Adoption of Second Life in Higher Education: Comparing the Effect of Utilitarian and Hedonic Behaviours

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ABSTRACT

Second Life is a three dimensional multi-user virtual environment within the Web 2.0 suite of applications which has gained widespread popularity amongst educators in the recent years. However, limited empirical research has been reported on the adoption of Second Life, especially within higher education. The majority of technology adoption studies concentrate on analysing effects of utilitarian variables on adoption of a new technology however one should also focus on the hedonic effects when it comes to the adoption of Web 2.0 technologies which are highly interactive, involving, multi-user and entertaining. In this paper, the authors analyse the effect of utilitarian and hedonic behaviours on adoption of Second Life in a higher education context. To achieve this goal the authors propose an extension to Davis’ Technology Acceptance Model (TAM) by including emotional and imaginative responses as hedonic behaviours and usefulness, ease-of-use and computer self-efficacy as utilitarian behaviours. Empirical evaluation of the proposed model suggests that hedonic behaviours, emotional responses in particular, emerged as the strongest predictors of Second Life adoption. The study findings further suggest that traditional technology acceptance approaches may fail short in being able to explain the usage of today’s highly interactive, multi-user and entertainment-oriented technologies.

Keywords: Hedonic Behaviours, Higher Education, Partial Least Squares (PLS), Second Life, Technology Acceptance Model (TAM), Utilitarian Behaviours

INTRODUCTION

Second Life is a popular 3-D multi-user virtual environment (MUVE) which is gaining widespread acceptance from educators and students. A large number of prominent educational institutions have established virtual campuses in Second Life. Despite the fact that Web technologies like Second Life are seen as next-generation platforms for Web users, their acceptance remains a big challenge in order to become mainstream (Shin & Kim, 2008). Also, due to infancy of MUVEs in higher education very little academic research is available on the adoption of Second Life.

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To better understand this emerging virtual learning environment it is vital to understand the significant predictors of Second Life usage. In Information Systems research, several theoretical models have attempted to explain the adoption of new technology. Of these, technology acceptance model (TAM) is the most researched. TAM, originally developed by Davis and his colleagues, attempts to explain or predict individuals’ acceptance of computer-based systems and underlying influencing factors (Davis, 1989). The core TAM constructs are perceived usefulness and perceived ease-of-use which capture utilitarian aspects of users intentions to adopt (or not to adopt) a technology. Computer self-efficacy is another utilitarian construct that has been used in a number of technology adoption studies. It is originally derived from Bandura’s Social Cognitive Theory (SCT) which explains individual’s belief in one’s own capabilities to use computers in diverse situations (Compeau & Higgins, 1995). Despite the importance of the utilitarian notion in gauging technology adoption patterns, some recent studies also suggest investigating upon facets of human behaviour that are likely to capture hedonic consumption of emerging Web technologies (Hsu & Lu, 2004). Hedonic consumption behaviours relate to multisensory, imaginary and emotional aspect of one’s experience with products (Hirschman & Holbrook, 1982), mainly explained through emotional and imaginative responses (Hirschman, 1983; Lacher & Mizerski, 1994). Since Second Life constitutes a large entertainment element along with its multi-user and interactive nature, it could be a typical subject for hedonic consumption constructs.

This paper builds on a previous study conducted by the authors by analysing the impact of hedonic variables on adoption of Second Life (Saeed, Yang, & Sinnapann, 2009). However, after completing the first study the authors decided to analyse the adoption of Second Life from a different angle, i.e., by comparing the impact of hedonic and utilitarian variables. In order to capture the utilitarian and hedonic aspects of Second Life usage, we propose an extension to the original TAM, by including emotional and imaginative responses along with TAM constructs and computer self-efficacy. One of the driving factors motivating this research could be attributed to the growth of MUVEs and their increased use in the higher education scene. Thus, this paper aims at analysing adoption of a popular Web 2.0 technology called Second Life by looking at hedonic and utilitarian aspects. The rest of the paper is organised as follows. The second section presents an overview of academic uses of Second Life: technology acceptance model; computer self-efficacy; and, hedonic consumption behaviours. The research hypotheses and model development process is explained in the third section. Data collection procedures are explained in the fourth section. The fifth section presents the study results while the sixth section discusses the study findings, theoretical contributions, practical implications and limitations. The seventh section concludes the study and points out some directions for future work.

BACKGROUND

Second Life in Higher Education

Second Life is a 3-D multi user virtual environment (MUVE) launched by Linden Labs in 2003. This is another popular Web 2.0 technology with a large user base of nearly 26 million. Second Life is a world mainly created by its inhabitants, called ‘residents’. Residents have the opportunities to create their digital proxies called ‘avatars’ and design their clothing, hair colour, dresses and even appearances (Coffman & Klinger, 2007). Avatars can walk, run, or even fly in the virtual environment. They can converse with other avatars using a variety of communication channels including text, images, gestures and voice. Residents can move (walk, run, fly) or teleport (transferring of avatar from one point to another without traversing the virtual space) from one location to another. Second Life also provides opportunities for its residents to create virtual goods and services to sell, buy and trade to other residents using Linden dollars.
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