ABSTRACT

This study examines the factors influencing Estonian college student retention in course management systems (CMS). The study employed a sample of 72 students with experience in CMS tools, that is WebCT. The participants came from four local higher education institutions. A hypothetical, structural model highlighting the impact of relevant antecedents such as, ease of finding, computer anxiety, self-efficacy, perceived usefulness, and perceived ease of use were developed. Twelve hypotheses were generated from the model and tested using a structural equation modeling technique, partial least squares (PLS). The predictive power of the model was adequate and the study found support for seven of 12 hypotheses. Regarding the impact of the antecedents on continuance intention in the use of technology, the results offer the following insights: when computer anxiety is low, students are able to use the system without much difficulty, and are likely to continue to use it in the future. Similarly, students intent to continue the use WebCT is enhanced when they are able to navigate the system with ease. The implications of the results are discussed.

Keywords: continuance intention; course management systems; electronic learning; technology acceptance model; user characteristics; Web-based education; WebCT

INTRODUCTION

Currently, higher learning institutions across the globe have started adopting a type of information and communication technology (ICT), generally referred to as course management systems (CMS) to enhance pedagogy (Limayem, Chan & Chan, 2003; Ifinedo, 2006; Ngai et al., 2007; Tavangarian et al., 2004). CMS are used in the management of asynchronous academic environments (Tavangarian et al., 2004). Examples of CMS include Blackboard, Learning Space, and WebCT (the example used in this study). In brief, the technology or tools enable students to learn at their own speed, and give and receive feedback from peers and instructors alike. Additionally, it provides a wide variety of learning and teaching opportunities, such as course content and syllabi tools, student
progress tracking, group project organization, student self-evaluation, e-mail, and online chat. Morss (1999) studied the relevance of WebCT in higher learning settings noting that students generally have favourable attitudes towards the tool. This is due to the fact that WebCT is easy to use and requires little or no technical background (see Ifinedo, 2006).

Several thousands of universities around the world have adopted WebCT to enhance their e-learning platforms (Ifinedo, 2005b, 2006; Ngai et al., 2007; Tavangarian et al., 2004). The same is true for higher learning institutions in Estonia, where CMS, including WebCT, have been adopted to facilitate Web-based learning or e-learning (Ifinedo, 2005a). Estonia is an emerging country in Eastern Europe incorporating ICT use in education at levels (Estonian eUniversity, 2004a; Tiger Leap Foundation, 1997). Therefore, Estonian colleges were chosen as a model to test the efficacy of Web-based learning. Researchers (e.g., Morss, 1999; Limayem et al., 2003; Ngai et al., 2007; Tavangarian e et al., 2004) have studied the acceptance of CMS among college students in developed countries. Results suggest that the acceptance and success with such tools are high. Unfortunately, a search of relevant literature shows little or no empirical studies exist in which the Estonian student’s perspectives have been discussed. Success in the use and acceptance of these technologies among students in developed countries does not necessarily represent the attitudes of students from other regions of the world (Brown, 2007). Conflicting results could be due to cultural and socio-economic differences (Gefen & Straub, 2000; Straub et al., 1995). It is hoped that by studying the perceptions of Estonian student intent to continue the use of WebCT, policy makers and e-learning project administrators in the country will benefit from the results of this study.

Importantly, this study complements other research in Estonia examining e-learning project success assessment. For example, Ifinedo (2005a) reports the risks of implementing e-learning projects from the information systems (IS) project managers’ point of view. The Estonian eUniversity (2004b) conducted a survey to determine the needs of e-studies and e-learning environments among teachers in the country. In both studies, the views of students’ were not sought. Indeed, Keller and Cernerud (2002) note that the discourse of ICT use in pedagogy tends to focus on how faculty members use such technologies, with little or no attention paid to students’ perspectives on these issues. They argue that by researching students’ views, we stand to increase our knowledge in the success of learning environment. More importantly, e-learning project managers and other policy makers in Estonia, as elsewhere, are beginning to realize that as new ICT are introduced, if administrators are not educated in the success of these learning strategies, a valuable resource may be lost (Davis, 1989; Gefen & Straub, 2000; Lee et al., 2003; Estonian eUniversity, 2004b; Straub et al., 1995).

The notion of acceptance in this article refers to “the demonstrable willingness within a user group to employ information technology for the tasks it is designed to support” (Dillon & Morris, 1996, p.4).

This present study is motivated by the lack of empirical studies on WebCT continuance intention of use among college students. Additionally, this research aims at presenting empirical evidence from a region of the world that has not been featured prominently in the literature. Importantly, this research did not limit its scope to presenting evidence on WebCT use as the major indicator for success with the tool. Previous studies were limited by an approach using only WebCT to measure success with the technology acceptance model (TAM). Such studies overlook the fact that use is the first step in achieving success with the new IS. In fact, Bhattacherjee (2001) and Limayem et al. (2003) have argued for IS continuance intention to be incorporated into studies investigating the adoption of IS. This will assure overall success with IS acceptance. Similarly, Davis (1989) argues the predictive capability of TAM could be improved when relevant variables or factors are considered. In response, researchers examining the acceptance
Effects of the Digital Game-Development Approach on Elementary School Students' Learning Motivation, Problem Solving, and Learning Achievement
