# MOBILE LEARNING: A META-ETHICAL TAXONOMY

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**ABSTRACT**

In this paper I discuss some of the ethical issues relating to the use of mobile technologies in education. I argue that the frames of reference used by educators and technologists fail to capture the nature, scope and impact of ethical issues in mobile learning. A taxonomy of ethical issues based on dominant positions in meta-ethical moral theory is proposed. Using categories from the Mobile Technologies in Lifelong Learning (MOTILL) project, I show how this taxonomy can be applied in such a way as to facilitate understanding of ethical issues in mobile learning.

**KEYWORDS**

mobile learning, policy, education, metaethics, methodology

## 1. INTRODUCTION

It is widely recognized that the use of mobile technologies in educational contexts raises a number of ethical issues, and there is a growing body of literature which suggests ethical ways of researching mobile learning. While there is undoubtedly a need for adequate guidance on ensuring that research methods are ethical, my suggestion is that the preponderant focus on research ethics risks obscuring some of the more interesting ethical issues associated with mobile learning.

I will briefly describe the topography of ethical issues in mobile learning before using three popular positions from philosophical meta-ethics as a way of framing three distinct kinds of ethical question which relate to mobile learning. I hope to be able to show how different meta-ethical concerns give rise to distinctive ethical questions and provide ways of conceiving of ethical issues. My discussion of some of the main philosophical frameworks for ethics is intended to provide non-specialists with an improved way of grasping ethical problems and of the ways one might approach one's own interventions more consistently and systematically. Policymakers may also find that the following schematic helps them to formulate and justify consistent policies with respect to their own institutions. My intention is that educators will recognise the relationship between our moral intuitions and several distinct ways of explaining or understanding them. I hope that, by using this tool to refine intuitions and think more systematically about ethics, practitioners will be better equipped to anticipate and deal with ethical issues as they arise in teaching and learning contexts.

## BODY OF PAPER

## 2.1 Ethical Issues in Mobile Learning

Ethics is a complex and contested subject. I take the study of ethics to include developing a systematic understanding of why particular behaviours are (or should be) considered right or wrong. Philosophers commonly distinguish three main areas of ethical inquiry. *Normative ethics* concerns the attempt to arrive at standards and values that can regulate our conduct. *Meta-ethics* is a deeper examination of the concepts, reasoning and language surrounding ethics. *Applied ethics* involves bringing these tools to bear on specific (and often controversial) issues. I will be concentrating here on the first two (and primarily the latter).

## 2.1.1 Opportunities and Dilemmas

Mobile technologies present educators with a plethora of new pedagogical possibilities. There is a considerable body of research which suggests that mobile technologies can be a catalyst for learner-centric education (Sharples *et al.*, 2007); help to organize, distribute and manage collaborative learning (Lundin & Magnusson, 2003) and conversational learning (Sharples, 2002). Wireless internet devices offer immediate, context-specific access to immense amounts of multimedia information. Mobile technologies facilitate the generation of new forms of knowledge, challenging traditional, formal notions of education (Traxler, 2009). Schuler (2009) provides a useful summary of the opportunities commonly associated with mobile learning.[1]

1.) *Encourage "anywhere, anytime" learning*. Mobile devices allow students to gather, access, and process information outside the classroom. They can encourage learning in a real-world context, and help bridge school, afterschool, and home environments.

2.) *Improving Accessibility*. Because of their relatively low cost and accessibility in low-income communities, handheld devices can help advance digital equity, reaching and inspiring populations "at the edges" — children from economically disadvantaged communities and those from developing countries.

3.) *Improve 21st-century social interactions*. Mobile technologies have the power to promote and foster collaboration and communication, which are deemed essential for 21st-century success.

4.) *Fit with learning environments*. Mobile devices can help overcome many of the challenges associated with larger technologies, as they fit more naturally within various learning environments.

5.) *Enable a personalized learning experience.* Not all students are alike; instruction should be adaptable to individual and diverse learners. There are significant opportunities for genuinely supporting differentiated, autonomous, and individualized learning through mobile devices.

Enthusiasm about the incredible potential of mobile devices has been tempered by the hazards that have been identified around mobile learning (which are far more common in the research literature than suggestions for ameliorating them). The effective use of mobile devices in teaching and learning can present considerable functional, cognitive and social challenges (as well as more practical ones). Smartphone technologies dramatically extend the reach of the internet, exposing larger numbers to the risks associated with internet use (Livingstone, 2003). Grinter and Palen (2002) have described at length the ways in which mobile and social networking technologies may facilitate bullying and other anti-social behaviours.

