinical practice leading to material change.

Helen Stanley is Academic Lead for Nursing in the School of Health Sciences. She has extensive clinical and curriculum development experience in pre- and post-qualification nursing and interprofessional health and social care higher education, and has designed a number of practice-focused educational projects to support workforce planning and service redesign in the NHS. Her current PhD study is to identify the learning and development strategies in a clinical leadership programme that have an impact on workplace practice and culture.
