A Study of Intention to Use Tablet PC E-books from a Perspective Combining TAM and IDT

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Abstract: The emergence of Tablet PCs in recent years has further triggered an evolution of e-books. Tablet PCs are very likely to become a dominant e-book reading device in the future. This paper probed into attitude toward using and intention to read e-books for Tablet PCs among e-book users in Taiwan based on a model combining Technology Acceptance Model and Innovation Diffusion Theory. The proposed model was tested using confirmatory factor analysis. Results indicated that attitude toward using was significantly related to perceived usefulness, compatibility, and observability. In other words, people tend to have a positive attitude toward e-books for Tablet PCs when they perceive reading e-books on Tablet PCs as easy, compatible with traditional printed books, and helpful for their communication with others. Besides, most respondents held a positive view of e-books, and their intention to use e-books was positively affected by perceived usefulness and attitude toward using.

Key-words: e-book, Tablet PC, technology acceptance model, innovation diffusion theory

1 Introduction

With the development of information technology and increasing prevalence of the Internet in recent years, people have become used to the information diffusion model of electronic media and gradually changed their ways of acquiring information and reading. Basically, electronic books (e-books) are the digital form of books that deliver knowledge through digital devices. They can be downloaded onto computer, smart phones, and other electronic reading devices for reading at home or on the go. They are overwhelmingly superior to physical printed books, whether in terms of instantaneity or portability. The emergence of e-books has broken many barriers to reading and also increased the diversity of reading materials available to readers. It can be expected that the development of e-books will be very intense in the future.

1.1 Introduction to e-books

According to Joint Information Systems Committee (JISC), the term “e-books” is defined broadly to include electronic reference works, monographs, and textbooks that can be delivered via the Web or a handheld device [12]. Magda and Jennifer [24] suggested that e-book is the results of integrating

classical book structure, or rather the familiar concept of a book, with features that can be provided within an electronic environment. E-book is a book downloaded from a website for free or at some cost for reading on a personal computer or a specially designed e-book reader. On International Digital Publishing Forum and the quarterly sales reports of Association of American Publishers (AAP), e-book refers to any book that can be downloaded from the Web and accessed using a handheld reader device.

The first e-book was created in 1970 in a project called Project Gutenberg. The goal of this project was to archive public domain books in digital form and make them available on the Web for free reading and download. Project Gutenberg set the earliest example of converting printed books into an electronic format. The e-book industry in Taiwan has been developing steadily under the long-term promotion of Industrial Development Bureau, Ministry of Economic Affairs, and Government Information Office of Executive Yuan. The government's goal was to boost the global competitiveness of this industry, expand the niche market for publishers of Chinese e-books, and create a technique-based ecology of this industry. In the future, e-books are likely to become the major form of publications in Taiwan.

1.2 Technology acceptance model

Based on Theory of Reasoned Action proposed by Fishbein and Ajzen [13] and Theory of Planned Behavior by Ajzen [1], Davis [10] developed a model called Technology Acceptance Model to explain factors affecting people's intention to use a technology and how rational and emotional factors are related to technology adoption [11]. TAM suggests that an individual's "actual use of a technology" is affected by his or her "intention to use", which depends largely upon his or her "attitude toward using" the technology as well as the "perceived usefulness" and "perceived ease of use" of the technology. This model also takes into account some "external variables" that may have a potential effect on one's adoption behavior. These external variables, including system characteristics, user characteristics, and organization, may indirectly affect actual use behavior through attitude toward using and behavioral intention. The main dimensions of TAM are explained as follows: "Perceived usefulness" is the degree to which one believes that using a particular information system could enhance his or her job performance. The higher the perceived usefulness of the system, the more positive the user's attitude toward using it. "Perceived ease of use" is the degree to which one believes that a particular information system is easy to use. The higher the perceived ease of use of the system, the more positive the user's attitude toward using it. "Attitude toward using" refers to the user's feelings about using the information system. "Intention to use" is the user's willingness to use the system. The higher the intention, the more likely that the user will actually use the system. In the present, TAM and its related theories have been applied in a wide array of areas to study user acceptance of various information technologies. Its effectiveness in predicting user acceptance of and intention to use information technologies has been empirically confirmed in many studies.

