MOBILE LEARNING BASICS

What is mobile learning?

Mobile learning is the ability to obtain or provide educational content on personal pocket devices such as PDAs, smartphones and mobile phones. Educational content refers to digital learning assets which includes any form of content or media made available on a personal device.

Mobile learning using handheld computers is in its infancy in terms of both technologies and pedagogies. As a result there is still some dispute amongst industry advocates in how mobile learning should be defined: in terms of devices and technologies; in terms of the mobility of learners and the mobility of learning, and in terms of the learners' experience of learning with mobile devices.

Most researchers and educators probably view mobile learning as the immediate descendant of e-learning. Pinkwart, et al. (2003) for example, defines e-learning as 'learning supported by digital "electronic" tools and media', and by analogy, mobile learning as 'elearning that uses mobile devices and wireless transmission'.

Quinn (2000) defined it earlier, as simply learning that takes place with the help of mobile devices, or the intersection of mobile computing (the application of small, portable, and wireless computing and communication devices) and e-learning (learning facilitated and supported through the use of information and communications technology).

In line with this definition, several authors (e.g., Turunen, et al. 2003) view mobile devices as a pervasive medium that may assist us in combining work, study and leisure time in meaningful ways.

Traxler (2005) defined it as "any educational provision where the sole or dominant technologies are handheld or palmtop devices."

How is that different from e-learning?

E-learning has come to define any dissemination of educational knowledge over the Internet. This makes e-learning a subset of technology-based training. It also incorporates a number of learning activities conducted on the Internet, of which mobile learning is one part.

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Many authors (e.g., Mostakhdemin-Hosseini and Tuimala, 2005) view mobile learning simply as the natural evolution of e-learning, which completes a missing component such as the wireless feature, or as a new stage of distance and e-

learning (e.g., Georgiev, et al. 2004). M-learning is often described as occupying a sub-space within the e-learning space, which is in turn a sub-part of digital learning.

Differentiating e-learning from mobile learning

E-learning can be real-time or self-paced, also known as "synchronous" or "asynchronous" learning. Additionally, e-learning is considered to be “tethered” (connected to something) and presented in a formal and structured manner.

In contrast, mobile learning is often self-paced, un-tethered and informal in its presentation.

e-learning	m-learning
lecture in classroom or internet labs	learning anywhere, anytime
e-mail-to-e-mail	instantaneous messaging
private location	no geographic boundaries
travel time to reach to internet site	no travel time with wireless internet connectivity

Because mobile devices have the power to make learning even more widely available and accessible, mobile devices are considered by many to be a natural extension of e-learning.

Mobile Learning – A timeline

To understand why we’re in an exciting period in mobile learning education, it is important to take a look at the technologies and developments that have gone into making learning accessible to people on the move.

This convergence of mobile information and enabling technologies has significantly impacted the way users interact with information on a daily and immediate basis.

From the above timeline, it is clear that the technology overlap that has happened in this last decade has given the needed impetus to escalating the potential of mobile learning.

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With information and communications technology becoming portable and individual-oriented, we are today experiencing the first level of effective mobile learning as it was envisioned decades ago.

Objectives & Challenges in Mobile Learning

Mobile technologies possess educational potential for today's generation akin to that of television some 40 years ago or so. Carly Shuler identifies the following key opportunities and challenges in mobile learning, which summarize arguments in the debate about mobile learning aptly:

Objectives

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, after school, and home environments.

Reach underserved children

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.

Improve twenty-first century social interactions

Mobile technologies have the power to promote and foster collaboration and communication, which are deemed essential for twenty-first century success.

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.

Enable a personalized learning experience

Not all children 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.

Challenges

Negative aspects of mobile learning
Cognitive, social, and physical challenges must be surmounted when mobile devices are incorporated into children's learning. Disadvantages include: the potential for distraction or unethical behavior; physical health concerns; and data privacy issues.

Cultural norms and attitudes
Though many experts believe that mobile devices have significant potential to transform children's learning, parents and teachers apparently are not yet convinced. A 2008 study done by the Joan Ganz Cooney Center in collaboration with Common Sense Media found that most teachers see cell phones as distractions and feel that they have no place in school.

No mobile theory of learning
Currently, no widely accepted learning theory for mobile technologies has been established, hampering the effective assessment, pedagogy, and design of new applications for learning.

Differentiated access and technology
Wide diversity among mobile technologies represents a challenge for teachers and learners who wish to accelerate academic outcomes as well as the producers who seek to facilitate such learning.

Limiting physical attributes
Poorly designed mobile technologies adversely affect usability and can distract children from learning goals. Physical aspects of mobile technologies that may prevent an optimal learning experience include: restricted text entry, small screen size, and limited battery life.