Teachers defining mobile learning: Conceptualisations emerging in a development project

Jimmy Jaldemark, Lena Randevåg

*Department of Education, Mid Sweden University, jimmy.jaldemark@miun.se,
lena.randevag@miun.se*

Abstract

From a historical perspective, new information and communication technologies have rapidly been introduced in the development of higher educational settings. Such introductions have led to new ways of bridging the boundaries of time and space. In recent decades, this development has conveyed that mobile devices and social media have found their way into the teaching practices of higher education settings. However, before being implemented in the ordinary activity of teaching practices of higher education, these applications are often embraced in development projects that aim to raise the quality of higher education. One particular problem that arises in such projects is how teachers understand and conceptualise the areas of focus of the projects. One issue in projects that emphasises the introduction of mobile learning in higher education relates to how teachers define and conceptualise mobile learning. This short paper emphasises aspects of this problem. It aims to discuss and analyse emerging conceptualisations and definitions of mobile learning in higher education teaching practices. The study deals with the research question: What emerging conceptualisations and definitions of mobile learning in the teaching practices of higher education appear among teachers who participate in a development project? The project is currently in the first stage, including preliminary results from the analysis of empirical data from interviews and from observations of online teaching within six courses in a Swedish higher education institution. The interviews comprised open-ended questions. Online observations include data taken from two sources; the first source includes online dialogues of students and teachers recorded in learning management systems and various social media applications; the second source includes documents related to the teaching in the sampled courses. The initial analysis indicates that in the studied development project, different conceptualisations and definitions of mobile learning emerged. Various meanings were emphasised by the teachers of what mobile learning means and how it relates to the design of courses and to their work as teachers. Such differences might relate to interests, knowledge, beliefs and how they link mobile learning to their own processes of life-long learning. Nevertheless, the emerging definitions of mobile learning from the included teachers are preliminary in this stage of the research. To reach a more thorough understanding of the research question, the empirical data need further analysis. Moreover, the results need to be illustrated with excerpts from the interviews and the data recorded in the learning management system and the additional applications applied in the studied educational settings.

Research Context

In recent decades, teaching in higher education has gone through changes. These changes relate to technological development that, in general, has influenced communication within society. From a historical perspective, new networked technologies have rapidly been introduced to support teaching in higher educational settings (Anderson & Garrison, 1998; Diehl, 2013). Such introductions have led to new ways of bridging the boundaries of time and space. In recent decades, technologies such as mobile devices and social media have emerged and found their way into teaching practices in higher education settings (e.g., Gikas & Grant, 2013). Oftentimes such practices are labelled mobile learning. In such practices, both mobile devices and social media have been introduced with a promise to be tools that support networked learning. However, before being implemented in the ordinary activity of teaching in higher education, these tools are often embraced in development projects (El-Hussein & Cronje, 2010). Such projects aim to implement mobile learning in higher education teaching with at least two purposes. One concerns the application of tools to support networked learning experiences that go

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beyond the constraints of time and space. Another purpose of these development projects is to raise the quality of higher education.

In these projects, teachers are supposed to work with the proposed development. The involved teachers are expected to learn in their trials how to implement tools for networked learning in a manner that follows the aims of the project. However, changing teaching practices in higher educational settings is a complex process. A key in such processes is to understand the impact of different aspects of the teachers. Their teaching depends on various interests, knowledge, and beliefs about how mobile devices and social media could support learning and raise the quality of higher education. Therefore, changing these interests, knowledge and beliefs related to applying particular tools in teaching practices is an important key for understanding how to achieve success in development projects that embrace ideas of learning supported by mobile devices and social media (Rienties, Brouwer, & Lygo-Baker, 2013). If the motivation of teachers to commit to the intended development is low, problems with achieving the aims of the projects might appear (De Rijdt, Stes, van der Vleuten, & Dochy, 2013). For example, earlier research that focuses on the introduction of mobile learning in higher educational settings has shown that "faculty members ought to be able to commit to lifelong learning" (Kukulska-Hulme, 2012, p. 252). This research emphasises that a link exists between teachers' use of mobile devices and social media for their professional development and learning needs and their application of such tools in their own teaching. Moreover, if they are less skilled in how to use and apply such tools, it might prevent projects from reaching their potential (Hew & Brush, 2007). Therefore, the conditions for achieving the educational potential of projects differ between teachers who are everyday users of social media and mobile devices and teachers who seldom or never use such technologies (Corbeil & Valdes-Corbeil, 2007).

Another particular problem that arises in development projects is how teachers understand and conceptualise the areas of focus of the projects. In projects that focus on mobile learning, such conceptualisations seem to be important for achieving successful implementations (Uzunboylu & Ozdamli, 2011). Such differences between the aims of a development project and the interest, knowledge and beliefs of teachers challenge projects that have an ambition of changing teaching practices in higher education by implementing mobile learning. These differences motivate further research that could inform development projects with knowledge of how to address teachers' interests, knowledge and beliefs about implementing mobile learning in higher educational settings. This is particularly the case if these projects "will take place in conditions that will be radically different from those educators and learners are familiar with" (El-Hussein & Cronje, 2010, p. 12).

The studied development project embraced unfamiliar conditions for teaching in higher education in the introduction of mobile learning. Considering the background of teachers' different interests, knowledge and beliefs, there is motivation to study how teachers in such unfamiliar and emerging conditions define and conceptualise mobile learning. This short paper emphasises aspects of this problem.

