

# Microlearning and Mobile Learning

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## INTRODUCTION

In the rapidly-changing world of the Internet and the Web, theory and research frequently struggle to catch up to developments, interactions and permutations in technology and the social forms and cultural practices evolving with it. This is especially true in view of more recent mobile developments. Although the term ‘mobile learning’ (m-learning) is widely used today, there is no commonly accepted definition available. In many cases definitions have been created around technical aspects in the sense of a sub-domain of e-learning. Clark Quinn (2000), for example, defined m-learning at the “intersection of mobile computing and e-learning: accessible resources wherever you are, strong search capabilities, rich interaction, powerful support for effective learning, and performance-based assessment. e-learning independent of location in time or space” (Quinn, 2000). Similar ways of defining m-learning in the sense of e-learning enabled or supported through mobile computational devices (Pinkwart et al., 2003) are widespread in the context of business applications and commercially oriented applied research. In academic discourses various aspects have been taken into consideration. Mike Sharples et al. (2005), for example, provided a framework for analyzing mobile learning in the tradition of Activity Theory, focusing on moving facets of the learner’s environment and conceptualizing learning as a “cultural-historical activity system, mediated by tools that both constrain and support the learners in their goals of transforming their knowledge and skills” (Sharples et al., 2005, p. 64). Elsewhere Sharples et al. (2008, p. 5) define mobile learning as a “process of coming

to know through conversations across multiple contexts amongst people and personal interactive technologies.”

In their comprehensive analysis also Norbert Pachler et al. (2010) point out that mobile learning is not primarily about technology or about delivering content to mobile devices “but, instead, about the processes of coming to know and being able to operate successfully in, and across, new and ever changing contexts and learning spaces. And, it is about understanding and knowing how to utilise our everyday life-worlds as learning spaces” (Pachler et al., 2010 p. 6). The need of an educational relevant definition of mobile learning is underlined, too, by Yiannis Laouris and Nikleia Eteokleous (2005) who developed an integrated set of formulas including temporal, spatial, mental, environmental, methodological, content related, contextual, conceptual and other aspects of mobile learning.

Like ‘mobile learning’ the term ‘microlearning’ has become used since the beginning of the twenty-first century mainly in the context of technology-enhanced learning (TEL), web-based training (WBT) and digital education. Commonly it stands for an abbreviated manner of expression for various kinds of short-time learning activities or learning with relatively small screens, small learning units, mobile devices or microcontent. The expression has also been used as a synonym for flexible Community Learning Centers (CLC) in contrast to formal educational institutions, in speech and language therapy, or in the sense of micro self-government in differentiated classroom learning. From a wider perspective, the term ‘microlearning’ refers to various micro-perspectives in the context of learning, education and training.

More frequently, the term is used in the domain of e-learning, for example, as related to special activities like microblogging, tagging or commenting, to elements of educational settings (arrangements, scenarios) or situated learning, or to collaborative activities like mind mapping, film scripting, digital storytelling, etc. Corresponding definitions and characterizations can be analyzed from meta-theoretical perspectives on learning processes in mediated environments. In doing so, especially following dimensions are relevant for the description, analysis, design, or creation of versions of microlearning (Hug, 2005):

- **Time:** Relatively short effort, operating expense, degree of time consumption, measurable time, subjective time, societal time diagnosis, etc.
- **Content:** Small or very small units, narrow topics, rather simplex issues, visual, textual, etc.
- **Curriculum:** Part of curricular setting, parts of modules, elements informal learning contexts, etc.
- **Form:** Fragments, facets, episodes, “knowledge nuggets,” skill elements, competencies, etc.
- **Process:** Separate, concomitant or actual, situated or integrated activities, iterative methods, attention management, awareness (getting into or being in a process), single-, double- or triple-loop, etc.
- **Mediality:** Face-to-face, mono-media vs. multi-media, (inter-)mediated, cross- or trans-medial, multicodal, multimodal, information objects or learning objects, symbolic value, cultural capital, etc.
- **Learning Type:** Repetitive, activist, reflective, pragmatist, instrumentalist, constructivist, connectivist, behaviourist, incidental, learning by example, task or exercise, goal- or problem-oriented, “along the way,” “on the go,” action learning,

classroom learning, workplace learning, corporate learning, conscious vs. unconscious learning, etc.

In contrast to mobile learning, discourses on microlearning play a comparatively less important role both in academic research and in commercially oriented applied research. However, intersections of mobile learning and microlearning have been explored variously (Beaudin et al., 2006; Beaudin et al., 2007; Kress & Pachler, 2007; Seipold, 2012, pp. 132-143), also in terms of mobile learning *as* microlearning (Hug, 2012a).

## OVERVIEW

In her historical overview of mobile learning Helen Crompton (2013a) focuses on recent history after the turn of the millennium when digital mobile technologies started to gain currency widely. Though she admits that historical and cultural roots of mobile learning could be traced back “through history far beyond the invention of the Gutenberg’s printing press and the influence of the Industrial Revolution” (Crompton, 2013a, p. 3), she does not elaborate on world history in the sense of a global long-term study. Nevertheless, the definition of m-learning – “learning across multiple contexts, through social and content interactions, using personal electronic devices” (Crompton, 2013a, p. 4)” – which she is favoring in the course of her discussion of other definitions, learning theories and advances in technology, could serve at least as a working definition for a long-term analysis across cultures and histories if it is slightly modified as follows: *Mobile learning is learning across multiple contexts, through social and content interactions, using mobile devices.*

This definition can act as starting point for the analysis of a wide range of phenomena including following:

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