OPEN ACCESS

University of BRISTOL

Peer reviewed version

Link to publication record in Explore Bristol Research

PDF-document

University of Bristol - Explore Bristol Research

General rights

REFLECTIONS ON WAYS FORWARD FOR ADDRESSING ETHICAL CONCERNS IN MOBILE LEARNING RESEARCH

Jocelyn Wishart
Graduate School of Education, University of Bristol
35 Berkeley Sq. Bristol, UK

ABSTRACT

This paper reflects on a decade of discussions about the range of ethical issues arising in mobile learning research. Research into the educational potential of mobile, handheld technologies to enhance teaching and learning has been regularly frustrated by lecturers' and teachers' concerns about how their students might use such devices. At other times researchers have been surprised by the extent of the personal information made available to them. It presents the use of co-created ethics frameworks and scenario generation as a potential way forward that is more aligned with participatory research ethics than the traditional one-off pre-project approval by an ethics committee.

KEYWORDS

Ethics, mobile learning, participatory research

1. INTRODUCTION

As handheld, portable devices with Internet connectivity via wi-fi or the cellphone network become more and more widely available to students across the globe, many schools, colleges and universities are working to Bring Your Own Device (BYOD) policies so that teachers can capitalize on the potential of such devices to support student learning both inside and outside the classroom. This makes for good opportunities to research the effectiveness of such mobile learning opportunities. However, these devices are first and foremost personal ones, used informally outside class as well as inside, which can result in possible breaches of privacy such as researchers unexpectedly accessing personal information including images. Also not everyone in a class can afford the latest model and time and time again we see their capabilities poorly understood by their owners and data accidentally shared or lost. It is clear that the design of mobile devices themselves is an obvious contributor to these concerns. Andrews, Dyson and Wishart (2015) note that they are highly portable with multiple functions; they can be used unobtrusively and their use, in particular, for taking photographs and videos and uploading them more widely creates huge risks of privacy infringements. This has been a longstanding issue for the mobile learning research community, with researchers finding that their goal of identifying how educators can capitalize on the potential of emerging technologies to enhance teaching and learning has been regularly blocked by lecturers' and teachers' concerns about how their students will use such devices and what they can be used to access. This raises questions about how ethical research into such mobile learning opportunities is and how we can better prepare for these challenges.

2. ETHICS IN MOBILE LEARNING

2.1 What have we learned about ethics in mobile learning?

As early as 2004 researchers in mobile learning were voicing concerns about how to tackle research ethically. Traxler and Bridges (2004) pointed out that a number of professions and bodies publish ethical

guidelines for their members, of which quite a few would be relevant to researchers and practitioners of mobile learning. These were professional bodies for learning technologists, educational researchers and software developers. This approach to considering ethics by 'looking up the rules' is common in educational research and exemplifies taking the deontological approach to working ethically. It emphasizes participants' rights and researchers' responsibilities and led to Traxler and Bridges (2004) construing the major ethical issues inherent in mobile learning as ensuring informed consent, anonymity and confidentiality for participants, obeying guidance on participant risk, payment to participants and cultural differences. However they themselves note, that in 'pure' mobile learning, this is potentially problematic for a number of reasons that centre on the unpredictability of research that follows the learner using a mobile device across different contexts, both virtual and real. Research in these environments can take many forms as educational researchers, including teachers researching their own practice, use data collected on students' mobile devices in, and across, private and semi-public domains, such as classrooms, field trips, workplace training, informal learning and the home. Pachler (2010) adds that mobile learning practices are also personal, intimately bound up with the individuals concerned and their relationship with members of their peer group. In their original paper Traxler and Bridges (2004) go on to highlight that mobile learning, could even take place across several different countries with different legal jurisdictions which begs the question of whose ethical guidelines should a researcher be following in the first place.

Aubusson et al (2009) in their review of the role of the potential of mobile learning for teachers' professional learning conclude, from interviews with teachers, that there are actually five key ethical concerns relevant to classroom based mobile learning that teachers should bear in mind. These are cyber-bullying, potential public access to events and materials intended for a limited, school based audience, sharing of digital materials that include student data for professional purposes, archiving and keeping records of student performance and ensuring informed parental and student consent. Aubusson et al (2009) add concerns over how that ensuring all guidance is complied with conflicts with the potential usefulness of mobile devices to teachers when used to capture aspects of their practice spontaneously. One of their teachers complained "It has to be a pre-arranged and agreed activity."

