Exploring the Antecedents to Learning Continuance in Virtual Worlds: A Balanced Thinking-Feeling and Social-Constructivism Perspective

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ABSTRACT

Many education institutes are planning to use virtual worlds to offer distance education programs and to reach potential students globally. However, the success of such programs depends on students’ willingness to use virtual worlds for learning continuously. Students’ learning continuance helps to decrease the drop-out rate of the programs. Motivated thus, this study uses the lenses of the balanced thinking-feelings model and socio-constructivism to model how students’ personal learning and social learning experiences influence virtual world learning continuance. Our results show that the utilitarian and hedonic values are critical to learners’ continuous intention of virtual world learning, and they are influenced by learners’ social learning experiences. Social learning factors are also found to interact with students’ personal learning factors to influence their perceived utilitarian and hedonic values of virtual world learning. The findings provide theoretical implications by integrating information systems theories and education psychology to understand the factors influencing the virtual world learning continuance in a systematic way. The findings also provide educators empirical evidence on what influences users’ learning continuance in virtual worlds.

Keywords: Hedonic, Learning Continuance, Social Constructivism, Thinking-Feelings, Utilitarian, Virtual Worlds

Some colleges that have built virtual classrooms in Second Life—the online environment where people walk around as avatars in a cartoonlike world—have started looking for an exit strategy.

DOI: 10.4018/jgim.2013040101
INTRODUCTION

In order to compete in the global education market, education institutes have been offering courses virtually with help from various computer-aided education systems (Huang et al., 2004). According to social-constructivist theory, among many learning models available for distance education, the learner-team-centered model has received great attention (McLoughlin & Luca, 2002). This learning model emphasizes the benefits of learning in groups and posits that interaction and communication among students can improve learning performance (McLoughlin & Luca, 2002). However, among all the pedagogical models used in modern education, the group-based collaborative learning model received little support from the various widely applied e-learning systems (Huang et al., 2004).

Meanwhile, it is not long since researchers and educators start to show notable interest in using virtual worlds (VWs) for innovative group learning assistance. VWs are technology-mediated environments that contain representations of real world elements such as human beings, landscapes and other objects (Kock, 2008). Most VWs provide immersive three-dimension (3D) representations, allowing multiple users to synchronously interact in the form of vivid reality-emulating characters called avatars without facing the communication constraints that occur in the real world (Mueller et al., 2011). VWs are emerging as a useful alternative to face-to-face teaching, and their potential for supporting participatory and collaborative knowledge construction among learners that may be geographically dispersed have been considered by many researchers (e.g., Wasko et al., 2011). Many prestigious universities worldwide have set up various VW classrooms and incorporated in-world learning and training programs as part of the curriculum, and are further considering using VWs to offer distance education programs to reach a wider spectrum of students globally (Holmberg, 2008).

However, for distance education programs, the use of VWs for learning and collaborative knowledge construction is usually mandated by educators (Lee, 2006). Research on e-learning pointed out that even under the mandatory situations, learners may still express their unwillingness to continuously use e-learning platforms through uncooperative behaviors, such as keeping silent in online discussions and allowing the avatars to become idle for a long time (Fabri & Moore, 2004). Furthermore, for voluntary long-distance learning at VWs, learners’ unwillingness to continue is highly likely to increase drop-out rates (Frankola, 2001). Nevertheless, despite the importance of learners’ continuous use of VWs for learning after the initial exposure, researchers and practitioners still know little about its underlying reasons, especially about how learners’ learning experiences and their perceptions will affect their continuous intention. Thus, this study aims to address the following research question:

What are the critical factors and how will these factors influence learners’ continuous intention in group-based virtual worlds learning?

This study leverages on theories from information systems research and educational psychology to address the research question. In particular, a balanced thinking-feelings model on information systems continuance (Kim et al., 2007) and social-constructivist theory (Roussos et al., 1999; Vygotsky, 1986) are adopted to develop a research model on virtual world learning continuance. Both the utilitarian and hedonic values are investigated as determinants to VW learning continuance and their antecedents, personal and social learning factors, are emphasized. In this way, we are able to systematically examine the drivers to VW learning continuance. The model was tested through a survey among undergraduate students at a large public university attending course activities in Second Life®. The current
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