1.3 Innovation diffusion theory

Since first introduced by Rogers [28], the concept of diffusion has been extensively applied in various fields. Diffusion is a process by which an innovation is communicated through certain channels over time among members of a social system. It is a special way of communication. The communicated messages are related to some innovative concepts. Many

scholars have proposed their definition and views about "innovation". According to Bradford [3], any new idea or practice that has been successfully introduced into a certain social system and recognized as new by local members of the system can be viewed an innovation. It is not easy for users to accept new ideas, solutions or products, even though the new ideas, solutions or products have obvious advantages over existing ones. Many innovative things we use today went through a long period of improvement and diffusion before they were widely accepted. Hence, how to accelerate diffusion of innovations is an important issue for many businesses and organizations. Diffusion of innovations is also a kind of social change. The release, diffusion and even adoption or rejection of an innovation will cause some changes in the structure or functions of a social system [31]. Roger's [31] innovation diffusion theory has been a dominant theoretical foundation of many studies of adoption and diffusion of innovations. It is frequently used to predict and explain users' innovation adoption and diffusion behavior. Rogers and Shoemaker [29] proposed a model of stages in the innovation decision model, suggesting that an individual decides to adopt an innovation through a series of decision-making stages. Rogers [30] modified this model to form an innovation diffusion model. In this model, innovation decision process involves five stages, including knowledge, persuasion, decision, implementation, and confirmation. Rogers [31] further argued that characteristics of innovation are among the factors that affect one's innovation decision process. These characteristics, including relative advantage, compatibility, complexity, trialability, and observability, can be used to explain user acceptance and adoption of a new technology.

1.4 Summary of studies of TAM and IDT

In this paper, we attempt to use TAM as a basis to explore Tablet PC e-books usage intentions from user perspective. Due the fact that Tablet PC e-book is still an emerging information technology in Taiwan's consumer market, we will integrate Innovation Diffusion Theory (IDT) into our research model. Table 1 is a summary of studies of TAM and IDT. As shown in this Table, these studies are primarily focused on mobile commerce, weblogs or website technologies. To the best of our knowledge, no research has applied both TAM and IDT to discuss e-book related issues. Therefore, we will propose an integrated model combining TAM and IDT to investigate consumers' intentions to read e-books on their Tablet PCs.

Table 1 Summary of studies of TAM and IDT

Author(s)	Abstract
Karahanna et al.[18]	This paper investigates factors affecting user attitude toward information systems. Empirical evidence suggests that consumers' behavioral intention is affected by their subjective norms, and their continued use of an information system is affected by their attitude toward the system.
Carter and Belanger[5]	This study integrates constructs from TAM and IDT to form a model of factors that influence citizens' adoption of e-government services. Results indicate that perceived ease of use, compatibility, and perceived trustworthiness are significant predictors of citizens' intention to use e-government services.
Kuo and Yu	This paper proposes an extended

[20]	model of TAM to explore consumer intention to use mobile value-added services. Results indicate that personalization and perceived ease of use have a direct effect on perceived usefulness; perceived ease of use, compatibility, and perceived usefulness have a direct effect on attitude, which is positively associated with behavioral intention.
Tung et al.[36]	This paper uses a model developed based on TAM and IDT and incorporated with two additional variables, namely trust and financial cost, to examine nurses' acceptance of an electronic logistics information system. Results suggest that this extended model is effective in predicting nurses' adoption of the electronic logistics information system.
Chen [7]	This paper uses TAM and IDT to explore factors affecting users' adoption of digital TV. Results show that attitude, subjective norm, behavioral control, and behavioral control all have a positive effect on users' adoption of digital TV.
Wu and Lin [38]	This study uses TAM and IDT as a basis to survey acceptance of Library 2.0 among university students and teachers. Results indicate that attitude is a predictor of adoption intention.
Shih [32]	This study explores key factors affecting promotion of mobile services innovation in Taiwan. Results suggest that perceived usefulness and perceived ease of use have a positive effect on consumer attitude toward mobile services innovation.
Wn et al. [39]	This paper focuses on user perception of and intention to use 4G WiMAX. Empirical findings suggest that most users have a positive attitude toward WiMAX, and the attitude has a positive effect on usage intention. The more that users perceive WiMAX as useful, the more positive their attitude will be.

