

Adaptive ethnography: Methodologies for the study of mobile learning in youth culture

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ABSTRACT

This paper focuses on the use of an adaptive ethnography when studying such phenomena as young people's use of mobile media in a learning perspective. Mobile media such as PDAs and mobile phones have a number of affordances which make them potential tools for learning. However, before we begin to design and develop educational materials for mobile media platforms we must first understand everyday use and behaviour with a medium such as a mobile phone. The paper outlines the research design for a PhD project on mobile learning which focuses on mobile phones as a way to bridge the gap between formal and informal learning contexts. The paper also proposes several adaptive methodological techniques for studying young people's interaction with mobiles.

Keywords

Situated learning, mobile phones, ethnography, adaptive methodology, affordances, user-centred design

INTRODUCTION

Mobile phones are an integral part of young people's communication culture today. At the same time, research into learning and media use suggests that learning is a phenomenon that takes place anytime anywhere cf. the discussion on informal and lifelong learning. Taking the specific affordances (Gibson 1979) of mobile media as a point of departure, it will be a challenge to investigate whether there is basis for mobile learning to become a part of the learning space of young people both within and outside the school.

The purpose of this paper is to discuss how to adapt ethnographic fieldwork to the study of mobile learning and in so doing to break down the somewhat crude distinction between formal and informal learning contexts. Mobile learning projects are characterised by intended learning and takes place in mainly formal learning contexts such as schools or semiformal spaces such as museums and science centres. However, when it comes to designing educational content and applications for mobile devices, it is safe to argue that "usability, usefulness, and social acceptability of future mobile services require understanding present-day mobile behaviour" (Oulasvirtta et al 2003: 3). For the time being, that behaviour revolves mostly around mobile phones, which is why we need to investigate this media using adaptive ethnography.

A STUDY ON MOBILE LEARNING

Previous research on mobile phone use has focused mainly on its socio-cultural implications such as the coordination of everyday life and the constant need to be in touch. Mobile phones have been treated as a sort of *apparatus* of our age, and countless articles have been written on the so called SMS-generation and the disruption of the public sphere. There is no question that these are very important features of mobile media and should be treated as such, but there is a tendency to ignore the potential of mobile media to facilitate something other than keeping in touch with friends or disturbing public space: that of informal learning.

Applying a learning perspective to the use of mobile phones is somewhat new and calls for using a variety of methodological tools. Indeed, studying media use that is indeed mobile and not fixed to a particular context or physical location is a challenging task. Furthermore, there is the added complexity of how to study learning processes. Using a combination of adaptive methodological techniques will therefore be a key factor in my PhD project with the working title *Mobile learning: how young people communicate about health and learn about health*. In the project I am asking questions about first and foremost a) how the use of the mobile phone as we know it in youth culture today can facilitate informal learning processes on health-related issues, and b) if there is a potential for mobile phones to be used as a platform for e.g. SMS-services, educational games, or e-learning software on health issues across various learning contexts.

Although the research design outlined for the project also entails the use of traditional qualitative methods such as focus groups interviews, the emphasis is largely on doing observational fieldwork around a Danish upper secondary class combined with the use of mobile media user production and computer logs of text messages. The fieldwork will consist of contextual interviews on young

people's perceptions about health and mobile phone use, observation of health education in the classroom, and essays about informants' relationship to their body.

Furthermore, computer logging of text messages and multi media messages will be used to analyse the discourse production taking place in the virtual communication space of the mobile phone. In addition to these data, I will provide the informants with tasks to solve by using their mobile, such as creating their own mobile weblogs and making photographic essays about health using their camera phone. The fieldwork is carried out in order to provide necessary data on young people's conceptions about health on the one hand and their relationship with the mobile phone on the other in order to inform the design process of developing a cross-media educational game on health for a mobile phone platform. Going beyond the scope of this particular project, I would argue here that the practice of developing mobile learning materials intended for 'formal' learning should consider the informal learning processes that may already take place during mobile phone use.