Thus we reach a dilemma – how best to prepare researchers for potential challenges to agreed, ethical practice when those challenges are yet to be identified? Fortunately Lally et al (2012) remind us of the role iterative and participatory research ethics play in social science research and go on to show how they can be used to address the unpredictability of context and activity and how these relate to ethical guidelines in mobile learning research pointed out earlier by Traxler and Bridges (2004). They concluded that ethical review processes are most valuable in mobile, ubiquitous and immersive technology enhanced learning (MUITEL) research if they are understood not as 'approval' or 'clearance' by an ethics committee or professional body but as contributing to, or even initiating, formative and dialogic practice. However, questions remain over exactly how researchers would construct such a more comprehensive ethical process, particularly in boundary-crossing areas like mobile learning research.

Reflecting on this dilemma, researchers such as Wishart (2009) and Farrow (2011) propose that considering the principles behind the ethical concerns suggested above will assist mobile learning researchers in addressing these questions and in developing such a process. This is supported by Batchelor and Botha (2009) who, informed by their work in Africa where access to mobile technologies outpaced desktop computer access, proposed that a move from a rules-based system of addressing ethical concerns in mobile learning to a value-based system could accommodate these developments. Wishart (2009) started this process by looking back to the early days of computing and information technologies when Norbert Wiener proposed three "great principles" of justice (Wiener, 1954). These are that: justice requires freedom i.e. the liberty of each human being to develop, the equality by which what is just for A and B remains just when the positions of A and B are interchanged and justice requires benevolence. These resonate well with three of the four basic principles that have been largely accepted by the biomedical community for generations and are used to guide moral deliberations today (Beauchamp and Childress, 1983). The fourth principle is non-maleficience which gives us:

- Beneficience (doing good);
- Non-maleficience (avoiding harm);
- Autonomy (respecting choice) and
- Justice (equality of access to resource)

Wishart (2009) crosstabulates these with five key areas of potential ethical concern for mobile learning researchers to create an ethics framework where each cell in the table where a key ethical issue intersects

with an underpinning ethical principle becomes an opportunity for reflection as to what is current practice and what is good practice. Farrow (2011) adopted a similar structural approach in his work to develop an analytical tool to support mobile learning researchers in understanding the nature of ethical issues beyond the more customary strategic focus on gaining research approval. Taking the concepts of deontological ethics (rule based on responsibilities or duties), consequentialist ethics (based on outcomes of an action) and virtue ethics (based on developing as a good person) from moral philosophy he first develops them in the context of mobile learning to create a taxonomy. Farrow (2011) then cross-tabulates this taxonomy with the ethical issues highlighted in the MOTILL Project (set up by Arrigo et al (2010) to identify best practices in using mobile technologies to support lifelong learning) which it was found could be categorized under three headings: accessibility, privacy/security and copyright.

2.2 Why is this framing incomplete?

It is noticeable that issues such as cyber-bullying and accessing inappropriate information do not appear in either of these two thoughtfully considered frameworks yet appear to be strongly associated with teachers and lecturers' concerns over adopting mobile learning. Mobile phones are largely seen as likely to be disruptive not just to the class teacher's pedagogy but to the learning of the entire class, indeed they are banned from all schools in certain states in the USA and India and even in whole countries such as Brunei and Sri Lanka. Katz (2005) further classifies problems generated by mobile phone use by students in educational settings into four groups: disruption of class, delinquency (theft and bullying), chicanery (cheating and plagiarism) and erosion of teacher autonomy. Yet these groupings clearly result from pupil behaviour and not the technology per se. The development of educational research into how to effectively employ handheld mobile devices in class is currently being held back by local, and, in some cases, state or national regulatory frameworks that target the tool and not the operator. However, that said, the mobile learning research community still needs to ensure that all researchers are fully aware of potential ethical concerns and challenges in their work. One way forward, proposed by Andrews, Dyson and Wishart (2015), is centered on researchers using, even developing their own, frameworks to support planning ethical considerations and is presented in the next section.

2.3 Advancing ethics frameworks and scenario-based learning in support of mobile learning research

Andrews, Dyson and Wishart (2015) propose scenario development stimulated by development of an ethics framework as a way to implement ethical professional development of mobile learning researchers. They had noted how discussion over the issues to select for inclusion in a framework such as the one proposed by Wishart (2009) stimulated debate and reflection on ethical challenges and good practice in mobile learning research. Also scenarios, or simulated case studies, are often used in teaching ethical issues as this approach supports contextualisation of issues, exploration of multiple perspectives, reflection, and opportunities to develop collaborative solutions (Herrington, Oliver and Reeves, 2003). They are a known means of articulating issues from real-world experiences and exploring ways forward for the future (Kamtsiou, Koskien, Naeve, Pappa and Stergioulas, 2007). The aim is not to teach others right from wrong but to equip them with the ability to reason about ethics ready for the participatory, iterative approach that Lally et al (2012) point out is so appropriate to mobile learning research. Scenarios have the advantage of making ethical issues concrete and embedding them within a specific context assists professionals to prepare for the ethical challenges they will face in their own practice. One of the frameworks generated is shown in Table 1 below.