2 Method

There are some similarities between TAM and IDT, and each is complementary to the other. As pointed out in Moore and Benbasat [25] and Taylor and Todd [34], the "relative advantage" construct in IDT is conceptually similar to the "perceived usefulness" construct in TAM; the "complexity" construct in IDT is similar but opposite to the "perceived ease of use" construct in TAM. Therefore, we integrate TAM and IDT to build our conceptual model as shown in Figure 1. We will use this integrated model to explore factors affecting attitude toward using and intention to use e-books for Tablet PCs.

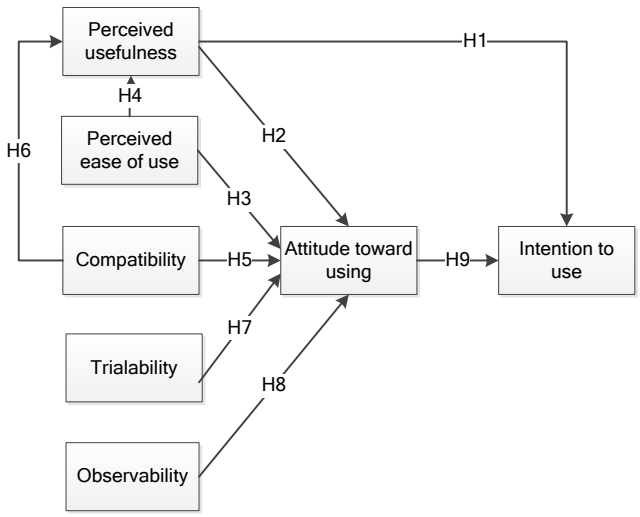


Fig.1 Research framework

2.1 Operational definitions

The proposed model consists of seven dimensions, including perceived usefulness, perceived ease of use, compatibility, trialability, observability, attitude toward using, and intention to use. The operational definition of each dimension is explained as follows:

1. Perceived usefulness: Davis [10] defined perceived usefulness as the degree to which a user believes that using a new technology or specific application system can enhance his or her job performance. Rogers [30] described relative advantage as the degree to which an innovation is perceived as being better than the idea it supersedes. Based on these definitions, we propose perceived usefulness is "the degree to which one believes that he or she can benefit from using e-books for Tablet PCs".
2. Perceived ease of use: Davis [10] described perceived ease of use as the degree to which one believes that an innovation is easy to use. Rogers [30] defined complexity as the degree to which an innovation is perceived as relatively difficult to understand and use. In this paper, we define perceived ease of use as "the degree to which one believes that e-books are easy to use and read on Tablet PCs".
3. Compatibility: According to Rogers [31], compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters. In our research, we define it as "the degree to which one believes that reading e-books on Tablet PCs is consistent with the way he or she reads printed books".
4. Trialability: Rogers [30] described trialability as the degree to which an innovation may be experimented with on a limited basis. In this paper, we define it as "the degree to which one believes that the functions of e-books for Tablet PCs can be tried before adoption".
5. Observability: According to Rogers [30], observability refers to the degree to which the results of an innovation are visible to others. In our research context, it is defined as "the degree to which one believes that using e-books for Tablet PCs facilitates his or her communication with others".
6. Attitude toward using: Attitude toward behavior is an individual's positive or negative feelings about performing a specific behavior [13]. In our research context, it is defined as "one's feelings about using e-books for Tablet PCs".
7. Intention to use: According to Fishbein and Ajzen [13], behavioral intention is an individual's strength of intention to perform a certain behavior. We define intention to use as "the degree to which one is willing to use e-books for Tablet PCs".

