Chapter 4.2
Applied Training in Virtual Environments

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ABSTRACT

Virtual worlds hold enormous promise for corporate education and training. From distributed collaboration that facilitates participation at a distance, to allowing trainees to experience dangerous situations first-hand without threat to personal safety, virtual worlds are a solution that offers benefits for a multitude of applications. While related to videogames, virtual worlds have different parameters of interaction that make them useful for specific location or open-ended instructional exchanges. Research suggests that participants identify quickly with roles and situations they encounter in virtual environments, that they experience virtual interactions as real events, and that those experiences carry over into real life. This paper will evaluate the attributes of a successful applied training project, the Canadian border simulation at Loyalist College, conducted in the virtual world Second Life. This simulated border crossing is used to teach port of entry interview skills to students at the college, whose test scores, engagement level, and motivation have increased substantially by utilizing this training environment. The positive results of this training experience led the Canadian Border Services Agency (CBSA) to pilot the border environment for agency recruits, with comparable results. By analyzing the various elements of this simulation, and examining the process with which it was used in the classroom, a set of best practices emerge that have wide applicability to corporate training.

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INTRODUCTION

The game is a proven powerful agent for bringing real life problems into an instructional situation. When games are translated into graphical or online environments, their potency for engaging users is multiplied. However, for most organizations, the costs necessary to create or customize a videogame environment to suit their corporate contexts, makes them inaccessible for the average training situation. With the advent of "desktop virtual worlds" like Second Life, a complex toolset for custom instructional experiences is now widely available (Hudson, Wood, Wetsch, & Solomon, 2009).

Virtual worlds emerge from the traditions of online gaming, and are directly related to themed worlds like World of Warcraft, as well as more traditional videogames. However, virtual worlds have different parameters of interaction. While most videogames and online worlds focus the user within a specific themed context, with appropriate goals and tasks, virtual worlds have the flexibility to adapt to whatever environment the user wishes, making them ideal platforms to design open-ended instructional content.

Hundreds of organizations and institutions are exploring these platforms to determine how they may be applied within their local training context, so it is crucial to understand how these environments effect learning, so as to engage these dynamic tools on the basis of their strengths for transferring information and experience. Current research suggests that people feel present both with the environment and with one another in virtual worlds. They identify readily with their avatars, and they are guided in their behavior by the avatar's appearance. Participants experience and remember their encounters in virtual worlds as if they happened in real life, and they organically adopt skills and attitudes from the virtual into their real lives.

As a basis for corporate training, virtual worlds hook participants directly into a complex set of behavioral expectations that can be used to reinforce post-training workplace requirements. One example of how role-play instruction has been transformed by the use of virtual worlds is the Canadian border simulation at Loyalist College. Using Second Life, the college created a fully functioning border crossing to train students on primary port of entry interview techniques.

Participants in this experience reported high sense of being present at an actual border crossing. They were able to master complex mandatory processes quickly by enacting the role in this realistic environment. Most importantly, this mastery persisted past the experience and directly impacted positive test results that underscore the possibilities using virtual worlds for corporate training.

Virtual worlds alone will not transform corporate education. Virtual worlds are new and with great promise, but also present innumerable ways which can bog down learning, and add unnecessary complexity. By examining the attributes of virtual worlds and current research for virtual interactions, we will understand the potency of these environments for applied learning constructs, and a set of best practices will emerge that will act as a guide to evaluating potential virtual world learning initiatives.

ONLINE GAMES AND VIRTUAL WORLDS

Online gaming is a powerful force in our culture. Once just an add-on to videogames, most gaming platforms have migrated the game experience into online communities. As such, while considered a sub-set of virtual worlds (Schroeder, 2008), online games have blurred the distinction between game and virtual worlds; they are a transitional phase toward full virtual world platforms with gaming as a part of them.

Video gaming is deeply involving for the participants. There is both the immediate involvement of the puzzle of the game, the identification with the protagonist, all the way up to communal