Chapter 8.5
Teaching Project Management with Second Life

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ABSTRACT

Project Management is a field of intellectual and pragmatic enquiry that is inherently inter-disciplinary. It typically involves the integration of areas such as: project scoping, time, cost, and human resource management, whilst the management of effective inter-team communication, project risk, and procurement aspects are all central to the discipline. To try to cover all of these areas within a single university assignment presents somewhat of a challenge. This chapter demonstrates that the deployment of a Multi User Virtual Environment can indeed encompass these areas in an effective manner, both from learning objectives, realism, and assessment points of view. The chapter has emerged from the experience of three years deployment of Second Life as an integral part of a unit on Project Management, offered as part of both undergraduate and postgraduate courses within the Department of Computer Science and Technology at the University of Bedfordshire. Examples illustrate the work that has been produced by the students of these courses.

INTRODUCTION

The Project Management Institute (PMI) defines Project Management as "the application of knowledge, skills, tools, and techniques to project activities to meet project requirements" (PMI, 2008). A keystone is the successful balance of scope, time and cost - the so called triple constraint: an increase of scope can be addressed by allowing more time, but it may increase the cost. As part of a university assignment, this balancing act can only be simulated up to a certain extent. For instance strict deadlines are prescribed by submission dates that do not leave any leeway for balancing and cost management needs to be simulated as there are typically no resources from the university or the students themselves to provide money that could be spent for real. Other knowledge areas defined by the PMI

DOI: 10.4018/978-1-61350-456-7.ch8.5

are quality (sometimes seen as part of scope management), risk, human resources, communication and procurement. In addition, the knowledge area of integration serves to tie together the different tools and techniques used to address the demands from the other areas. To setup an assignment that encompasses all those areas in a realistic way is not straightforward and need to be crafted carefully.

At the University of Bedfordshire two units, one in the final year of undergraduate level, the other on postgraduate level, utilize Second Life for teaching Project Management. Conceptually the structure follows Wilson (2002) in that "the assessment in this unit was designed as a simulation of an activity that they [the students] were likely to be involved in real life". With this in mind, the assessments aim to encompass the characteristics of situated learning identified by Herrington and Oliver (2000), namely: authentic context, activities and assessment; expert performances; multiple roles and perspectives; collaborative construction of knowledge; reflection and articulation; and finally coaching and scaffolding. The authenticity in context, activity and assessment in particular are areas where the use of virtual worlds such as Second Life provides significant improvement compared to traditional approaches. It allows to pursuit a real, i.e. authentic, project from within the lab environment of an educational institution: students build a *real* showcase in Second Life, not a simulation. Other characteristics of situated learning such as multiple roles, collaboration or scaffolding clearly have to be part of this approach to make the assignment successful and relevant for this level of teaching. However, with the overall scope of this book in mind, we focus on those aspects of teaching Project Management that are particularly enhanced by the use of Second Life.

BACKGROUND

At the University of Bedfordshire, UK, Second Life had been used in 2008 for the first time to address the Project Management knowledge areas as learning outcomes within a unit on the postgraduate level. Since then, the assignment has been repeated with slight variations both on the postgraduate and final year undergraduate levels. The more experimental experience from the first year has been published elsewhere (Conrad, Pike, Sant, & Nwafor, 2009) where the focus was on the suitability of Second Life to be used for an assignment of that kind (which is by now established, also in view of many other teaching and learning activities within virtual worlds including those discussed in other chapters of this book). Also, in that paper, a particular emphasis was made on the aspect of large student numbers of up to 800 that needed to be accommodated. The main findings were that institutional support is essential (still, many teachers have to put pressure on their IT departments to allow access to Second Life from within their institution) and that students do appreciate the use of Second Life in teaching or at least do not object to this. In particular the 'steep learning curve' that students have to master in order to get an avatar and to work within Second Life does not seem to constitute a real problem. If at all, issues are rather with Second Life itself as it does not scale well to large student cohorts. In the long vision an integration of virtual worlds within a virtual learning environment such as Blackboard or Moodle, as it is for instance piloted in the SLoodle project (Kemp & Livingstone, 2006), might therefore be desirable and is henceforth recommended.

In this chapter we leave these issues aside and focus on the particular aspects of teaching Project Management. The units Social and Professional Project Management (on the undergraduate level) and Professional Project Management (on the postgraduate level) are taught across a number of awards within the field of Computing at the University of Bedfordshire. These include awards in Computer Science, Networking, Security, Computer Graphics, as well as Information Systems.