SITUATED LEARNING AND MOBILE COMMUNICATION

Here, it can be fruitful to view informal learning as an expression of situated learning, thus leaving behind the problematic distinctions made between formal and informal learning. This takes us beyond cognitive understandings of learning as being internal, or 'within the skin', of individuals towards an understanding that takes in the social.

Thus we can talk of 'situated learning'. This can be seen as involving participation in *communities of practice*. According to Lave & Wenger's theory on situated learning, learning takes place whenever the learner acts as a participant in social practice (Lave & Wenger 2003: 21). This very wide definition of learning leaves room to the notion that young people may actually learn something from each other when participating in the social practice that is mobile phone communication, producing discourse as they go along. In situated learning theory, the focus remains on learning as practice in the sense that you do not learn something until you actually do it yourself. Likewise, the intricacies of text messaging codes and mastering different functionalities of the mobile phone are learned by the user only when actively carrying out the practice.

Furthermore, the mobile phone is ideal for collaborative tasks such as constructing text messages with your friends, helping each other to find cool ring tones, press-on covers and other ways of personalizing your phone. Combined with the possibilities for talk, chat, playing games and sharing pictures, the mobile phone becomes a medium for information exchange, relationship maintenance,

entertainment, gossip and self representation. But how do we grasp the learning processes that arise from this kind of social discourse production? Ethnographic fieldwork may be the answer.

ADAPTIVE ETHNOGRAPHY: TOWARDS DESIGNING FOR MOBILE LEARNING

Researching mobile phone use is a novel situation much like researching life on the internet is. For online research, ethnography has been used in new and experimental ways to understand social interaction by adapting ethnographic tools to work on the computer screen. Christina Hine explains the need for this in her work on *Virtual Ethnography* (2000): “[t]he methodology of an ethnography is inseparable from the contexts in which it is employed and it is an adaptive approach which thrives on reflexivity about method.” (ibid.:13). Hine argues that the researcher has to adapt methodology in innovative ways, if they are to take both offline and online contexts into account: “Extending and adapting ethnography provides both a site for reflection on what counts as ethnographic experience and a site for reflection on the implications of mediated communication (ibid.:156)”.

The ethnographic experience of mobility is quite different from that of spending six months exclusively in one setting such as a classroom. However, ethnography is not limited to the Malinovskian tradition of immersing yourself in the field for a very long time, becoming one with your subject of study. According to British researchers Alex Taylor & Richard Harper the term ethnographic describes: “(...) a particular form of 'investigative fieldwork' that seeks to describe, qualitatively, the means by which people organise and present themselves in their everyday lives” (2003: 269), which certainly broadens the perspective on what counts as ethnographic experience much like Hine suggests. For their study on mobile phone use, Taylor & Harper used observational field notes from approximately eighteen hours of observation in addition to transcripts from eight video-recorded group interviews with six students (ibid.). Taylor & Harper also asked students to log their text messages during specified periods and take pictures with their camera phones of things that might be of interest in relation to phone use in their daily lives, adapting the research design to include a participatory process.

When departing from the notion of 'classic' ethnography, there is a vast array of available methods for studying mobile technologies-in-use. As mentioned before, one might let young people produce empirical data themselves not only through drawings and diaries but by using the functionalities of the phone itself, and in so doing taking advantage of a medium that can be difficult to do research on because of the challenges posed by mobility.

For instance, SMS can be used as a tool for doing interviews in the field and producing on site reports by users when doing usability tests of e.g. location based services. Likewise, mobile phones with advanced functionalities can be used to produce small audio and video clips, e.g. letting friends produce short video clips on each other's mobile media use. Camera phones can be used to produce moblogs as innovative media journals, and a combination of SMS and MMS can be used to produce thematic stories for either analytical purposes or school presentations. The list of innovative methodological tools will no doubt expand as functionalities and applications of mobile phones increase. These adaptive approaches also lets the researcher focus on young people's mobile media literacy in a variety of settings, cutting across both informal and formal learning contexts and instead focusing on situated learning defined by creativity with and reflections on the medium at hand.

