Chapter 2

Factors Affecting the Adoption of Web 2.0 Technologies by University Students:
Evidence from Australia

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ABSTRACT

The purpose of this chapter is: (1) to examine Australian university students' awareness of the benefits of Web 2.0 technologies, and (2) to investigate the factors that influence students to adopt Web 2.0 technologies to supplement in-class learning, using the theoretical foundations of both Theory of Planned Behaviour (TPB) and Decomposed Theory of Planned Behaviour (DTPB). Web survey data of 60 students studying in 14 universities and 1 undergraduate college across Australia were used to examine the aforementioned purposes. Findings indicate that most students in this study's sample were aware of the benefits of Web 2.0 technologies to supplement in-class instructions. The findings also indicate that students' attitude, subjective norms and perceived behavioural control were strong determinants of their intention to use Web 2.0 technologies.

INTRODUCTION

In the past decade the Web has shifted from a source of information to a place in which ordinary users can contribute content interactively through blogs, reviews and so on. Web 2.0 has opened a window of opportunity for people to become producers of content rather than merely receiving it (Blank & Reisdorf, 2012). O'Reilly and MediaLive International started the formulation of the concept 'Web 2.0' in a conference brainstorming session, in which the importance of the web was seen to be increasing over time. The exciting bundles of applications that enrich the Internet have marked the emergence of the concept of 'Web 2.0' (O'Reilly, 2005).

With regard to education approaches and pedagogies, there is an increasing demand for innovation (McLoughlin & Lee, 2007). In addition, students of this era are considered digital natives as they are widely exposed to technologies such as computers, cell phones and the Internet (Bennett, Maton, & Kervin, 2008; Prensky, 2001). Currently, there is a growing use of Web 2.0 such as wikis, social networks, social bookmarking and blogs by these digital natives (Jones, Ramanau, Cross, & Healing, 2010), and thus exploring students' perceptions of the fit of these technologies for educational purposes requires more attention from the research community.

Little research has been conducted to address students' perceptions of the advantages of incorporating Web 2.0 applications to supplement in-class learning environments. In an attempt to fill this void, Hartshorne and Ajjan (2009) conducted a study that examined university students' awareness of the pedagogical benefits of Web 2.0 applications to understand the factors that influence students to adopt these tools. This study was done in the U.S. in which the external validity of its findings is regarded as a viable research goal. Indeed, Johns (2006) indicates that context has a powerful effect on the results of a given study. In this regard, the variations of results between studies that investigate the same phenomenon within different contexts are regarded as an indicator of context effect (Johns, 2006). In line with this argument, based on the Theory of Planned Behaviour (TPB) (Ajzen, 1991) and the Decomposed Theory of Planned Behaviour (Taylor & Todd, 1995a), this Australian-based research aims to provide a contextual extension for Hartshorne and Ajjan's (2009) study. The rationale of this strategy is to add to the literature through learning about specific factors that influence students from Australian universities to adopt Web 2.0 technologies. The purpose of this research is to address the following research questions: (1) Are university students aware of the benefits of using blogs, wikis, social networks and social bookmarking to supplement traditional classroom instruction? and (2) What factors influence student decisions to adopt blogs, wikis, social networks and social bookmarking to supplement classroom instruction?

SCOPE OF THE STUDY

This study explores the students' perception of the suitability of blogs, wikis, social networks and social bookmarking to supplement in-class learning according to six criteria statements. These are: (1) improve students' learning, (2) increase student-faculty interactions, (3) increase student-student interactions, (4) increase student satisfaction with the course, (5) improve students writing, (6) ease of integration into university courses (Baylor & Ritchie, 2002; Hartshorne & Ajjan, 2009). Thus, the aim is to allow respondents to indicate the fitness of each technology in relation to the above mentioned criteria, in which the categorisation of these technologies can be attained from the students themselves. Moreover, it should be noted that providing an in-depth analysis of the possible types of use and interaction with these technologies by students is beyond the scope of this study.

Our focus in this study is limited to providing the factors that influence students to 'voluntary' adopt Web 2.0 to supplement in-class learning. The voluntariness of this adoption has a decisive influence for this study to use TBP and DTPB as theoretical foundation. That is, both of these theories are practical in explaining the adoption of technology in voluntary contexts (Brown, Massey, Montoya-Weiss, & Burkman, 2002) because they incorporate the attitude construct of which empirically proven in past literature to has a substantial influence on behavioural intention (i.e., technology adoption) (Pavlou & Fygenson, 2006).

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