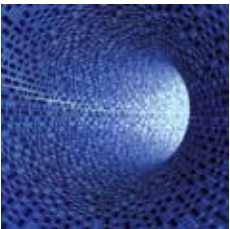


MUITEL: an ethical perspective

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Mobile, Ubiquitous, and Immersive Technology Enhanced Learning



This document is an abridged version of a research briefing for the TLRP-TEL programme. Whereas the full research briefing includes a broader context of ethical frameworks for technology-enhanced learning (TEL), this document focuses on issues of ethics specific to research into learning with mobile, ubiquitous and immersive technologies. With the aid of mobile phones and netbook computers children can now engage in technology-supported educational activities in almost any context. At the same time 'virtual worlds' can offer the possibility of realistic and sustained immersion in educational environments that transcend the formal curriculum.

The principal aims of this document are to:

- propose ethical dimensions of researching the mobile, ubiquitous and immersive aspects of TEL, in the wider context of the digital economy;
- examine the recent literature on the ethical dimensions of TEL research, with a view to identifying key trends, ethical dilemmas, and issues for researchers investigating MUITEL in informal educational settings;
- make recommendations about the management of the ethical dimensions of MUITEL research in informal settings, for further debate among the TEL research and practitioner communities.

We have chosen to focus on MUITEL rather than learning with desktop computers in the classroom or workplace because learning in non-formal settings constitutes the vast majority of any person's educational interactions over a lifetime, so researching how these new forms of interaction can be enabled by personal and social digital technologies is crucial for development of the creative economy and, more broadly, the digital society.

Networked social tools are becoming merged with creative and informal educational pursuits. This blurs the boundaries between formal and informal education, raising major challenges for ethical protocols as researchers attempt to understand what is happening, let alone to integrate these practices into educational innovations. Research that focuses on innovative and informal use of MUITEL for educational purposes, which may engage with young people's personal and private use of technology, poses new ethical challenges. It is also of great importance if the gap between informal digital practices and formal education is not to fracture completely.

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Two TLRP-TEL projects (Inter-Life and Personal Inquiry) have engaged in a dialogue that prompted this document. The projects are exploring with young people the 'intermediate ground' that needs to be bridged, when incorporating informal practices and use into designed educational contexts and supporting the continuation of learning across formal and informal settings. The projects have explored how ethical and educational processes need to be negotiated and distributed amongst participants, rather than pre-determined by their institutional context. This ethical approach has also been taken by the Ensemble project¹ in researching the use of semantic technologies to support case based learning.

The team surveyed international ethical guidelines, formal peer-reviewed literature, and emergent 'grey' literatures. The ethical guidelines of 12 major international organisations were reviewed, where these have relevance to mobile ubiquitous immersive technology enhanced learning (see full research briefing for sources). General ethical frameworks were compared and contrasted and areas of frequent concern investigated. Specific ethical guidelines were also used to highlight common issues relating to the uses of informal MUITEL based research. All the frameworks discussed below will need to be interpreted by institutional ethics review boards. Apart from personal experience of such processes, we have no knowledge of how this process is enacted, leaving a significant gap in understanding how ethics is enacted in practice. The review is organised around themes that we uncovered in the survey and the discussed amongst the team. The themes and findings are offered as prompts for wider discussion in the TEL community. See the full research briefing for references to the literature surveyed.