2.2 Hypotheses

According to Davis [9], one's attitude toward a technology is affected by perceived usefulness and perceived ease of use of the technology, and one's intention to use a technology is directly affected by his or her attitude toward and perceived usefulness of the technology. Hu et al. [16] confirmed that one has increased intention to adopt a new technology when he or she believes that the technology can offer expected or even higher performance. Ho [14] further showed that perceived usefulness of e-books has a significant and positive effect on users' continuance intention. Based on the above findings, we propose the following hypothesis:

H1 *"Perceived usefulness" is positively related to "intention to use" e-books for Tablet PCs.*

Perceived usefulness refers to the extent to which a potential adopter of an information system believes that he or she can benefit in life or in the workplace by using the system. In other words, the more useful the information system is perceived, the more positive that the adopter's attitude toward the system will be. According to Davis [10], perceived usefulness is a primary determinant and perceived ease of use a secondary determinant of intentions to use a certain technology. Rogers [30] mentioned that higher perceived relative advantage leads to higher probability of adoption; higher perceived complexity leads to lower probability of adoption. In the research of Internet use, Busselle et al. [4] found that potential adopters who perceived a higher relative advantage of the Internet were more likely to adopt the Internet. Lin and Lu (2000) probed into behavioral intention of website users. Their findings showed that users' attitude toward a website is affected by perceived usefulness of the website. Based on the above empirical evidence, we propose:

H2 *"Perceived usefulness" is positively related to "attitude toward using" e-books for Tablet PCs.*

Perceived ease of use refers to the degree to which potential adopters believe that learning how to use an information system is easy. Their attitude toward the system becomes more positive with the decrease of effort it takes to use it. Liao et al. [22] found a positive relation between perceived ease of use and attitude in a study of usage of online banks. Moon and Kim [26] probed into acceptance of the Internet among students with Internet experiences. Their results suggested perceived ease of use is a significant factor affecting user attitude. Kuo and Yu [20] obtained the same finding in the research of usage intention of mobile value-added services. Hsu et al. [15] indicated that perceived complexity is negatively related to attitude toward using in the context of blog usage. Lee [21] used TAM to explore usage behavior of federated search systems. Her findings also manifested that perceived ease of use has a positive effect on attitude toward using. Based on the above evidence, we hypothesize:

H3 *"Perceived ease of use" is positively related to "attitude toward using" e-books for Tablet PCs.*

Davis [10] suggested that perceived ease of use is also a determinant of perceived usefulness. In a study of user acceptance of email systems, Karahanna and Straub [17] found that user acceptance is affected by perceived usefulness, and perceived usefulness is also related to perceived ease of use. Chiu [8] probed into usage of instant messaging systems among college students. His results showed a positive relationship between perceived ease of use and perceived usefulness of instant messaging systems. Ho [14] also showed that perceived ease of use of e-books has a significant and positive effect on perceived usefulness of e-books. Therefore, we propose the following hypothesis:

H4 *"Perceived ease of use" and "perceived usefulness" of e-books for Tablet PCs are positively related.*

As mentioned earlier, compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters [30]. In other words, one is more likely to adopt an innovation that he or she perceives as compatible with their needs or existing systems. Takacs and Freiden [33] argued that World Wide Web is a new innovation and its innovative characteristics should be considered in research. They found compatibility a determinant of user attitude toward the Internet. People who are used to personal computers are more likely to use the Internet. In a research of adoption of information

systems among small businesses, Thong [35] found higher system compatibility results in higher likelihood of adoption. Kuo and Yu [20] revealed that compatibility of mobile value-added services would directly reinforce consumers' attitude toward adopting them. Hsu et al. [15] investigated user satisfaction with blogs from the perspective of TAM and IDT. Their findings suggested users' attitude toward a blog is positively related to its compatibility. Based on the above empirical evidence, we propose the following hypothesis:

H5 *"Compatibility" is positively related to "attitude toward using" e-books for Tablet PCs.*

Chau and Hu [6] investigated telemedicine technology acceptance based on a model based on TAM and Theory of Planned Behavior (TPB) and integrated with the compatibility construct. Their findings showed that compatibility has a significant effect on perceived usefulness. Wu and Wang [37] integrated compatibility into TAM to explore user acceptance of mobile commerce. Their findings suggested a positive relation between compatibility and perceived usefulness. Wu et al. [39] used TAM and IDT to examine user intention of 4G WiMAX among Taiwanese. They concluded that perceived usefulness of 4G WiMAX is positively affected by compatibility of this technology. Therefore, we propose the following hypothesis:

H6 *"Compatibility" and "perceived usefulness" of e-books for Tablet PCs are positively related.*

