Chapter 1

Developing Tools that Support Effective Mobile and Game Based Learning: The COLLAGE Platform

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ABSTRACT

This chapter presents the COLLAGE (collaborative learning platform using game-like enhancements) project as a good practice example of mobile and game-based learning that aims to integrate formal and informal learning settings through an innovative pedagogical approach. In this learning environment, students learn in context while participating in ready-made game activities or creating their own
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INTRODUCTION

The future of education is outside of education. It is in the everyday life. In business, in the world. In life long learning. But the principles can be applied inside of formal education as well. They require a change in thinking, to move toward problem-centered, meaningful activities in the classroom. To exploit people’s interests and subvert them to lead to natural, inspired learning activities.

(Norman, 2001)

Learning happens in various ways. Students typically learn in classrooms, but learning may also occur when they explore parks and streams playing with friends, trying and maybe failing to perform tasks. People learn by experience and involvement, by talking with peers and experts, by delving into a practical problem. Virtually any experience can be a learning opportunity, although the resources to make it one are often lacking. The conception of knowledge as something “held”, “stored” in a “body of knowledge” lends itself easily to viewing learning as “knowledge acquired”, collected from books, lectures, and other media. A different approach is followed here: knowledge is embedded in situations, and learning is contextual in its very nature. Knowledge happens rather than being stored and applied only when appropriate.

Contextual learning may be supported and enhanced by mobile learning applications. Mobile learning provides flexibility in accessing learning materials, students, and teachers anytime, anywhere. The use of mobile devices with Internet access can offer an appropriate educational environment for learning activities both inside and outside the classroom, motivating students through their exposure to authentic stimuli as well as their involvement in game-like activities.

The proliferation of mobile phones and other handheld devices has transformed mobile learning from a researcher-led endeavour to an everyday activity, whereby mobile personal tools help people learn everywhere through either formal training or informal support and conversation (Kukulska-Hulme, Traxker & Pettit, 2007). Even so, the effective design and development of mobile learning applications and activities, and their evaluation remain core activities where specialist expertise and insights by teachers and learners have important roles to play.

Teachers constitute a major factor for the success of such innovative interventions. Schools and classrooms, both real and virtual, ought to have teachers equipped with resources and skills enabling them to teach the subject matter exploiting technology potential. Interactive computer simulations, open educational resources, and sophisticated data-gathering and analysis tools are only a few of the resources that allow teachers to provide previously unimaginable opportunities for conceptual understanding. Traditional approaches may no longer provide prospective teachers with the necessary skills for teaching students to survive economically in today’s workplace.

In this context, the aim of the COLLAGE (Collaborative Learning Platform Using Game-