E-Book Acceptance among Undergraduate Students: A Look at the Moderating Role of Technology Innovativeness

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ABSTRACT

This paper utilizes the technology acceptance model (TAM) to uncover the moderating roles of technology innovativeness. A study of 158 undergraduate students revealed that the original TAM constructs and relationships were reliable, supported, and applicable in the measurement of e-book acceptance. Interestingly, personal technology innovativeness was found to moderate in a significant way, the relationship between behavioral intention to use e-book and actual usage of e-book. These findings suggest that while individuals who are more open to technology (adopters) as well as less technologically innovative individuals (late adopters and non-adopters) are likely to have the intention to use web-based instructional technologies like e-book, only highly innovative individuals, may actually translate intention into actual usage. These results have serious implications on adopters, implementers and users of instructional technologies who would need to factor into their decision-making the role of the individual technology innovativeness of its users.

Keywords: Instructional Technologies, Technology Acceptance Model, Technology Innovativeness, User Acceptance, Web-Based Learning Technology

DOI: 10.4018/ijwltt.2015070103
INTRODUCTION

The question as to why some people adopt new information technologies while others do not has been widely studied in the last three decades. While labels like information systems implementation, technology adoption, and technology acceptance (see Agarwal & Prasad, 1998) have all been used to describe this phenomenon, the undergirding purpose has remained the same. Instructional technologies, without exception, have also gained increased attention as a consequence. About a decade ago, a new construct, technology innovativeness (TI) was both conceptualized and operationalized under the name, personal innovativeness in the domain of information technology (Agarwal & Prasad, 1998).

Personal innovativeness in the domain of information technology has been defined as the “willingness of an individual to try out any new information technology” (Agarwal & Prasad, 1998). Because technology acquisition does not automatically translate to technology usage, the subject of technology acceptance has, and continues to garner research attention as can be seen in the works of Davis, Bagozzi and Warshaw (1989); Taylor and Todd (1995); and Moore and Benbasat (1991). The technology acceptance model (TAM), first proposed by Fred Davis (1989), has received so much theoretical and empirical support through the years as an important framework to gauge user’s behavioral intentions to use a particular technology (Venkatesh & Davis, 2000).

The TAM has been used to predict user acceptance of technology in different information systems studies (Venkatesh & Davis, 2000; Mathieson, 1991; Selim, 2003; Adams, Nelson & Todd, 1992). Developed by Davis (1989) from the theory of Reasoned Action (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980) the TAM has become a generally accepted model for examining technology acceptance. Because of the failure of user technology acceptance (Kiel, 1995), organizations as well as technology manufacturers must consider the crucial subject of user acceptance.

New technologies for classroom usage require a careful choice of between the technology options being offered (Chilton & Gurung, 2008). Since the implementation of the e-book as an instructional technology, very little research has focused on its acceptance, let alone, the moderating factors. E-book has been defined as any piece of electronic text, excluding journal publications, regardless of size or composition, made available electronically for any device that includes a screen (Armstrong, Edwards & Londale, 2002, p. 217).

The idea of the e-book was first defined by Bush (1945) when he conceptualized the hypertext engine, Memex. However, it was Alan Kay who in 1968 (Kay, 2000) proposed the idea of Dynabooks—a device that could provide connections to online libraries—enabling both the search and reading of books. The 1971 start of Project Gutenberg (Hart, 1992) became a major achievement in this regard delivering electronic texts...
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