We Learn as We Go: 
What Five Years Playing with Virtual Worlds has Taught Us

Stefan Schutt, Work-based Education Research Centre, Victoria University, Melbourne, VIC, Australia
Dale Linegar, Work-based Education Research Centre, Victoria University, Melbourne, VIC Australia

ABSTRACT

The authors’ team has been working with virtual worlds since 2006, deploying them in diverse contexts including secondary schools, special schools, vocational education and training, higher education and the community sector. Here the authors outline their operational experience of the complex web of interrelated factors involved in running virtual world projects. The authors discuss project development models, institutional politics, activity types and working with teachers and students. They conclude that embedding virtual worlds in education can be rewarding but also difficult at times, with qualities of nimbleness and self-reinvention required of project teams.

Keywords: Change Management, Innovation, Multi-user Virtual Environments (MUVEs), Opensim, Simulation, Virtual Worlds

INTRODUCTION

In this article we present four case studies, snapshots of projects taken from our experience in deploying 3D virtual worlds, or Multi-user Virtual Environments (MUVEs), within a range of educational settings. Through these case studies we propose that the success of MUVE projects is closely tied to a complex and interrelated web of operational factors surrounding their development and implementation.

We have grouped these operational factors into four broad areas. Each case study investigates one of these four areas, namely: working with teachers and students; working within institutional settings; working within the project team; working with the technology. Based on our own five-year experience, which has included both successes and failures, we propose that these operational areas can impact significantly on the success or otherwise of virtual world projects, and understanding them better offers the potential for greater project success. It seems, however, that operational concerns like the ones explored here do not feature widely in the extensive literature on virtual worlds and education, although there are some exceptions (Winter, 2010; Dalgarno...
Instead, investigations into the educational uses of virtual worlds have tended to focus more on examining affordances of in-world activities (e.g., Robertson, Webb & Fluck, 2007; Laurillan, 2002).

The existing literature has also tended to report on individual projects undertaken by subject area experts who have used virtual worlds to enhance or transform their existing teaching practice (Salt et al., 2008; de Freitas & Veletsianos, 2010; Dalgarno et al., 2011a). It seems that relatively few project teams like ours have run projects across a number of areas, working with subject teachers rather than being them. This is perhaps where our operational perspectives may prove useful, having run virtual world projects within a broad range of contexts.

Beginning in 2006 as a small group of educational technologists working on projects connected with Victoria University in Melbourne, Australia, our team’s work has since expanded to encompass Higher Education, Vocational Education and Training (VET), secondary schools, the training arms of corporations, Adult and Community Education (ACE) and specialist schools for children with disabilities. During this time our technical development team has grown into an independent technology consultancy employing up to eight 3D programmers and designers who work on multiple projects simultaneously for a range of clients. This team has worked with a range of virtual world technologies including Second Life (SL), a privately-run world for school students within Second Life, OpenSimulator (OpenSim) and, more recently, the Unity3d games engine. It has also built open source, web-based learning systems to support its virtual world activities that have since been adopted by a number of institutions.

It should be noted, however, that technology is not the prime focus of this article. In fact three of the four operational areas we explore deal with the social and institutional context within which the technology is deployed, and only one focuses on the technology itself—and even this area is inextricably linked to social and institutional dynamics. Instead, the prime focus of this article is how project teams deal with the ever-changing internal and external circumstances that are part and parcel of technology projects. This, we propose, requires of project teams a certain nimbleness and willingness to reinvent one’s way of doing things.

Although our team’s working methods have evolved over time as we have learned from experience, our conceptual approach to creating educational 3D environments has not changed. Our projects have continued to approach virtual worlds as approximations or ‘metaphors’ (Wilson, 1995) that create a space for learning through trial and error and/or conceptual consolidation of theoretical material. As such they are forms of ‘microworlds’, a ‘subset of reality or a constructed reality whose structure matches that of a given cognitive mechanism so as to provide an environment where the latter can operate effectively.’ (Papert, 1980, pp. 204).

CASE STUDY NO. 1: WORKING WITH TEACHERS AND STUDENTS (BRINGING VIRTUAL WORLDS INTO A VET CONSTRUCTION SCHOOL)

Working with Teachers

Can you tell me, right now, why this isn’t a complete waste of my time? Teacher; virtual world demonstration, VET Construction program, 2009

Our team has undertaken virtual world activities with a Melbourne-based vocational construction program since 2009. This has largely involved working with construction pre-apprentices (around 50 in all). These students have tended to be 16-18 year old young males with low literacy levels and/or high levels of disengagement. The teaching staff members have been exclusively male and have varied considerably in their age and interests. Some, like the teacher quoted above, are wary of new technologies. Others, such as the program coordinator we have worked with from the beginning of our involvement,
Related Content

Incorporating “World View” into the LMS or CMS is Best
[www.igi-global.com/chapter/incorporating-world-view-into-lms/63188?camid=4v1a](www.igi-global.com/chapter/incorporating-world-view-into-lms/63188?camid=4v1a)

Designing Dynamic Learning Environment for Web 2.0 Application
Robert Z. Zheng (2010). *Collective Intelligence and E-Learning 2.0: Implications of Web-Based Communities and Networking* (pp. 61-77).
[www.igi-global.com/chapter/designing-dynamic-learning-environment-web/37070?camid=4v1a](www.igi-global.com/chapter/designing-dynamic-learning-environment-web/37070?camid=4v1a)

Personal Knowledge Integrators
[www.igi-global.com/article/personal-knowledge-integrators/102958?camid=4v1a](www.igi-global.com/article/personal-knowledge-integrators/102958?camid=4v1a)
Signs and Guideposts: Expanding the Course Paradigm with Virtual Worlds
www.igi-global.com/chapter/signs-guideposts-expanding-course-paradigm/53493?camid=4v1a