

Chapter 1

A Contextualised Multi-Platform Framework to Support Blended Learning Scenarios in Learning Networks

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ABSTRACT

This chapter describes a multi-platform extension of learning networks. In addition to Web- and desktop-based access, the authors propose to provide mobile, contextualised learning content delivery, and creation. The extension to a multi-platform extension is portrayed as follows. First, the authors give a description of learning networks, the kind of learning focused at, and the mechanisms that are used for learner support. After that, they illustrate a possible extension to contextualised, more authentic forms of learning mediated by mobile devices. Moreover, they give some requirements for a multi-platform learning network system and describe a technical framework integrating contextualised media with learning networks. Two blended learning scenarios are given as examples of how the extended system could be used in practice. Last, the conclusions and outlook describe what is necessary to integrate multi-platform e-learning software in existing learning scenarios, and how a larger-scale adaptation can be achieved.

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INTRODUCTION

Lifelong learning takes place anytime and anyplace. Next to formal learning scenarios in a classroom, a great deal of learning is informal, happening in unforeseen places and at unexpected times. Recent developments in mobile technologies increasingly make it possible to support learning on the move and make use of these spontaneous learning situations. Moreover, mobile technology offers new chances to integrate spontaneous learning in a more formal learning scenario. Already, we see a tendency to use blended learning scenarios combining different forms of learning, and integrating various ways of content access; for instance, web-based, desktop, and mobile. A couple of mobile projects aim at a better integration of mobile learning scenarios into more formal, classroom-based scenarios. MyArtSpace (Sharples, et al., 2007), for example, strives for an easier combination of a museum trip with lessons before and after the visit. Similarly, the RAFT project (Terrenghi, Specht, & Moritz, 2004) endeavoured to improve the benefit of museum visits by mediating the communication between learners on location and learners in the classroom. Furthermore, the Sydney Olympic Park Project (Brickell, Herrington, & Harper, 2005) is a more recent blended learning example. In this sense, mobile technology can be seen as a mediating artefact (Sharples, 2007) that (1) can be used to give more structure to informal learning, and (2) integrates informal learning into blended learning scenarios.

The combination of learning inside as well as outside the classroom calls for a range of different, specialised devices, each suited for a specific learning use and provided with device-specific client software wielding their potential for learning. Moreover, blended learning scenarios call for software integrating the use of these devices. With the introduction of new multi-faceted devices the possibilities for content creation, delivery, and sharing across different learning contexts has been

possible. Mobile devices facilitate personalised and contextualised services that provide new ways of supporting, for example, authentic and workplace learning situations (Collins, Brown, & Newman, 1989; Schön, 1983; Sticht, 1975). In addition, mobile technology can be used to engage the learner and include her in the social and cultural aspects of that learning process (Bruner, 1996; Paiget, 1970). However, some learning content can be better used on devices with larger screens, like desktop PCs and smartboards, which provide better opportunities to display and create larger pieces of content.

Still, although blended learning scenarios are seen more frequently, it does not seem to be adapted on a larger scale in modern-day teaching. More importantly, most of technology use in education is seen as interrupting education (Sharples, 2003) and the potential of it is therefore often discarded. Additionally, the technology itself can provide an insurmountable hurdle: for instance, the mobile market contains lots of different devices without much standardisation, which leads to a need for detailed technical knowledge to be able to integrate mobile technology in existing learning scenarios. Moreover, the rapidly changing technologies form an additional burden to keep the learning scenarios up-to-date; even worse, while most learning designs would remain the same and would need similar functionality, this would have to be implemented again and again for new technology. Last, small-scale experiments could be used to create enthusiasm and show the benefits of mobile, ubiquitous, or blended learning to teachers, learners, and institutions. The creation of such experiments calls for flexible and fast prototyping, and by giving the opportunity to create and integrate learning technologies fast and without too much effort, the number of applications would increase, making room for new and innovative learning approaches.

Thus, we believe the issues preventing a larger scale adoption of new technology for learning could be mostly tackled by simplifying the use,

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