Table 1. Exemplar Ethics Framework for Mobile learning Research (Andrews, Dyson and Wishart, 2015)

	Do Good	Avoid Harm	Autonomy	Justice / Equal Access
Boundaries				
Privacy				
Anonymity				
Accessibility				
Ownership				
Awareness				
Risk analysis				

Not all the intersections shown in Table 1 will give rise to relevant concerns to be discussed, it will depend on the situation under consideration and in some instances it will be hard to balance principles. For example with using mobile devices to capture and share images 'avoid harm' may conflict with 'respect user choice' however, the act of considering the ethical issues involved will alert the researcher or educator to the need to come to an agreement with participants or students respectively with respect to that key issue. Using such frameworks has resulted in example scenarios that have been taken up by the International Association of Mobile Learning and are currently shown on its website at http://iamlearn.org/ethical-issues-mobile-learning/research-planning as scenarios to aid research planning.

3. FINAL REFLECTIONS

Ethical questions appear to be part and parcel of mobile learning research, having appeared with regularity over the past decade – today's concerns over privacy and students' inappropriate sharing online may well be overtaken by another issue, for example, cyberbullying is in and out of the news. In such a fast changing context it is important that both researchers are aware of potential ethical issues and that stakeholder and/or participants' voices are heard. Engaging these key players in planning an underpinning ethics framework to be used enables both participants' voices to be heard and the subsequent discussions tailored to their needs and interests. In particular scenario generation stemming from such frameworks has been found to be an effective method of stimulating discussion and raising awareness of potential ethical issues with participants ranging from doctoral students to tenured professors. In future, collating these scenarios could provide a resource that researchers can work through to explore the issues of concern to them and possible solutions to resolve these issues.

REFERENCES

Andrews, T., Dyson, L., & Wishart, J. (2015). Advancing ethics frameworks and scenario-based learning to support educational research into mobile learning. *International Journal of Research & Method in Education*, 38(3), 320-334.

Arrigo, M. et al (eds.) (2010). *Mobile Technologies in Lifelong Learning: Best Practices*. Italian National Research Council.

Aubusson, P., Schuck, S., & Burden, K. (2009). Mobile learning for teacher professional learning: Benefits, obstacles and issues. *ALT-J Research in Learning and Teaching*, 17(3), 233-247.

Batchelor, J. and Botha, A. (2009). Liberating Learning, Educational Association of South Africa, Amanzimtoti, South Africa.

Beauchamp, T.L. & Childress, J.F. (1983). *Principles of biomedical ethics*. Oxford: Oxford University Press.

Farrow, Robert (2011). Mobile learning: a meta-ethical taxonomy. In: IADIS International Conference proceedings, Mobile Learning 2011, 10-12 March, Avila, Spain.

Herrington, J., Oliver, R. and Reeves, T. (2003). Patterns of engagement in authentic online learning environments, *Australian Journal of Educational Technology*, 19(1), 59-71.

Kamtsiou, V., Koskinen, T., Naeve, A., Pappa, D., and Stergioulas, L. (2007). A Glimpse at the Future of Technology Enhanced-Professional Learning: Trends, scenarios and visions". In "*European Networking and Learning for the Future. The EuroPACE Approach*" edited by A. Boonen, W. Van Petegem. Heverlee: EuroPACE ivzw-Garant Publishers.

Katz, J. E. (2005). Mobile phones in educational settings. In K. Nyiri (Ed.), *A Sense of Place* (pp.305–317). Vienna: Passagen Verlag.

Lally, V., Sharples, S., Tracy, F., Bertram, N. and Masters, S. (2012). Researching the ethical dimensions of mobile, ubiquitous and immersive technology enhanced learning (MUITEL): a thematic review and dialogue, *Interactive Learning Environments*, 20(3), 217-238,

Pachler, N. (2010). Research methods in mobile and informal learning: some issues. In *Researching Mobile Learning: Frameworks, tools and research designs* edited by G. Vavoula, N. Pachler and A. Kukulska-Hulme, 2nd ed. Oxford: Peter Lang.

Traxler, J., & Bridges, N. (2004). Mobile learning – the ethical and legal challenges. In J. Attewell & C. Savill-Smith (Eds.), Mobile learning anytime everywhere - Papers from MLEARN 2004 (pp. 203–208). London: Learning Skills Development Agency.

Wiener, N. (1954). *The Human Use of Human Beings: Cybernetics and Societ*. New York: Doubleday Anchor.

Wishart, J. (2009). Ethical considerations in implementing mobile learning in the workplace. *International Journal of Mobile and Blended Learning*, 1(2), 76-92.