Aims and Objectives

This paper aims to discuss and analyse how teachers in higher educational practices conceptualise and define mobile learning. The study deals with the following research question:

- What emerging conceptualisations and definitions of mobile learning in the teaching practices of higher education appear among teachers who participate in a development project?

Below follows brief information about the methods applied in the study and some of the preliminary results so far.

Design

This short paper reports on preliminary results from a development project aimed at designing and creating teaching models built on blended and mobile learning. These models were designed with the purpose of being implemented in a wide range of educational settings at a Swedish higher education institution.

The study embraced an in-depth analysis of the examined courses, including scrutinizing the context and details of performed activities (Stake, 1994). The research of the development project is currently in the first stages, including preliminary results from the analysis of empirical data from interviews and observations of online teaching within six courses in a Swedish higher education institution. These courses were sampled from two different academic departments: the Department of Education and the Department of Information and

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Communication Systems. The courses included teachers and students from four different three-year first-cycle programmes. Two of these programmes were teacher training; one was a bachelor programme in behavioural science, and the final programme dealt with Android-based mobile applications.

The interviews were performed with six of the involved teachers, one sampled from each course. These interviews comprised open-ended questions (Kvale & Brinkmann, 2015). These interviews ranged from 37 to 67 minutes in length. Online observations (Fielding, Lee, & Blank, 2008) include data taken from two sources. The first source includes online dialogues of students and teachers recorded in learning management systems and various social media applications; the second source includes documents related to the teaching in the sampled courses. So far, the analysis mainly focuses on the interviews. Nevertheless, a few illustrations from the observations are included in the results. An additional analysis of the observations is planned for the next step of the research project. In the analysis, data were processed in three different phases. First, after transcription, the interviews were read through with the goal of being immersed in the data. Second, in a process of open coding categories were created. Third, from the created categories, more general themes were identified.

Preliminary definitions of mobile learning

In the preliminary analysis of the interviews, teachers expressed various thoughts about what mobile learning might be about. Nevertheless, any clear and common idea about a definition is absent in the empirical data. The sampled teachers showed in the interviews signs of trying to negotiate with themselves on what mobile learning is about. Some of the teachers discussed mobile learning in ambiguous terms while relating it to e-learning. They discussed it in connection with e-learning, emphasising that it was about the application of various tools in the educational setting. Such tools include various forms of social media and mobile devices. They simultaneously emphasised that the concept of e-learning should not be muddled with the concept of mobility.

Moreover, teachers also related mobile learning to distance education and the bridging of boundaries of space and time. They discussed it in terms of opportunities for teaching that go beyond the synchronous and geographically fixed character of campus-based education. Mobile learning becomes a flexible feature in course design with properties that support the physically and temporally separated participation of students and teachers in higher education. In other words, mobile learning is applied as an accompaniment to physical meetings: a property shared with distance educational settings that utilise networked technologies as well as physical meetings.

Participation in different ways is another issue that the teachers associated with mobile learning. They emphasised the possibility of bridging time and space. In the empirical data, such bridging was found in teachers' identification of different aspects of documentation as a feature of mobile learning. This meant that mobile learning in their teaching practices could include students' use of mobile devices for the documentation of educational activities. Particularly, it could relate to the activities that students perform in internship placement periods, for example, teacher-training students' documentation of lessons learned while interplaying with children and experienced teachers. Such an application of mobile devices includes the possibility for students to reflect on important professional issues during their placements. This example applies to two different communicative processes of teaching practices in higher education to which mobile learning relates. The first process is communication between the students and their university supervisors. Except for visits to the workplace by the supervisor during a placement, this process could also be supported by, for example, the teaching sequences recorded on tablets or smartphones. The other communicative process relates to the role documentation have to support reflections between teacher-training students, for example, by using social media applications to discuss issues they experience during their placements. These two communicative processes extend earlier teaching practices of placement beyond the limits of follow-ups on campus.

Teachers in the study also related mobile learning teaching practices to issues of access. One such issue relates to different ways of content delivery and the possibility of using various tools for sharing information and participating in communicative interplays. Teachers emphasised the importance of making content more available in different ways, for example, by applying tablets, smartphones or computers in their teaching practices. In this way, they showed that they understood that students' access to content and their ability to share information and participate in dialogues have various constraints and possibilities. Moreover, these constraints and possibilities are related both to temporal and spatial conditions as well as to different ways of accessing mobile devices and social media. Another issue related to access discussed by the teachers is inclusion. Teachers in the development project expressed worries about having weakened contact with the student, pointing to

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student-to-student communication through social networking sites, such as Facebook, or video tools, such as Skype. Students' use of such tools is claimed to exclude teachers from educational discussions in which they earlier took part in. Moreover, they worry about the possible exclusion of co-students from these discussions. They also ponder over students who choose not to participate through social media and the reasons behind such behaviour.

Concluding remarks

The initial analysis indicates that in the studied development project, different conceptualisations and definitions of mobile learning emerged. Various meanings were emphasised by the teachers regarding what mobile learning means and how it relates to the design of courses and their work as teachers. Such differences might relate to interests, knowledge and beliefs and how they link mobile learning to their own processes of life-long learning (De Rijdt et al., 2013; Hew & Brush, 2007; Kukulska-Hulme, 2012; Rienties et al., 2013). Nevertheless, the emerging definitions of mobile learning from the included teachers are in this stage of the research preliminary. To reach a more thorough understanding of the research question, the empirical data need further analysis. Moreover, the results need to be illustrated with excerpts from the interviews and the data recorded in the learning management system, and the additional applications need to be applied in the studied educational settings.

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