Chapter 1
Eight Years of Utilizing Virtual Worlds for Education: A View from the Trenches

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ABSTRACT

The authors’ team of developers and educators has been working since 2006 to deploy virtual worlds for training within secondary and special schools, vocational education, higher education, private industry and the community sector. During that time the team has dealt with a complex web of interrelated factors in an environment of continual technological and institutional change. These factors include technological change, organizational politics, pedagogical fashions, changes in policy and funding environments, and the human aspects of working with teachers and students. The authors conclude that utilizing virtual worlds for education can be rewarding but is not always easy, requiring qualities of nimbleness and self-reinvention.
INTRODUCTION

Change is ever-present in both technology and education. In this article we present four project case studies that detail our attempts to deal with changing circumstances, whilst deploying 3D virtual worlds within a range of educational settings. Through these case studies we propose that the success of virtual world 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 eight-year experience, which has included both successes and failures, we propose that these factors, individually or in combination, can impact significantly on the success or otherwise of virtual world projects, and understanding them better offers the potential for greater success. However these kinds of operational concerns do not feature widely in the extensive literature on virtual worlds and education, although there are some exceptions (Landers & Callan, 2012; Bateman et al., 2012; Winter, 2010; Dalgarno et al., 2011b).

Existing literature into the educational uses of virtual worlds has tended to examine specific affordances of in-world activities, report on individual activities undertaken by subject area experts to enhance or transform their existing teaching practice. Recent work has tended to focus on specialist affordances such as climate change reduction (Crookall, 2013), or explore emerging educational possibilities for virtual worlds through technological developments that make it increasingly possible to integrate virtual worlds with other technologies such as mobile devices, web browsers, augmented reality applications and virtual reality headsets (e.g. Kanter et al., 2014; Dahlsveen & Sousa, 2013).

One recent focus of virtual world research has been collaboration, again driven by technological change (e.g.: Oksanen & Hämäläinen, 2014; Hakonen & Bosch-Sijtsema, 2014). These discussions have tended to examine affordances of student collaboration within virtual worlds, and on the need for virtual world projects to be built with Open Source technologies to facilitate sharing with other educators (Beck & Perkins, 2014). However there has not been much exploration of teams’ operational experiences, especially the obstacles faced by teams in attempting to collaborate within institutional settings. Here, the perspectives offered by our team may prove useful, having run virtual world projects in a broad range of contexts.

In 2006 a small group of educational technologists began to work on projects connected with Victoria University in Melbourne, Australia. This work expanded in the forthcoming years to encompass Higher Education, Vocational Education and Training (VET), secondary schools, the training arms of corporations, Adult and
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