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Assessing Student Perceptions and Current Adoption of E-Textbooks

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ABSTRACT

This study looks into students' perception about E-textbooks and assess current adoption of E-textbook in a medium-size university in the Midwest of the United States. Literature reviews indicated some inconsistencies related to E-book adoptions. This study will investigate some of those inconsistencies including prior usage as factors in E-book adoption. Other factors considered in this study are: trialability, perceived values, and technology savvy. The theory of Technology Acceptance Model will be used in this study. An E-textbook adoption model is proposed and survey methodology will be used in this study. Survey will be administered among students on campus.

Keywords

Electronic Textbook, E-Textbook, Technology Acceptance Model, Trialability, Perceived Value, Technology Savvy, Prior Usage

INTRODUCTION AND LITERATURE REVIEW

Studies on E-Textbook or E-book adoption in general have been done extensively in the last decade in various disciplines and focusing on various aspects of it. However, the review of the existing literature indicates inconsistent findings regarding E-book adoption. Some of the inconsistent findings include:

- Previous usage of E-books: Woody et al. (2010) found that "...it doesn't increase preference for e-books", while Philip et al. (2013) found at least "...the probability that e-textbook users will choose E-textbook in the future is less than moderately high," pointed to some level of preference for e-book. Shepperd et al. (2008) found in their study related to previous usage that students will not purchase E-books for next semester after using them in the previous semesters. This indicated that previous usage has negative effect on predicting future usage.
- Preference of E-book: Shepperd et al. (2008) found that their respondents view E-book unfavorably, while Lynch et al. (2012) showed that their respondents, in this case students in their classes, prefer E-textbook option that traditional one.
- Future of E-books: Zhang et al. (2013) argue that his study findings support the idea that E-books have firmly established a place in people's lives, while Philip et al. (2013) noted in their study that the likelihood of traditional book users switch to E-book is low.

While there are inconsistencies in E-book adoption study, there are also a number of agreements among researchers. Those agreements among others include:

- Usefulness as the stronger predictor for future use or adoptions: Stone et al. (2013), Nelson et al. (2007), Bansal (2010).
- Perceived ease of use as predictor for future use or adoption: Stone et al. (2013) and Bansal (2010).

In this paper, the terms "E-textbook" and "E-book" will be used interchangeably. In the next section, theory and research question will be discussed, followed by discussion about the methodology.

THEORY AND RESEARCH QUESTION

Due to some inconsistencies in the existing literatures, this research aims to investigate the factors that influence E-textbook adoptions by college students. The Technology Acceptance Model (TAM) (Davis 1989) will be utilized in this research as this theory has been accepted as de facto theory for studying E-book adoptions. The perceived ease of use and perceived usefulness and users' intention to adopt E-textbook for future classes will be assessed. The overall research question for this study is:

What factors that influence students to adopt E-textbooks?

In specific, the researchers will explore prior usage experience, trialability, perceived value, technology savvy, perceived ease of use, and perceived usefulness.

Although many IT adoption studies suggested positive impact of prior usage or experience in IT adoption, e.g., Taylor et al. (1995) and Jackson et al. (1997), E-book adoption studies have shown inconsistencies pertaining to this factor. Jackson et al. (1997) found in their study that prior usage positively related to intention to use, while they can not find positive relationship to perceived usefulness. However, we would argue that prior usage or experience on a system or product would form some level of perception in relation to its usefulness. Therefore, in this research we argue that prior usage would have positive relationship to perceived usefulness, as users would find more features on E-textbooks that can not be found in traditional textbooks. Bansal (2010) argues that "...past usage would generate habitual tendencies, which would lead one to develop favorable evaluations of the design of the e-book and would, at the same time, develop compatibility with e-books." Favorable evaluation of the design and compatibility with E-book are related to perceived ease of use. Therefore, the researchers argue that prior usage of E-book is positively related to perceived ease of use (H1), perceived usefulness (H2) and intention to adopt (H3).