Researching mobile learning also presents a number of problems, such as getting informed consent from participants to be monitored (Sharples, 2009; Pachler 2009). Because of the unique challenges raised by mobile learning from a research ethics perspective, most of the work that has been carried out in this area has understandably been on the implications for research ethics of the move to mobile technologies in learning. It's fair to say that certain cautiousness is typically employed with respect to the use of mobile technologies in education: researchers typically refrain from causing harm to students or subjects to the extent that this becomes their over-riding concern. (As such, they observe a kind of negative utilitarianism (Popper, 1952)).

Perhaps because of this fixation on research considerations, educational technologists have struggled to find the right analytical tools for understanding the nature of ethical issues beyond research approval. It is common for those who are not specialists to take the view that ethics is largely a matter of achieving consent, accommodating personal preferences and minimising the potential for harm. Indeed, these are coherent moral ends. But they are not sufficient for a full appreciation of all the relevant ethical issues. This has led some researchers to suggest that it is important to go surpass a procedural approach to research ethics in

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[1] Adapted from Schuler (2009).

favour of an approach which sees the research subjects as partners in the exercise (Bakardjieva and Feenberg, 2001; Elliott, 2006) or to focus instead on the importance of wider social practices (Roschelle, 2003).

### 2.1.2 Challenges to Ethical Mobile Learning

I suggest that there are four main reasons why educational technologists might find ethical mobile learning a particularly challenging subject.

1.) Firstly (and perhaps most importantly) ethics itself is a subject about which it is difficult to be clear. Ethical concepts are slippery and complicated, and for many it's natural to lapse into either a kind of lazy ethical relativism ('follow your own path') or to conform to 'the rules' or mores as we find them.

2.) Furthermore, the diversity of mobile devices and their contexts of application can make it very difficult to anticipate and make a judgement about ethical issues that might arise. This means that the advice given in general ethical guidance is often vague and non-transferable.

3.) Unless they have worked specifically on ethical issues, most educational technologists understand ethics primarily from the perspective of research ethics (which are largely a matter of conformity to recognised 'ethical' practice and lack the kind of autonomous judgement which is distinctive of morality.

4.) Educational technologists who write and publish about mobile learning are, to a considerable extent, simultaneously prominent advocates for mobile learning. In practice, there is a general wariness about sharing experiences for fear of inspiring sensationalist headlines. This makes it more difficult to share experiences and think collectively about the ethical challenges that mobile technologies raise in educational contexts.

## 2.2 Meta-ethics

Finding ways to systematically understand or justify our normative commitments is the distinctive challenge of moral philosophy. Clearly it is impossible, in a paper of this length, to discuss every possible mobile learning scenario, or provide exhaustive guidance on the ethical use of mobile technologies. Instead, I propose to introduce some vocabulary and some basic concepts from meta-ethics.[2]

### 2.2.1 Normative and Meta-Ethics

Meta-ethics can be summarised as the study of the meaning and use of moral language. It is typically contrasted with normative ethics (which is concerned with making more specific recommendations on how to behave or what kind of values one should have). Ethical questions are concerned with the kind of moral judgements and actions we should take, while meta-ethics aims to interrogate the meaning and coherency of our moral language and concepts; what it means to make a moral judgement, and what kinds of justification might be given for them. One example of a normative ethical question might be 'is it good to give to charity?' The relevant meta-ethical question might be, 'what is goodness?' Depending on the situation, one's meta-ethical convictions might suggest a particular course of action, but meta-ethics is not concerned with actions per se. Most philosophers argue for one of three main meta-ethical positions (or some combination thereof): deontological, consequentialist or virtue-based.

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[2] The emergence of meta-ethics as a distinct branch of ethics is usually traced by scholars of ethics to Moore (1903).

### 2.2.2 Deontology

A deontological (literally, the 'science of duty' from the Greek δέον [deon] meaning obligation or duty and -λογία, [-logia] meaning 'rational inquiry') approach to morality emphasizes the importance of duties, obligations, rights and responsibilities. Deontologists are interested in the precise nature of our moral obligations, where conflicts between them may exist, and where there might be exceptions. In mobile learning environments, questions of this kind might focus on the behaviour expected of teachers and learners. A deontological perspective may be more useful when considering the kinds of responsibilities and duties that are relevant to particular m-learning scenarios. Note that these are distinct from legal obligations, though they share the same character (and may overlap with them). Principles of justice and equal treatment typically fall under this category because they treat all agents as of equal worth. A deontological perspective may be helpful because of its focus on the kinds of duties and obligations teachers and learners have in different m-learning scenario (such as those set out in employment contracts or relevant policy documents).

