

# Chapter 13

## Mobile Learning: Didactical Scenarios in the Context of Learning on the Job

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### ABSTRACT

*Mobile learning extends the media dissemination of knowledge and learning in extremely varying educational contexts with mobility and independence of location. The chapter describes possibilities of mobile learning for situation-oriented, personalised and collaborative learning. It explains on the one hand existing conceptions and application scenarios with regard to learning theory backgrounds, and on the other thematises possibilities of Web 2.0 for mobile learning. In doing this, it presents in particular didactical scenarios for mobile learning situations in the context of learning on the job.*

### 1 INTRODUCTION

As a result of the rapid technological developments of mobile communication technologies, but also as a result of the great distribution in everyday life of mobile devices such as mobile phones, smartphones and PDAs which now have almost the computer capacity of PCs, the next step in multimedia learning is predestined. Learning with the help of mobile devices (mobile learning) will gain considerable importance if this medium is used as an additional

channel for deepening and extending educational content within existing blended learning arrangements. Because of the independence from a location and the mobility, the user has individually significant information available in his respective situation. He uses mobile devices without restrictions as to space and time, and uses the devices flexibly to gain qualifications, e.g. directly at the workplace. Information is therefore adapted to individual use and learning needs, and linked to this is a personalisation of information. Mobile learning conceptions refer to learning users with situation-based problems who recognise their learning targets and

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learning needs, and want to work through their own knowledge deficiencies as quickly as possible. Mobile learning scenarios are not limited just to the dissemination of knowledge, or the presentation of teaching materials, but also comprise the interaction, communication and collaboration of all participants in the teaching/learning process. Mobile learning will differ from e-learning on the one hand through the characteristics of the location-independent devices, and on the other through new didactic scenarios. Therefore the chapter introduces into technical features and didactical settings with mobile devices, differentiates in this context mobile and e-learning. According to the perspective of lifelong learning, learning on the job becomes an important context of mobile learning. Against this background relevant didactical conceptions are presented, potentials of Web 2.0 applications, of mobile communication and of mobile internet are explained for mobile learning on the job. Finally didactical scenarios of mobile learning in different situations of learning on the job are described.

## **2 MOBILE LEARNING**

If we look at the subject of ‘mobile learning’ (also: mobile computer-based learning, m-learning, mobile education, m-education, ubiquitous learning or microlearning), two different aspects have to be taken into account. The term ‘mobile’ illuminates the technological and the term ‘learning’ the didactical side of the aspect. The word ‘mobile’ can be assigned initially to the area of ‘mobile communication’. Mobile communication is used to describe in general individual, group and mass communication that take place via portable, wire-bound and wireless devices (cf. Schiller, 2003).

### **2.1 Mobile Devices and Technical Features**

On the technological level, mobile communication is based on specific devices, networks, services and applications. Because of its spread, mobile communication in the private field is based mainly on the mobile phone (smartphone) as the device, and at work on handheld device groups (also: PDA - Personal Digital Assistant or pocket PC) and portable computers such as (mini-)notebooks or tablet PCs (cf. Döring, 2008). In addition, there are the new e-book readers (e.g. Kindle from amazon.de). With these A5-size devices, which weigh about 250 g and were optimised specifically for reader-friendliness, books, texts and articles which have been put into electronic format can be downloaded in seconds to the reader, read and edited. The scope of functions of these e-book readers includes a text-to-speech function, which reads out books or websites automatically to headphones and in general enables audio files in MP3 format to be played (e.g. audio books and podcasts). The current appliance generations of so-called mini-notebooks, also known as netbooks or subnotebooks, can also be included among mobile devices, depending on their technical equipment. Their strengths for mobile learning are found in the relatively large display (8"-10"), the low total weight and the low total size, the computing output, which is sufficient for a PC, and the existing full-scale keypad. The long battery life, in comparison with traditional notebooks, of up to 6 hours, and integrated UMTS/HSDPA modems for wireless internet access, contribute somewhat to the factor ‘mobility’. The development of netbooks which will satisfy even more the essential criterion of ‘immediacy’, in the sense of availability for mobile learning, is expected for the near future.

The media ‘walkman’ and ‘newspaper’, for example, do not count as mobile communication. While it is true that they can be used independently of a location, they do not have any technical interface to a communications network. Even the

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