Introduction

Innovative consumer electronic reading devices such as tablet PCs, netbooks, and dedicated e-book readers grew tremendously in recent years and have drawn considerable research attention to e-learning (Alvarez, Brown, & Nussbaum, 2011; Hashemi & Ghasemi, 2011; Young, 2000). With computer technologies increasingly integrated into the classroom, learning environments have changed in revolutionary ways. A digital learning environment supports abundant learning resources and successfully integrates with physical learning devices that support students in performing their learning tasks also facilitates their learning performance.

E-textbooks are educational or instructional books which offer text, photos, graphs, and tables in digital format. Compared to printed books, e-textbooks have greater flexibility and accessibility, better visual appeal, as well as the potential to add additional supporting materials such as audio collections or links to activities and websites (Woody, Daniel, & Baker, 2010). Although e-textbooks appear to offer many advantages, students often express dissatisfaction with their current e-textbooks, largely because they consider them to be conversions from traditional printed books to digital. Students expect their e-textbooks to be multimedia and integrate interactive features in order to facilitate their learning efficiency. The development of the tablet PC gives learners a new way to meet these requirements.

In the initial stage of tablet learning, the lack of understanding of students' feelings toward tablet PCs caused schools to encounter many challenges to successful implementation. Greater concern for the performance of tablet PCs and student perspectives on tablet PCs is necessary. Recently, researchers have focused attention on tablet-based learning and attempted to evaluate its effectiveness. Tablet PCs have been used as reading devices, learning tools, and presentation systems, and applied in teaching courses such as language learning and medicine and in collaborate learning activities (Alvarez, et al., 2011; Anderson et al., 2004; Brusco, 2011; Hsueh & Wang, 2008; Tanaka, Hawrylyshyn, & Macario, 2012). These studies all provide contributions by using tablet applications in practical experiments in campus and consistently show a positive impact on education. However, factors affecting student switching intentions should be considered when adopting tablet learning applications. To date there have been no exhaustive studies exploring the factors that drive student intention to use tablet PCs

in classrooms. Thus, we explored several characteristics of tablet PCs and attempted to describe and explain what affects student switching intentions toward tablet learning.

In this study, we focus on tablet e-textbook applications within the tablet learning context and define them as textbooks running on a tablet which are the equivalent of printed textbooks and allow embedded multimedia elements including text, photos, graphs, video, and audio, combined with interactive abilities. This study explores the motivating forces in switching to tablet e-textbook applications. Hence, the Push-Pull-Mooring (PPM) model is adopted to describe student switching intentions towards tablet e-textbook applications by examining the structural relationships among the push, pull, and mooring factors on switching intentions. Furthermore, we investigated moderating factors to better describe switching intentions.

Literature review

Tablet PCs and tablet learning

The original concept of tablet in education was created by Alan Kay in 1968. Kay (1972) created the idea of a device called the Dynabook aimed at presenting digital media for children that focused on learning and gathering information. Kay envisioned that DynaBooks could centralize information storage through wireless connection. The size of a Dynabook is nearly the same as that of notepad. It had a liquid crystal screen and a hardware keyboard placed at the bottom of the device. It could also record voice memos, play audio files, and much more. Kay also described the basic idea of the multi-touch display. Thus, the concept of a tablet was basically complete almost 40 years ago, though the digital programs for running on it had yet to be invented.

Microsoft introduced the first mass market tablet, the Microsoft tablet PC, in the early 2000s. The Microsoft tablet PC is a pen-enabled personal computer running Windows XP Tablet PC Edition. The main difference between the Microsoft Tablet PC and a typical laptop is that the Microsoft Tablet PC provides impressive handwriting recognition technology, thus creating a pen computing operating environment. This device focuses on the applications work when the user is away from their desk. The Microsoft Tablet PC can run familiar applications such as Excel, Word and Powerpoint, and offers internet connectivity. By adding a pen and a screen, some common business tasks have