### 2.2.3 Consequentialism

Rights or duty-based deontological approaches must, to some extent, treat outcomes as of lesser moral importance since they do not feel that good outcomes are in themselves normative. By contrast, any consequentialist meta-ethics assess the 'rightness' or 'wrongness' of actions specifically in terms of their consequences: consequentialists believe that talking about the rightness or wrongness of an action is equivalent to talking about the desirability of the (likely) outcomes.

Consequentialism can be useful when comparing the likely results of different courses of action. In the case of mobile learning, a consequentialist analysis might try to elaborate the full implications that could result from the appropriate or inappropriate uses of mobile technology in teaching and learning contexts. Utilitarianism is the most common form of consequentialism. Utilitarianism offers a way to evaluate decisions and outcomes in terms of their aggregate effect or 'utility'. One way of understanding this approach to ethics is as a kind of cost/benefit analysis of the different potential outcomes of an action. Rudimentary forms of utilitarianism have been criticised for misconstruing ethics as a kind of calculus (Hamm, 1989) but it's still the case that most institutional policies are normally drawn up with broadly utilitarian principles or methods of justification in mind.

### 2.2.4 Virtue Ethics

A virtue ethics approach focuses upon the desirability of traits, skills and characteristics of agents: virtue ethicists believe that ethics is about cultivating the qualities and habits that contribute to a good or 'flourishing' life. The tradition of virtue ethics may be traced back to Ancient Greece, and though what we think of as virtuous has changed since then, reflections on the skills and attributes that will be needed by successful people remain highly relevant to technology-enhanced learning. In a mobile learning context, we might speak about the kinds of good habits teachers and learners should aspire to develop, and the qualities of a 'good' or 'virtuous' mobile learner/teacher. These will include acquiring and making use of the relevant technological, didactic, communicative and social skills. We can approach ethical issues from this developmental perspective by thinking about how the learning experience accommodates student needs and expectations.

### 2.2.5 Summary of Meta-Ethical Positions

The following table summarizes some of the differences between the major meta-ethical positions.[3]

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[3] It should be noted that this way of representing meta-ethical difference is heavily simplified. What I have produced here does not convey the richness of the ongoing debate about the role and status of meta-ethics within moral philosophy. Useful introductions to meta-ethics include Williams (1985) Sayre-McCord (2007) and Miller (2003). A meta-ethical bibliography is available from Lenman (2010).

Table 1. Differences Between Predominant Meta-ethical Approaches

| Meta-Ethics | Definition of 'good' | Focus | Strengths | Weaknesses |
|---|---|---|---|---|
| Deontological | Fulfillment or discharge of (moral) obligations | Responsibility, intention & duty | • Avoids overly demanding aspects of consequentialism<br>• Accounting for cross-cultural moral intuitions<br>• Reflects our moral intuitions and captures the sense in which morality 'binds' us like a law<br>• Clear moral boundaries | • Possible conflicts between different duties and rights<br>• Outcome 'blindness'<br>• Inflexibility: rules do not change according to context |
| Consequentialist | Maximising utility or 'pleasure' | Consequences and outcomes | • Captures 'objective' sense of morality<br>• Can incorporate multiple perspectives<br>• A practical approach to ethical problems | • Endorsement of counter-intuitive or objectionable outcomes<br>• Issues surrounding metrics<br>• No link with intention behind actions (which seem in themselves to be morally important) |
| Virtue Ethics | Flourishing (or *eudemonia*) | Individual character and 'well-being' | • No complex procedure of decision making. It trusts that a 'virtuous' person will make good moral choices.<br>• Recognises morality as a holistic, developmental process<br>• Emphasis on enjoying life and it being good to live virtuously<br>• Considers life experiences as a whole<br>• Linked to personal development | • Disagreement: 'virtuous' people may not agree on the right thing to do<br>• Problems with proposed link between virtue and flourishing<br>• Struggles to accommodate value plurality<br>• Promotes self-centredness or egoism |

It is not my intention here to argue for the superiority for one (or more) particular meta-ethical approach. It's important to appreciate that there are extensive debates both within and between each of these approaches to ethics, and they shouldn't be thought of as in necessary competition or tension: each position has relative strengths and weaknesses, and most philosophers think that some sort of combination and refinement of these basic meta-ethical positions represents the best way of getting to the 'truth' about ethics. Thus, 'hybrid' or synthesized approaches are common in moral philosophy.