Such findings were made by Isomursu et al (2004) when they performed user experience tests on location aware ads sent to mobile devices. The idea was to get video material on how users perceived the functionalities of a context aware PDA but they quickly realised that letting users work together in pairs, making small video clips of each other using advanced mobile phones, proved much more fruitful to their research than following them around with a video camera as this would be too intrusive and create a disturbance in public space (ibid.: 85). Furthermore, users who knew each other would be much more open and expressive about their experiences with the medium than if they had been followed by a researcher. Here, the mobile phone affords users to be collaborative and creative through the possibility of producing these "Experience Clips".

Combining ethnographic work with usability testing and design for mobile learning is necessary in order to gain a full understanding of mobile media use in all its contexts so that it can be implemented in the design of educational materials. However, it is nothing new to use ethnography in design. Ever since Lucy Suchman's work in *Plans and Situated Actions* from 1987, applied ethnography has been commonplace in design processes of IT products. According to Halse, for this kind of ethnographic practice "*doing fieldwork* cannot be separated from *doing design* or *intervening*. The descriptive account of what a setting really *is*, will necessarily be a highly contestable compromise of what the setting is for different actors" (Halse 2003: 66).

Furthermore, intervening in the field is not something the researcher can choose to do or not to do, but it is "(...) an unavoidable condition of ethnography. As soon as it is realised that ethnographic research is from somewhere and does affect the world, we have a basic motivation for the combination of Anthropology and design: *why not try to affect it well and intentionally?*" (ibid.).

Taking the above into consideration, it is safe to say that adaptive ethnography can provide a useful means of informing the design process of mobile learning materials. What is needed now for research and design of mobile learning is continuous *in situ* ethnographic fieldwork in a variety of settings in order to understand the differences in the importance of mobile phones in youth culture.

CONCLUSION

In this paper, I have outlined various approaches to the study of mobile media use, particularly the use of mobile phones in youth culture. Although a relatively new field of research, there is growing academic interest in the connections between the so called SMS-generation and mobile technologies. Much is yet to be discovered, specifically when going beyond the socio-cultural uses of the medium. Studying and developing materials for learning with mobile devices is the new frontier, but already there seems to be a tendency to focus on what the technology is capable of rather than what users are really interested in doing with the technology. Observing the users interact with the prevalent technology in a naturally occurring environment is of great importance here. No laboratory situation will tell you how a normal person is interacting with a mobile phone when on the go. The challenge of studying mobile media use is the affordance of the medium itself: its mobility.

REFERENCES

- Gibson, James Jerome** (1979): *The Ecological Approach to Visual Perception*, Houghton Mifflin Company
- Halse, Joachim** (2003): *Designing mobile IT and studying design practices - Exploring intersections of Anthropology, Interaction Design and the emergent discipline of Design Anthropology*, IT University of Copenhagen, Master thesis
- Hine, Christine** (2000): *Virtual Ethnography*, Sage Publications
- Isomursu, Minna et al** (2004): *Experience Clip: Method for User Participation and Evaluation of Mobile Concepts*, Participatory Design: Proceedings of the eighth conference on Participatory design: Artful integration: interweaving media, materials and practices - Volume 1, pp. 83 - 92
- Kasesniemi, Eija-Liisa** (2003): *Mobile messages - Young People and a New Communication Culture*, Tampere University Press
- Kreijns, Karel et al** (2002): *The Sociability of Computer-Supported Collaborative Learning Environments*, Educational Technology & Society 5(1) 2002
- Lave, Jean & Wenger, Etienne** (2003): *Situeret læring og andre tekster [Situating learning and other texts]*, Hans Reitzels Forlag

Oulasvirta, Antti et al (2003): *Understanding Mobile Contexts*, Information Ergonomics Research Group, Helsinki University of Technology & User Experience Research Group, Helsinki Institute for Information Technology, presented for MOBILEHCI 03 by Antti Oulasvirta

Schröder, Kim et al (2003): *Researching Audiences*, Arnold

Taylor, Alex S. & Harper, Richard (2003): *The Gift of the Gab?: A Design Oriented Sociology of Young People's Use of Mobiles*, Computer Supported Cooperative Work 12, pp.267-296, Kluwer Academic Publishers

Weilenmann, Alexandra (2003): *Doing mobility*, Göteborg University, dissertation