Iterative and Participatory Research Ethics

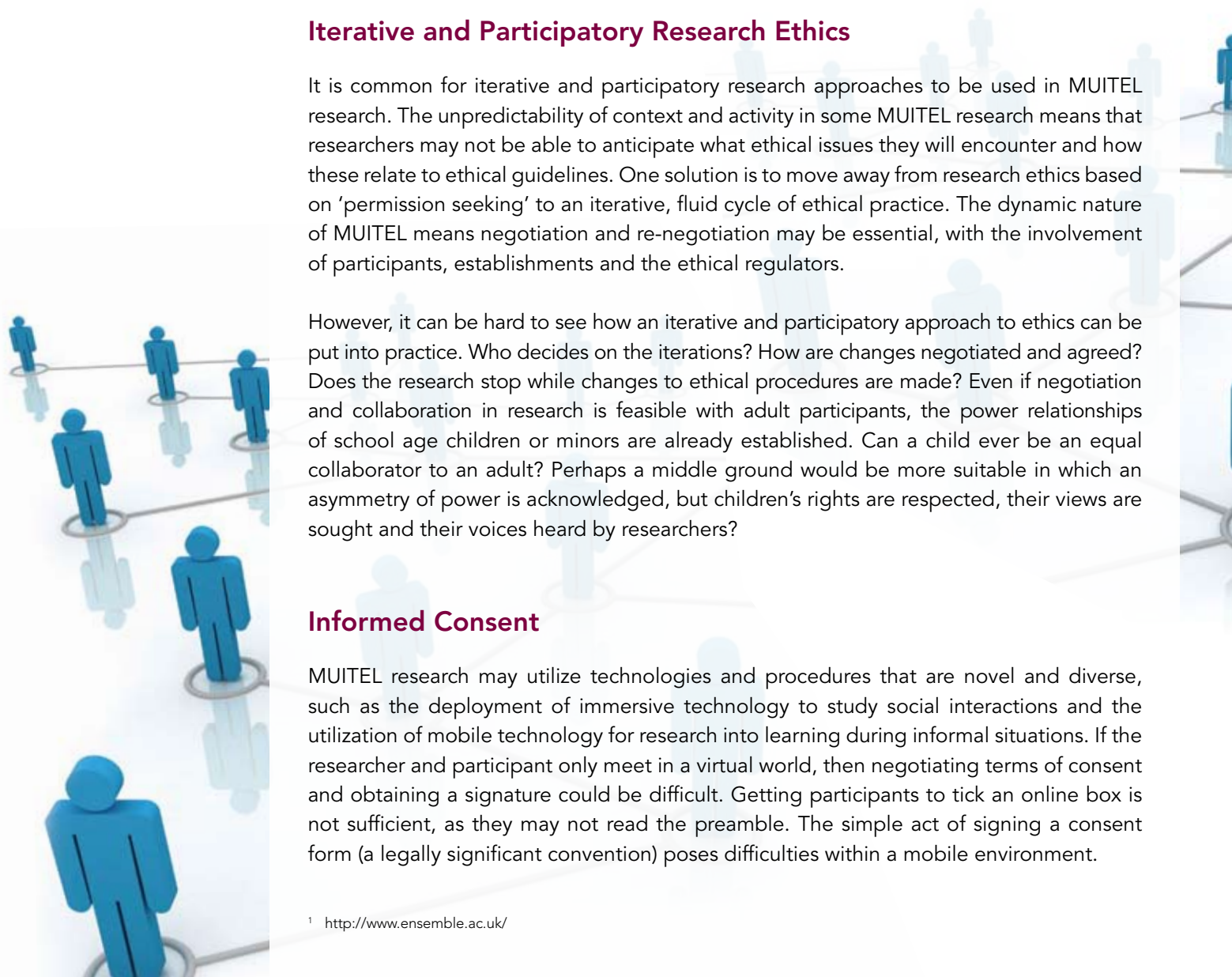
It is common for iterative and participatory research approaches to be used in MUITEL research. The unpredictability of context and activity in some MUITEL research means that researchers may not be able to anticipate what ethical issues they will encounter and how these relate to ethical guidelines. One solution is to move away from research ethics based on 'permission seeking' to an iterative, fluid cycle of ethical practice. The dynamic nature of MUITEL means negotiation and re-negotiation may be essential, with the involvement of participants, establishments and the ethical regulators.

However, it can be hard to see how an iterative and participatory approach to ethics can be put into practice. Who decides on the iterations? How are changes negotiated and agreed? Does the research stop while changes to ethical procedures are made? Even if negotiation and collaboration in research is feasible with adult participants, the power relationships of school age children or minors are already established. Can a child ever be an equal collaborator to an adult? Perhaps a middle ground would be more suitable in which an asymmetry of power is acknowledged, but children's rights are respected, their views are sought and their voices heard by researchers?

Informed Consent

MUITEL research may utilize technologies and procedures that are novel and diverse, such as the deployment of immersive technology to study social interactions and the utilization of mobile technology for research into learning during informal situations. If the researcher and participant only meet in a virtual world, then negotiating terms of consent and obtaining a signature could be difficult. Getting participants to tick an online box is not sufficient, as they may not read the preamble. The simple act of signing a consent form (a legally significant convention) poses difficulties within a mobile environment.