## 2.3 Meta-ethics in the Context of Mobile Learning

The three main meta-ethical positions outlined above denote three different ways of understanding ethical significance. I have already intimated some of the ways in which these might relate to mobile learning, but I will now attempt to do this in a more systematic way. What I would like to propose at this point is that practitioners can make use of these three basic meta-ethical distinctions by thinking about the ethical issues facing them under three related rubrics: *responsibilities*, *outcomes* and *personal development*.

Table 2. Relating Meta-ethics to Ethical Areas

| Meta-ethics | Ethical Issues |
| --- | --- |
| Deontological | Responsibilities |
| Consequentialist | Outcomes (Results) |
| Virtue Ethics | Personal Development |

The relationship between these meta-ethical positions and ethical issues is based on how the different meta-ethical positions present alternative explanations of the fundamental nature of ethics. The deontologist believes that ethics is a matter of duty and responsibility. The consequentialist believes that ethics is a matter of promoting good outcomes. The virtue ethicist believes that ethics is about cultivating good habits in order to flourish. Thus, three different accounts of the meaning of moral language emphasize three different ways of reconstructing moral dilemmas in order to think more intelligibly about ethics.[4] I mentioned before that philosophers often argue that we need to combine different meta-ethical approaches depending upon the rule or norm under investigation. Similarly, we further contextualize ethical concerns by producing a second tier of areas of ethical interest by synthesizing each of three areas with each other. For instance, the convergence of responsibilities and personal development concerns *pedagogical relationships*: what is expected of teachers, students and other stakeholders. Thinking about the connection between responsibilities and outcomes leads us to the kinds of *rules and policies* that different institutions employ for ethical reasons. Finally, focusing on the relationship between outcomes and personal development leads us to the *learning outcomes* associated with a particular activity. This diagram illustrates their interconnectedness.

Figure 1. Diagrammatic Representation of (Second Level) Taxonomy



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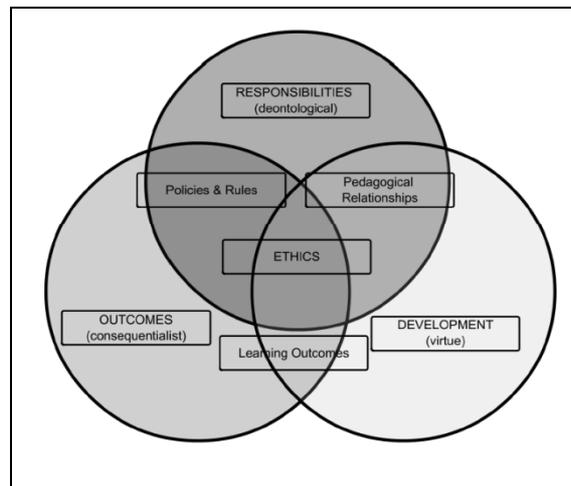
[4] My intention here is not to suggest that moral dilemmas have straightforward solutions when one of these positions is taken – indeed, they don't – but rather to provide a descriptive framework for considering ethical issues which incorporates and distinguishes the right areas. Issues about the desirability of the outcome, for example, are quite distinct from the question of the right pedagogical relationship. (For example, we might get the 'best' results from an evaluative standpoint by threatening extreme forms of punishment which students are keen to avoid.) Practically speaking, the different kinds of ethical consideration may well be considered, but the systematic relationship between them may not be recognized.

'Ethics' appears in this diagram as an undifferentiated nexus of competing concerns. But this is precisely how ethical issues tend to manifest themselves to us and partly what makes them so complex and difficult to resolve. This diagram shows how the different aspects of ethical problems can be identified and compared through a process of *reconstruction* that is likely to produce a fuller understanding of the relevant issues. These distinctions might be thought too abstract or too general to be usefully applied. In my view, it is precisely the flexibility of this taxonomy that makes it a desirable way to think about the ethical issues surrounding mobile learning in a productive and systematic way. Such a method allows us to analyse the essence of the ethical concerns rather than the particular topics on which we focus.

## 2.4 Application

In developing this way of categorizing ethical issues in mobile learning, my intention is that practioners could make use of the proposed taxonomy when ethical issues arise in order to think more clearly about the different kinds of concerns that are often obscured by the complex reality of a situation that is far from straightforward. In order to show how one might use this taxonomy as a tool for understanding ethical issues, I will discuss a couple of contemporary examples of ethical issues in mobile learning as identified by researchers on the MOTILL Project.