Rogers (1995) in his famous book of Diffusion of Innovations identified trialability as one of the innovation characteristics that influences adoption behavior. He defines trialability as ability to experiment with an innovation on temporary basis. This is relevant to this study as we witnessed the proliferation of research on E-book lending program, e.g., Chen et al. (2012). By allowing someone, in the near future, to lend his E-books to others, it will increase the role of trialability in E-book adoption. Therefore, the researchers argue that trialability is positively related to perceived usefulness (H4) and intention to adopt (H5).

As students face high expenses for textbooks, perceived value of E-textbook plays important role in its adoption. The National Association of College Stores estimated that in average each student spends annually \$655 for textbooks (2012). Pavlou et al. (2006) define value of a product as "...a product that offers an attractive combination of quality and price. Price discounts are examples where the consumer can save money by getting a product at a lower price and they have been shown to influence purchase intentions." In this study, the product is E-textbook that students should perceive as cost-saving alternative to print textbook while at the same time offers an equal, if not better, quality. Therefore, the researchers argue that perceived value of E-textbook is positively related to its perceived usefulness (H6) and intention to adopt (H7).

As current generation of college students grew with more technology around them than ever, technology-savvy is another factor included in this study. Sun et al. (2013) have identified the significance of this factor in E-textbook adoption. Technology savvy is related to readiness to embrace new technology such as E-textbook. In this study we argue that technology savvy is positively related to perceived ease of use (H8), and intention to adopt (H9)

Based on the TAM model, the researchers argue that perceived ease of use is positively related to perceived usefulness (H10) and intention to adopt it (H11). At the same time, they also argue that perceived usefulness is positively related to intention to adopt it (H12). Below is the proposed model for this study:

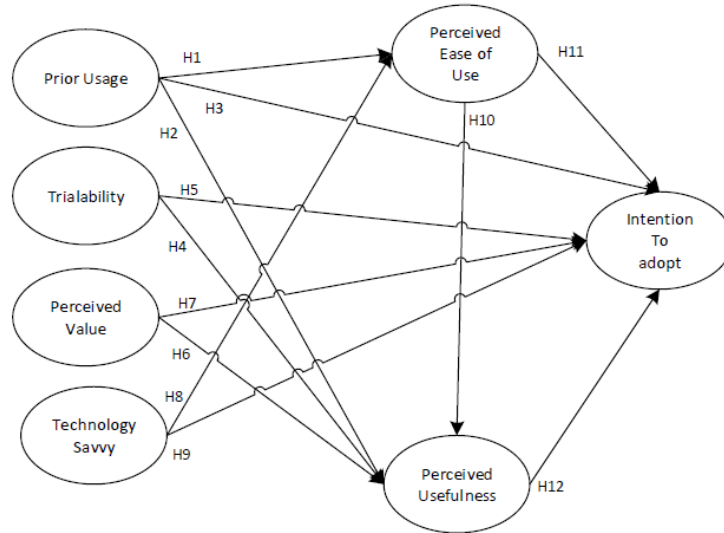


Figure 1. E-Textbook Adoption Model

METHODOLOGY

An online anonymous survey will be administered to collect data from students. The research proposal including the survey is approved by the Human Subject Committee/ IRB of the researchers' university. The survey will be sent to all students on the campus. The university is located in the Midwest of the United States with an enrollment of around 5,000. The number of male and female students on campus is almost identical (50.5% vs. 49.5%). The racial makes up of student body is 88% White, 3% American Indian, 3% International Students, and small numbers of other minority groups. Invitation for the survey will be distributed through email to the official students' emailing list on campus. The invitation will have a brief description about the study and a link to the survey site. The survey will be hosted on Google Form. Questionnaire for this study has been developed to address the following:

- Demographic information of respondents (including gender, races and current status)
- List of gadget or devices owned
- Prior usage of E-book – Self developed
- Student's awareness of E-books (5-point Likert scale) – Self developed
- Perceived values of E-books (5-point Likert scale) – Price factor in Sweeney et al. (2001)
- Perceived importance of trialability (5-point Likert scale) - Moore et al. (1991)
- Technology Savvy (5-point Likert scale) – Parasuraman (2000)
- Perceived usefulness (5-point Likert scale) - Davis (1989)
- Perceived ease of use (5-point Likert scale) - Davis (1989)
- Intention to adopt (5-point Likert scale) - Davis (1989)

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