¹ <http://www.ensemble.ac.uk/>



There is also the issue of defining informed consent. For example, a MUI TEL research project might involve a child navigating a virtual environment and making sense of the new surroundings. At an early stage of the project the researcher might be unable to explain fully to the child what they will find in the virtual world as this may pre-empt the investigation if an element of surprise is needed. Also if the virtual world contains more than just the researcher and one participant, does a participant require knowledge of everything about all the other participants they will meet in order for them to give fully informed consent?

For, say, a project on home energy use, a child may be asked to use a handheld device to record aspects of home life and post the results on a class website. Thus, the postings may include private information about other people with whom the child shares a house. Should consent be asked of all the occupants of the house in case personal information is accidentally uploaded along with that of the participant?

Appropriate Researcher Behaviour

A researcher may encourage a young person to participate in developing an online community where they develop a sense of belonging, involvement and ownership. Guidelines suggest that the researcher should tell the participants that they have the right to withdraw from the research if they disagree. But disagree with what? Other participants? The way the researcher is behaving? The researcher taking control? We must ask what affect this would have on the rest of the new community and whether allowing someone to leave would then restrict the educational activity of rest of the community.

When investigating interactions in virtual worlds, adults may have to enter the world and make themselves known in order to gain informed consent, to collect data, and to deal with unacceptable behaviour. This raises the issue of which adults (e.g. moderators, teachers, and researchers) are acceptable as participants in, and viewers of, child-oriented communities. Just because a person may be a responsible adult, that does not mean they have a right to enter a child's virtual world or view child-created content, particularly if they have authority over that child.

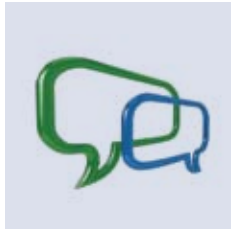
Appropriate Participant Behaviour

Mobile devices and virtual worlds offer the possibility of new forms of unacceptable behaviour, including cyber bullying, offensive texting, and the posting online of images taken with mobile phones. The subtlety of such behaviours may mean they go unnoticed by researchers. Adolescents may often engage in behaviours that could be perceived by others as 'abusive', and by moving this into enduring text, under the gaze of a teacher or researcher, lends it weight in the eyes of both recipient and sender. In an educational setting, participants may be reluctant, or unable, to withdraw from an activity they find unacceptable.

Intrusion of Privacy

If a project requires learners to use their own mobile phones or laptops, then it may encroach on the young person's personal and social world. Researchers have to treat this with great sensitivity and seek informed permission. Even sending text messages to participants' personal phones could cause embarrassment or disruption.





Anonymity and User Generated Content

Particular problems arise with private or anonymous interactions. If an online environment is considered by its users to be public, it poses fewer ethical issues than one that is private, or one where participants wish to stay anonymous. If an online environment is technically accessible, is it public? Although it may be relatively easy to hide the identity of participants in an online environment, through pseudonyms and avatars, is anonymity always appropriate? For certain MUITEL research projects, having a group meet anonymously may be detrimental to the project's ability to build a cohesive community, so aspects of privacy must be considered through the designs of the particular research. Researchers and participants need to be continually aware of changes to privacy and growing awareness of the identities of other participants.

Collecting data gathered from anonymous interactions can be problematic, unless all users of the online environment give explicit consent on entering the environment for their interactions and productions to be analysed.

Attachment

Young people can rapidly become attached to personal and mobile technology, so asking participants to become engaged with personal devices and then asking for them back at the end of the project could be upsetting. Conversely, young people may be reluctant to appropriate loaned devices or to store personal information on them.

One solution could be that at the end of the study researchers should download all material from the device and provide it to the student as a personal record. Another solution is for the researcher to make sure that the machine is fully reset and all data deleted before handing it to another student.

Unmonitored Spaces and Informal Interactions

A MUITEL researcher may be collecting data from physical or virtual spaces that are not monitored by education professionals. What are the ethical responsibilities if the researcher witnesses or records troubling behaviour, such as a fight, bullying, or obscenities? Should this be reported to the appropriate authorities, even if the behaviour might be considered appropriate in the context of the recording? Or does the researcher have a duty to respect the privacy of the participants? All guidelines surveyed are clear that if the research uncovers any illegality, it must be reported to the relevant authorities regardless of how it affects the project.

The 12 organisations reviewed highlight the need to 'above all do no harm'. However, what constitutes harm is based on a complex mixture of moral, legal and personal criteria. This could be deeply problematic for MUITEL research with its capacity to straddle traditional research boundaries and to encroach into the private and social worlds of young people.

The full research briefing is available from www.tlrp.org/tel