### 2.4.1 Ethical Considerations in the MOTILL Project

The MOTILL Project developed a framework for assessing pedagogical approaches that exploit mobile technologies for lifelong learning in order to identify and proliferate good practice. The project was funded by the European Commission, and involved partners from the Italian National Research Council, The Open University (UK), Trinity College Dublin (Ireland) and Corvinus University of Budapest (Hungary). One of the tools developed by researchers on the project was a grid for evaluating different mobile learning projects consistently and effectively while considering local and national contexts. Working from key concepts in mobile learning, a series of structured interview questions was composed. One of the areas identified as relevant to the Evaluation Grid was 'ethical considerations'. Indeed, they cut across the entire grid, as the following extract shows.

Figure 2. MOTILL Evaluation Grid[5]



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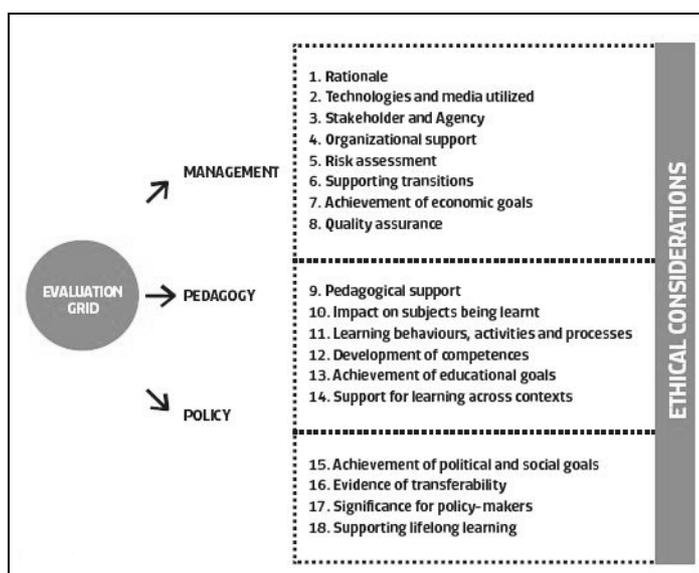
[5] Arrigo, M. *et al* (eds.), 2010 p. 7

The MOTILL Project categorised ethical issues under three headings: accessibility, privacy/security and copyright. Since these categories were chosen by expert researchers in mobile learning, we can trust that they accurately denote the areas relevant to mobile learning.

### 2.4.2 Synthesis with Proposed Taxonomy

Taking the categories from the MOTILL Evaluation Grid and cross-referencing them with categories from the ethical taxonomy (Figure 1) gives us the following grid.

Table 3. Synthesizing the Taxonomy with Areas of Ethical Interest in Mobile Learning

| Ethical Concerns in M-Learning | Taxonomy | | | | | |
|---|---|---|---|---|---|---|
| | Responsibilities | Pedagogical Relationships | Personal Development | Learning Outcomes | (General) Outcomes | Policies & Rules |
| Accessibility | | | | | | |
| Privacy & Security | | | | | | |
| Copyright | | | | | | |

Clearly, not all of these categories will necessarily be relevant to all scenarios or mobile learning initiatives. However, the grid can be used to generate relevant research questions of both a general and specific nature. If specific areas of inquiry are identified, the leftmost column can be redefined. Indeed, this grid could be used for analyzing the ethical issues around any learning activity. However, the three categories extracted from the MOTILL methodology provide a good starting point for practitioners in the field of m-learning. The grid is intended to be flexible enough to be adapted to different pedagogical scenarios rather than to identify and prescribe the correct kind of 'rule' to apply in existing contexts. This approach is intended to enhance (rather than replace) reflection on ethical issues and support those involved with mobile learning by helping them to think about ethics in a systematic way. The framework accommodates applications as diverse as policy review, lesson design, evaluating institutional activities and describing the ethical importance of research projects.

## 2. CONCLUSION

By adopting a *reconstructive* approach to ethics, those involved in mobile learning can gain new insights into the ethical significance of their activities and find space to reflect meaningfully on their activities. Given the diversity of devices and contexts of use in mobile learning, it is not possible to prescribe the 'ethical' thing to do in advance of every situation, and nor should one consider this to be desirable. Educators need to continually use their own judgement when dealing with ethical issues and dilemmas that arise in the context of teaching and learning. This is both a practical concern – teachers themselves are likely to have a better understanding of the situation that a third party – but also a philosophical one. Without using one's own judgement and taking responsibility for one's own actions, one cannot be said to be acting ethically. It might be possible to replace this kind of ongoing attentiveness to ethics with what Wittgenstein (1972) called 'blind rule-following', but given the pace of developments in mobile learning it is likely that practicioners will need to be reflect continually on the moral significance of technology-enhanced learning.

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