Rogers [30] stated that observability is the degree to which the benefits of a new innovation are visible to users. Hsu et al. [15] showed blog usage increases with observability of the benefits of the blog. Wu and Lin [40] probed in to usage of Library 2.0 based on an integrated model of TAM and IDT. Their finding confirmed that both trialability and observability have a positive effect on attitude toward using. Therefore, it can be hypothesized:

H7 *"Trialability" is positively related to "attitude toward using" e-books for Tablet PCs.*

H8 *"Observability" is positively related to "attitude toward using" e-books for Tablet PCs.*

Attitude is an individual's positive or negative feelings about performing a specific behavior [9]. According to Klobas and Clyde [19], attitude is a significant determinant of intention to use. Nysveen et al.'s [27] finding from a study of intentions to use mobile services echoed this view. They found among both adopters and non-adopters that consumers' intentions to use mobile services are affected by attitudinal influences. Wu and Lin [40] research of knowledge sharing behavior among information systems personnel suggested that attitude toward knowledge sharing has a direct effect on intentions to share knowledge. Hsu et al.'s [15] research of user satisfaction with blogs also showed attitude and intentions are positively related. Lee [21] also offer evidence indicating that attitude is a strong correlate of intention to use. Therefore, we propose the following hypothesis:

H9 *"Attitude toward using" and "intention to use" e-books for Tablet PCs are positively related.*

3 Data Analysis

The purpose of this research is to use an integrated model of TAM and IDT to explore intention to use e-books for Tablet PCs among their users.

3.1 Descriptive statistics

The sample consisted of 202 respondents, including 137 males and 65 females. These statistics reveal that male users constituted the majority of Tablet PC e-books users. Besides, most respondents were aged between 21~40 years old, suggesting that most Tablet PC e-book users were young adults. In terms of education level, respondents with college education

took the largest share, and those with graduate or higher education took the second largest. It can be inferred that most users were relatively more highly educated in the society. In the aspect of monthly income, the group of NT$20001~40000 was the largest, followed by the group of NT$40001~60000, indicating that most users had an intermediate income level. In terms of occupation, students constituted the dominant group, and those working in information related industries constituted the second largest one. It can be inferred that students and people from IT-related industries had higher acceptance of new information technologies. The residential distribution of the sample shows that respondents living in northern areas of Taiwan took the largest share, while those living in central and southern areas of Taiwan formed the second and third largest groups respectively. This distribution also reveals that consumers' acceptance of new information technologies would vary from region to region. In terms of number of hours of reading e-books on Tablet PCs, most respondent read them 5 to 7 hours a week. It can be inferred that e-books for Tablet PCs have been accepted by more and more users. E-books can be downloaded free of charge or at some charge. Most respondents reported that most of their e-books were obtained at no cost, and only 12.4% said that most of theirs were paid for, suggesting that users were still used to getting e-books for free. If divided by category, the number of e-books in the travel category was the greatest, followed by that of e-books in the fiction and magazine categories. This finding indicates that e-book users tended to read more recreational e-books on Tablet PCs.

3.2 Confirmatory factor analysis

We applied goodness-of-fit measures [2] to evaluate preliminary fit criteria, fit of internal structure of the model, and overall model fit. The results are as shown in Table 2. The above confirmatory factor analysis (CFA) results manifest that our model satisfied all the fit criteria, including preliminary fit criteria, overall model fit criteria, and criteria of criteria of the internal structure of the model.

