

Chapter 17

Virtual Worlds Applications for Management Education

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ABSTRACT

Frequently, research on management education does not take into account the role of Information Technology as a key resource to support teaching and learning processes. In this article, we explore the current applications of Three Dimensional Virtual Worlds (3DVW) for Management education. We researched the educational institutions subscribed to Second Life (SL) (<http://secondlife.com/>), as it is one of the most popular open 3DVW available worldwide. The results reveal that only 31% of the institutions that answered our questionnaire actually use SL in Management education. Regarding the acceptance of SL in Management education, one third of the 15 institutions using it claim that it has been well received and accepted both by students and lecturers/professors. These results lead to several questions for further research and development of practices concerning the use of 3DVW for Management education.

INTRODUCTION

We live in a global world where information and communication technology is changing the manner in which businesses create and capture value, how and where we work, and how we interact and communicate (Cascio & Montealegre, 2016). As some previous studies highlight, Information Technology (IT), although pervasive in our daily lives as well as in the organizational life, is frequently not taken carefully into account in organizational research (Orlikowski & Scott, 2008; Zammuto et al., 2007). Similarly, IT use in management education is frequently overlooked, especially recent (and sometimes, polemical) technologies such as the Metaverses.

DOI: 10.4018/978-1-5225-1709-2.ch017

Metaverses are technologies that allow the creation of Three Dimensional Virtual Worlds (3DVW) such as Active Worlds, Second Life (SL) and more recently, free software platforms such as Open Simulator and Open Wonderland among others that have been used for educational and professional training purposes.

The Gartner Group Hype Cycle Report (2011) pointed that Virtual Worlds was in the “trough of disillusionment”, after the hype surrounding them in 2007; however, it was predicted that this technology would achieve mainstream adoption in five to ten years. This was attributed to an increasing maturity and convergence in broadband, wireless computing, video and audio technologies, and the creation of conditions for building a more practical and useable virtual social arena, not based solely on text but also on richer media (Messinger et al., 2009).

Currently, Gartner (2015) highlights the merging of the real and virtual worlds with computing everywhere. As mobile devices continue to proliferate, predicts an increased emphasis on serving the needs of the mobile user in diverse contexts and environments, as opposed to focusing on devices alone; the internet of things, ie, the combination of data streams and services created by digitizing everything creates four basic usage models — manage, monetize, operate and extend, which could enhance 3DVW, merging real into virtual, as a virtual reality.

Still, thanks to their great potential, 3DVW have gained legitimacy in business and educational settings for their use in activities such as multimedia meetings and training, virtual teamwork, distributed collaboration and real-time simulation (Schultze & Orlikowski, 2010). They also provide an interesting environment for innovation and experimentation among educators, scientists and software teams (Bainbridge 2007, Schultze et al., 2008).

Educators and educational institutions points potential in the use of virtual environments for teaching and learning, as they provide the possibility of learner engagement, together with the ability to explore, construct and manipulate virtual objects, structures and metaphorical representations of ideas (Dalgarno & Lee, 2010). Dickey (2003; 2005) found that a Virtual World can support a constructivist learning environment for geographically distant learners. Communication features such as the possibility of establishing a unique identity (through the use of an avatar) and several tools for conversation provide opportunities for collaborative and cooperative learning. These opportunities are demonstrated in studies of Hanewald (2013) and Cho and Lim (2015).

Girvan and Savage (2010) claim there are many institutions exploring the use of 3DVW for education, however it is necessary to consider which educational approaches can provide an opportunity to do more than recreate the traditional classroom in these virtual environments. It is important to make use of the unique characteristics and potential that this type of technology can offer. Loke (2015, p. 112) reviewed theories currently used to underpin empirical work in virtual worlds for education, therefore “theorising how virtual world experiences bring about learning can help educators determine what their students can learn from virtual world experiences”.

Hew & Cheung (2010) and Kim et al. (2012) reviewed a set of empirical research studies on the use of 3DVW in education. At the end of their analysis they found that virtual worlds may be used as:

1. **Communication Spaces:** For instance, to interact with others in order to learn a new language,
2. **Simulation of Space (Spatial):** For instance, to simulate being in a place such as an university campus,
3. **Experiential Spaces:** With richer experiences within the virtual world, for instance, to play, act or build 3D objects, and

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