

Chapter 41

Effects of Studying Tasks Compatibility with Tablets on Their Acceptance: How Experienced Tasks with Tablets Can Modify Perceptions of Tablets

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ABSTRACT

This chapter addresses the issue of tablets acceptance for studying. An experiment was carried out to test the effects of specific studying tasks experienced by students with no previous experiences with tablets on the perceived usability and usefulness of tablets. Students had to perform a high-compatible task (i.e. navigation/reading task) and a low-compatible task (i.e. writing task) for tablets. Subjective measures of usability, usefulness and use intention were designed to be more specific to the type of task than the classical measures used in the Technology Acceptance Model approach (Davis, 1989). Participants rated their answers before and after performing the tasks with a tablet. The results showed that the perceived usability and usefulness of tablets increased after the high-compatible task while they decreased with the low-compatible task. The findings stressed the need to consider the real user experience and to use more task-oriented measures to investigate the acceptance of mobile devices for studying.

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INTRODUCTION: CONTEXT AND GOALS OF THE CHAPTER

Mobile learning is a crucial issue for technology education, but also for education in general. The development and the diversity of devices (Mobile computers, Tablets, Smartphones, Netbooks, etc.), combined with the rise of Internet, entailed new learning situations including more and more digital information processing. Mobile learning, defined as learning supported or conveyed by a mobile device (Traxler, 2009), may support ubiquitous learning. The use of mobile devices by college students is higher than ever (Margaryan, Littlejohn, & Vojt, 2011; W. H. Wu et al., 2012), which is why empirical and scientific studies should be carried out to determine the efficiency of such mobile devices, and how they are perceived by students.

One of the most widely used mobile devices for learning today are tablets, while PDAs, laptops and mobile phones were the most commonly used between 2000 and 2010 (W. H. Wu et al., 2012). Tablets are mobile devices using screens with digitizers, allowing users to interact with the screen using a stylus or their fingers (multi-touch system). The traditional keyboard and mouse are no longer necessary to use tablets. Their light practical weight, small size and good autonomy make technology education possible both inside the classroom and out (e.g. at a museum). In the educational field, tablets are becoming increasingly commonplace (Falloon, 2015) and are usually expected to support teaching and learning; this implies good acceptance of such innovative tools by teachers and learners alike. As for any other innovation, to be successful, tablets must be accepted by users.

Investigations into the acceptance of tablets contribute to our knowledge of the effects of such mobile devices on studying activities. However, rather than generally assessing acceptance and its closest determinants as is the norm in technology acceptance research (Teo, 2010), this chapter aims to examine how acceptance may depend on the type of task performed with a tablet. Tablets can be used for various study-based tasks (e.g. taking notes, communicating, sharing documents, reading, recording sounds and videos, searching for information, etc.) and acceptance could depend on the type of tasks performed by students. Because acceptance partly relies on usability and usefulness as perceived by users (Davis, Bagozzi, & Warshaw, 1989; Venkatesh, Morris, Davis, & Davis, 2003), a study was carried out to investigate how tasks that are highly and lowly compatible with tablet use may impact users' judgment concerning the usability and usefulness of such devices, and thereby the tablet's acceptance. The study was conducted in the field of ergonomics and psychology.

Tablets as Tools for M-Learning and U-Learning

Modern-day technological advances offer new perspectives for teaching and learning. In particular, they supply new tools that enable pervasive and ubiquitous learning. "Context-aware ubiquitous learning usually involves a learning activity situated in a real-world environment, the setup of a wireless communication infrastructure, and the use of mobile devices so that the learners can be guided to explore real-time information and interact with the learning environment" (Hsu & Hwang, 2014, p. 689). As mobile devices become increasingly powerful, they arouse more and more interest from teachers and researchers, and contribute to changing traditional educational contexts. Recent technologies support mobile learning (m-learning) and ubiquitous learning (u-learning), enabling anyone to learn, anywhere, anytime. In the classroom, using mobile devices allows students to access to digital resources that can be integrated into more classical activities involving books, paper and pens. For instance, students can use mobile tools to search for information on the Internet to assist with activities such as writing an essay.

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