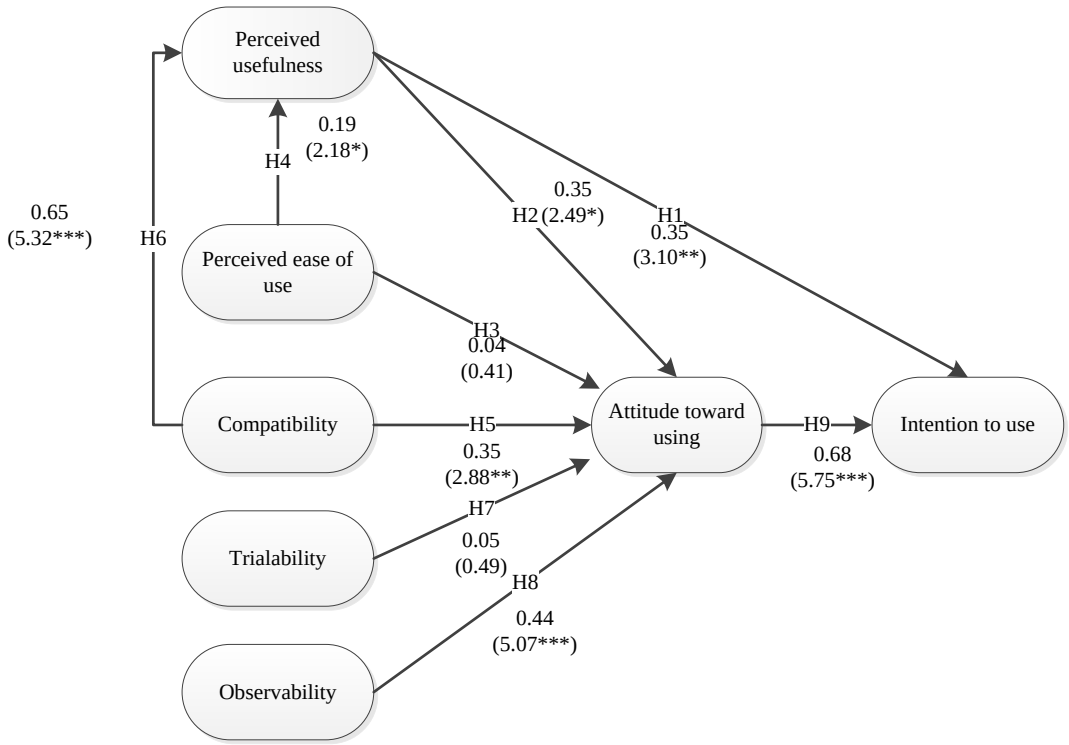
4 Results

In this paper, we used a model combining TAM and IDT to explore attitude and intention toward using Tablet PC e-books among current users. Based on our conceptual model, we proposed nine hypotheses. The path coefficient and t-value for each hypothesis are as shown in Figure 2. The hypotheses testing results are explained as follows.

Perceived usefulness is positively related to intention to use e-books for Tablet PCs(H1) was supported. This result indicates that if users can benefit more by using e-books for Tablet PCs, such as having access to a greater diversity of books, they will have a more positive attitude toward using this technology. Perceived usefulness is positively related to attitude toward using e-books for Tablet PCs(H2) was supported. This result suggests that users will have a more positive attitude toward using e-books for Tablet PCs when they can benefit more in their life or workplace by using this technology. Perceived ease of use is positively related to attitude toward using e-books for Tablet PCs(H3) was not supported. A plausible explanation is that the survey respondents were adopters of e-book tablets, and most of them perceived the interface and functions of e-books on Tablet PCs as easy to use enough. In this case, it would be harder for them to judge the effects of perceived ease of use on their attitude toward using e-books. Perceived ease of use and perceived usefulness of e-books for Tablet PCs are positively related(H4) was supported. This finding suggests that people perceive e-books for Tablet PCs as useful if

Table 2 Goodness-of-fit measures for the proposed model

Measure	Evaluation criteria	Result
Factor loading	0.50~0.95	0.5~0.86
Error variance (EV)	Non-negative	Compliant
χ^2/df	<2	1.47
Goodness-of-fit index (GFI)	>0.80	0.88
Adjusted goodness-of-fit index (AGFI)	>0.80	0.85
Parsimony goodness-of-fit index (PGFI)	>0.50	0.66
Normed fit index (NFI)	>0.90	0.93
Non-normed fit index (NNFI)	>0.90	0.97
Comparative fit index (CFI)	>0.95	0.98
Root mean square error of approximation (RMSEA)	<0.05	0.041
Root mean residual (RMR)	The smaller the better	0.026
Standardized root mean residual (SRMR)	<0.08	0.063
Individual item reliability (IR)	>0.50	Partially compliant
Composite reliability (CR)	>0.60	Fully compliant
Average variance extracted (AVE)	>0.50	Partially compliant



