

# Users' Acceptance of Online Literature Databases in a Thai University: A Test of UTAUT2

Wornchanok Chaiyasoonthorn, Faculty of Administration and Management, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

Watanyoo Suksa-ngiam, The Center for Information Systems and Technology (CISAT), Claremont Graduate University, Claremont, CA, USA

## ABSTRACT

Online literature databases are important for higher education and research organizations since they represent a vast collection of academic literature that researchers can utilize and review previous research conducted so far. The study aims to test a theory explaining what drive research students adopt online academic literature databases. Unified Theory of Acceptance and Use of Technology 2 (Venkatesh, Thong, & Xu, 2012) is a new theory in Information Systems that should be tested in a different circumstance. The study surveyed 614 respondents in a Thai university. The data are analysed using structural equation modelling (SEM). The results show that behavioral intention and facilitating conditions did not influence use behavior where as other paths suggested by UTAUT2 are still significant. However, only gender moderates the path from facilitating conditions to behavioral intention. The order moderators did not moderate the path suggested by the theory.

## KEYWORDS

Online Literature Databases, Thailand, Unified Theory of Acceptance and Use of Technology 2, User Acceptance, UTAUT2

## INTRODUCTION

Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) (Venkatesh, Thong, & Xu, 2012) is one of the newest theories in Information Systems (IS). It aims to understand why people use a particular technology. It is a revision of UTAUT1 (Venkatesh, Morris, Davis, & Davis, 2003) built up from eight theories including the Technology Acceptance Model (TAM) (Davis, Bagozzi, & Warshaw, 1989). UTAUT2 accounts for additional constructs: habits, hedonic motivation, and price value. Several paths are modified in particular moderating effects: gender, age, and experience.

The study aims to test UTAUT2 under a different circumstance that accounts for both technology and user differences. Recent research (Open Science Collaboration, 2015) replicated 100 original studies relating to experiments and correlation studies in psychology. The findings show a significant difference between the replicated and the original studies (Open Science Collaboration, 2015, p. 943). This leads to the concern about theories in social science when employed outside their original

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settings. In addition, theory building and theory testing must co-exist in journal publications. A theory should be able to generalize to in different spaces and time frames (Reynolds, 1971). As Karl Popper pointed out, scientific communities progress when new ideas (theories) are developed (conjectured) and then falsified (refuted). Consequently, only rigorous and relevant theories can withstand repeated falsification (as cited in Godfrey-Smith, 2003).

The adoption of literature databases is very interesting. Not only graduate students, but also undergraduate students are dependent on the use of literature databases in higher education (Soria, Fransen, & Nackerud, 2013). 42 percent of undergraduate students in a large US university read at least one paper from an electronic database in a class a semester (Mbabu, Bertram, & Varnum, 2013). Electronic journals are the most used library services by first year undergraduate students (Soria, Fransen, & Nackerud, 2013). Therefore, a test of UTAUT2 might be useful to understand and to promote the use of literature databases.

There are three gaps in this research that need to be addressed. First, although researchers - such as Chang (2013) and Joo and Choi (2015) - have studied the adoption of digital library and related technologies, studies about Thai users have not yet been addressed. There is thus a need to understand the use of technology in Thailand since different users from different countries and cultures present different behaviors (Im, Hong, & Kang, 2011). For example, a study in China indicates that masculinity moderates the casual links from perceived usefulness to intention to use and from perceived ease of use to intention to use (Yoon, 2009). Hence, one could not generalize the theory if there is no test with Thai users.

Second, studies validating UTAUT2 have not been found in the context of literature database and Thai users. TAM and UTAUT1 have previously used to investigate library technology adoption. However, since UTAUT2 is new, journals have not published studies employing UTAUT2 to explain library technology adoption. Adoption theories should be tested under a different technological circumstance. UTAUT2 is developed from mobile Internet in Hong Kong, which is a form of consumer technology (the mobile Internet) (Venkatesh et al., 2012). It has been applied and tested in many contexts but not in the context of literature databases. Different technologies generate different effect sizes. For example, the coefficient of the paths from perceived usefulness to behavioral intention, from perceived ease of use to behavioral intention, and from perceived ease of use and perceived usefulness differ among office, general, and Internet applications (King & He, 2006).

Third, different professional users use literature databases differently. Engineers read fewer articles than medical doctors (Tenopir & King, 2002). The focus of this research is on a Thai university where the majority are engineering and science students. The authors therefore raise the following research question:

*How well does UTAUT2 explain what drives research students in a Thai research university to adopt literature databases?*

This research is very significant for the IS community. Theory testing provides feedback for theory builders. Using this feedback, theory developers can know how UTAUT2 is employed in a different context so that they can modify the existing theory or develop a better theory. In addition, design researchers can know conditions or factors that enhance the use of literature database technology so that they can develop a better IT artefact (Hevner & Chatterjee, 2010). Most literature databases have been purchased from developed countries. Hence, this research reveals Thai users' perception and then informs the designers of the technology.

This research is very important in promoting intensive research universities. To fulfill students' needs, universities have deployed information technology expected to bring improvement in student's achievement (Yadegaridehkordi, Iahad, & Ahmad, 2016). Literature databases collect a massive number of published materials around the world and can be accessed by users anytime and anywhere.

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