Chapter 16
Using a Blueprint in the Design of Instruction for Virtual Environments

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ABSTRACT

Other chapters in this book discuss the design and development of interfaces for virtual worlds. This chapter will discuss the instructional design aspects of designing learning in virtual worlds. The use of virtual worlds is a relatively new phenomenon in education and, like many innovations that have preceded them, they are a new and intriguing tool to be mastered by both student and instructor alike. While bounded by a computer screen, virtual worlds have many of the affective components of everyday life and familiar-looking environments, where real life rules pertain, can be created to transfer learning, and both formal and informal learning can take place (Jones & Bronack, 2007).

INTRODUCTION

The first prerequisite to designing learning in virtual worlds is experience in the virtual world that you have chosen, or the one that your institution has made available to you. As an instructor or designer, you need to be comfortable in the environment you will be working in, and sometimes this takes many hours of personal exploration and experimentation. Once you are thoroughly familiar with the interface, you will be able to operate through it, rather than focusing all your concentration on managing it. You will discover that the experience of virtual worlds is very similar to the real world. You have, through your avatar, a sense of presence and immediacy – you feel as if you are really there, interacting in real time. You can move around, interact with other persons and with artifacts, and communicate in several modes including text and voice and scripted body language (Jones & Bronack, 2007).

When considering the use of a virtual world for your class, your first consideration should be what the “return on investment” will be for both you and your students. To master a virtual world takes many hours of practice – will that investment
be worth it to your students? Is instructional time in a virtual world the best choice for your content? If your aim is to pass along information and you want to lecture or demonstrate, or your content is static (why not use a web page?) or your lesson isn’t designed to be interactive, then there are many other ways of presenting information that don’t require the heavy investment of teaching/learning in a virtual world. Sitting in a virtual world classroom that replicates a real classroom, listening to a lecture and viewing slides that resolve very slowly on a screen is rarely a good use of a virtual world, unless the presentation is brief and intended to set up a learning activity that the students will then get up out of their chairs and pursue.

Students who pursue their education at a distance frequently experience of a sense of isolation from other students. In virtual worlds the sense of “presence” can have a great emotional and social impact – beyond the common benefit of looking at a three-dimensional model of a building or a super-size model of a giant squid (Aldrich, 2009). Students can come early to class meetings and visit, much as they might do in a physical classroom, and linger afterwards to continue their discussions.

In a virtual world you can build – or have built for you – spaces for students to learn in that would be prohibitively expensive in the real world – or too dangerous to allow students to work in (Jones & Bronack, 2007). Students can be immersed in authentic environments and actively work together to solve problems, using the customary problem-solving patterns for their discipline. They can research and build artifacts and environments at little or no cost or explore their virtual world and find environments that others have already created. In some virtual worlds various communities have researched and created cities and towns from different historical periods, complete with authentic looking buildings and artifacts. Residents and visitors dress in period clothing and often speak in the dialect of the time. Contemporary settings have been created by different language groups and students can be assigned to seek out and interact with native language speakers to practice their conversational skills (Aldrich, 2009).

Instructional design for virtual worlds has a lot in common with instructional design for traditional educational settings, provided they include interactive and immersive learning. For those who are used to collaborative learning and the building of learning communities, instructional design for virtual worlds will feel natural and straightforward. You can design “lecture courses” for virtual worlds but it would be a waste of the interactive resources available to you.

This chapter presents a relatively straightforward instructional design framework that stresses the alignment of learning outcomes, learning activities, and assessment/feedback (Berge, 2002). It focuses on student learning rather than instructional input and, because it is a structural model, can be used in most, if not all, disciplines. The model states that learning/performance outcomes should be stated for the student, learning resources provided, learning activities designed to help the student move from their entry level to the stated learning/performance outcomes, interaction among the students and continuing assessment and feedback so that students are confident they are meeting the learning outcomes. The model does not specify what the learning/performance outcomes, learning activities, nor assessments should be, only that those elements should be present and aligned with each other.

The model is phrased in language familiar to most faculty who have taught in the traditional classroom. This model recognizes that, in most settings, faculty are responsible for designing their own classroom, online or virtual world courses, with the assistance, sometimes, of technical personnel. This model is designed to assist instructors to continuously improve their skills in designing their own courses. It is not designed to turn the instructor into a professional instructional designer nor keeping them dependent on others.

In higher education, the most common model for online and distance course development in-