The numerical value is correlation coefficient, and the parenthesized value is *t*-value. * denotes t>1.96, p<0.05; ** denotes t>2.58, p<0.01; *** denotes t>3.29, p<0.01

Fig.2 Path coefficients in the model

this technology is easy to use, and they can access more information by using this technology than by reading printed media. Compatibility is positively related to attitude toward using e-books for Tablet PCs(H5) was supported. This finding implies that most respondents perceived no significant difference between reading e-books and reading printed media and therefore tended to have a positive attitude toward using them. Compatibility is a correlate of their attitude toward using e-books for Tablet PCs. Compatibility and perceived usefulness of e-books for Tablet PCs are positively related(H6) was supported. This finding means that users perceive e-books for Tablet PCs as more useful when they perceive the reading functions of tablet e-book readers as consistent with their experience of reading printed books. Trialability is positively related to attitude toward using e-books for Tablet PCs(H7) was not supported. Previous research has shown that most users expect to try an innovation first before adopting it. However, most e-books on the market offer only a small amount of content for trial reading. Therefore, the influence of trialability of e-books on user attitude would be very minimal. Observability is positively related to attitude toward using e-books for Tablet PCs(H8) was supported. The benefits of e-books have been widely spread on various media and among people. The high observability of e-books has had a positive effect on users' attitude toward using e-books. Attitude toward using and intention to use e-books for Tablet PCs are positively related(H9) was supported. This finding reveals that attitude is still a key factor affecting usage intention. One has a higher intention to use e-books when he or she has a more positive attitude toward using them.

5 Conclusions

Thanks to the technology advancement and growing prevalence of the Internet, reading is no longer limited to printed media or books. The emergence of Tablet PCs and evolution of e-books has gradually changed the way we access information and read. Under the promotion of our government, the e-book reading functions of Tablet PCs have become more and more mature in recent years. It is foreseeable that e-books will become the main form of books that prevail in the market of reading. In this paper, we investigated Taiwanese e-book users' attitude toward using and intention to use e-books for Tablet PCs. Based on our empirical findings, we proposed the following conclusions and suggestions.

In terms of attitude toward using e-books for Tablet PCs, most respondents held a positive attitude toward reading e-books on Tablet PCs, and their positive attitude was mainly associated with the high perceived usefulness, compatibility, and observability of this technology. This finding implies that the respondents agreed that, by using e-books on Tablet PC, they could save effort required to carry printed books and also quickly access a wide diversity of books. Besides, most of them agreed that their experience of reading e-books on Tablet PCs was very close or even better than their experience of reading printed books. And they could get the latest information about e-books easily from public media or friends. In other words, perceived usefulness, compatibility, and observability of e-books for Tablet PCs all have a positive effect on consumers' evaluation of and attitude toward this technology. Besides, most respondents agreed that e-books are easy to use on Tablet PCs, the additional functions provided by tablet e-book readers are convenient, the way they read e-books is similar to the way they read printed books, and using e-books has been helpful in their life and workplace. All these benefits have positively affected their perception of the usefulness

of e-books for Tablet PCs. Therefore, perceived ease of use and compatibility had a positive effect on perceived usefulness of e-books for Tablet PCs. Finally, it was found that behavioral intention was mainly affected by attitude and perceived usefulness. Our results showed that user acceptance of Tablet PC e-books depended primarily on their evaluation and feelings about e-books, followed by the benefits of e-books in their life or workplace. Users' positive attitude toward e-books and higher perceived usefulness of e-books could contribute to a higher degree of intention to use.

According to our observation, absence of large publishers is the main problem that has obstructed the development of e-books in Taiwan. In many foreign markets, there are usually a few large publishers dominating the e-book market. However, most e-book publishers in Taiwan are middle in scale and running their business independently. As a result, the number and diversity of e-books on the market are very limited. Besides, many respondents expressed in our survey that it was not convenience enough to purchase e-books for Tablet PCs. These are the factors that have made reading e-books on Tablet PCs less prevalent in our nation. Therefore, we suggest e-book publishers form a strategic alliance to expand the e-book market, establish a uniform format of e-books, and make use of the power of various mass media to spread the features and benefits of e-books. This way, they can ultimately increase potential adopters' intention to use e-books. In the present, our government has launched numerous projects to resolve issues regarding the development of e-books, including copyright, synchronization, and format. The insufficiency of e-books in the market has reduced users' intention to read e-books on their Tablet PCs. Therefore, in addition to communication between the government and the industry, cooperation between telecommunication companies and digital content service providers is also essential for greater development of e-books in our nation. In order to enhance consumers' intention to use e-books on their Tablet PCs, all the service providers involved in the e-book market should work together to provide consumers a stable system, best services, and the maximum amount of e-books at their choice.

