Chapter 60
Evaluation of a Mobile Platform to Support Collaborative Learning: Case Study

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ABSTRACT

In an educational context, technological applications and their supporting infrastructures have been evolved in a way that the use of learning objects is no longer limited to a personal computer, but has been extended to a number of mobile devices (PDA, phone, Smartphone, and Tablet PC). Such evolution leads to the creation of a technological model called m-learning that offers great benefits to education. This educational model has been developed over the recent years, which resulted in several research projects and some commercial products.

This paper describes the (re)use of an adapted platform from an API of MLE (Mobile Learning Engine), to create tests, quizzes, forums, SMS, audio, video, mobile learning objects, in combination with a learning platform in a particular setting.

MLE (Mobile Learning Engine) is a special m-learning application for mobile phones (a J2ME application) that can access a LMS (Learning Management System) and use most of its activities and resources, and add new, even innovative, activities. With J2ME one can store, use content and learn without the need of further network access and even use interactive questions that can be directly solved on mobile devices.

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The MLE enables one to use the mobile phone as a constant way of learning. As a consequence it is possible to use every spare time to learn, no matter where we are, making it a very interesting tool to use in many fields by providing new opportunities to enhance learning.

INTRODUCTION

The '80s were the decade of the personal computer introduction. Later, the World Wide Web became one of the most successful educational tools of all time: combining and integrating text, audio and video with interaction among users. Thus, in the '90s, the World Wide Web invaded our houses, schools and revolutionized the availability and sharing of information. As a result the development of new techniques and technologies in education allow the introduction of new methods of teaching (emphasizing learning instead of teaching), particularly distance education, e-learning and, more recently, learning through mobile devices, the mobile learning (m-learning).

Technological developments expanded the educational horizons in the 90s, eliminating constraints of time and space for both teachers and students. New learning approaches were created by the fast diffusion of Internet and online courses emerged as a new mode of teaching. Since then, interest in the development and use of distance learning in higher education has increased (Dabbagh & Kitsantas, 2004).

The e-learning itself, and the possibilities offered by the development of mobile devices potencies new opportunities and new challenges to educational systems. New tools and devices emerge in learning, involving teachers, students and transforming the environment in which they operate. These tools can be directly integrated into school activities, to enhance and promote new ways of teaching and learning.

Mobile computing, on the other hand, supports the paradigm of anywhere, any time and, therefore, mobile devices have become increasingly popular in several areas of activity due to its simplicity, functionality, portability, ubiquity, access, interaction and its ease of use (too many qualities not to be aware of mobile devices potential!).One of the great advantages of these devices is their size and mobility that, in education, may benefit learners in many ways. First of all, students use

Figure 1. The MLE communicates with the learning platform over HTTP and XML