References

[1] Ajzen, I. *From Intentions to Actions: A Theory of Planned Behavior*, In J. Kuhl and J. Beckman(Eds.), Action-control: From cognition to behavior, 1985, pp.11-39.

[2] Bagozzi, R. P. and Yi, Y. On the Evaluation of Structural Equation Models, *Academy of Marketing Science*, Vol.16, No.1, 1988, pp.76-94.

[3] Bradford, M. Examining the Role of Innovation Diffusion Factors on the Implementation Success of Enterprise Resource Planning systems, *International Journal of Accounting Information Systems*, Vol.4, No.3, 2003, pp.205-225.

[4] Busselle, R., Reagan, J., Pinkleton, B., and Jackson, K. Factors Affecting Internet use in a Saturated-Access Population, *Telematics and Informatics*, Vol.16, No.1/2, 1999, pp.45-48.

[5] Carter, L. and Belanger, F. The Utilization of E-government Services: Citizen Trust, Innovation and Acceptance Factors, *Information Systems Journal*, Vol.15, No.1, 2005, pp.5-25.

[6] Chau, P.Y.K. and Hu, P.J.H. Information Technology Acceptance by Individual Professionals: A Model Comparison Approach, *Decision Sciences*, Vol.32, No.4, 2001, pp.699-719.

[7] Chen, H. S. Study of Integrated Model for Behavioral Intention of Technology Products Using Digital TV as an Example, *Marketing*

Review, Vol.7, No.1, 2010, pp.75-98.

[8] Chiu, H. K. Exploring the Factors Influencing the Behavioral Intention of using Instant Messenger, *Journal of Information, Technology, and Society, Central Police University*, Vol.8, No.1, 2008, pp.1-19.

[9] Davis, F. D. *A Technology Acceptance Model for Empirically Testing New End-user Information Systems: Theory and Results*. MA:USA, Massachusetts Institute of Technology, 1986.

[10] Davis, F. D. Perceived Usefulness Perceived Ease of Use and User Acceptance of Information Technology, *MIS Quarterly*, Vol.13, No.3, 1989, pp.319-339.

[11] Davis, F. D., Bagozzi, R. P. and Warshaw, P. R. User Acceptance of Computer Technology: A Comparison of two Theoretical Models, *Management Science*, Vol.35, No.8, 1989, pp.982-1003.

[12] Edwards, L. and Woodward, H. Shaping A Strategy for E-books: the Role of the DNER, *Information and Knowledge Management*, Vol.31, No.4, 2001, pp.5-11.

[13] Fishbein, M. and Ajzen, I. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley, 1975.

[14] Ho, T. L. *Integrating TAM and ECT to Explore Continued Usage Behavior of E-book*. Unpublished MA Thesis, Department of Business Administration, Tamkang University, Taiwan, 2012.

[15] Hsu, L. L., Hsu, T. H. and Wu, S. J. The Antecedents of Influencing Usage Intention in Blog Context, *Journal of E-Business*, Vol.11, No.1, 2009, pp.1-28.

[16] Hu, P. J., Chau, P. Y. K., Liu, O. R and Tam, K. Y. Examining the Technology Acceptance Model Using Physician Acceptance of Telemedicine Technology, *Journal of Management Information Systems*, Vol.16, No.2, 1999, pp.91-112.

[17] Karahanna, E., Straub, D. W. and Chervany, N. L. Information Technology Adoption Across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs, *MIS Quarterly*, Vol.23, No.2, 1999, pp.183-213.

[18] Karahanna, E. and Straub, D. W. The Psychological Origins of Perceived Usefulness and Ease-of-use, *information and Management*, Vol.35, No.4, 1999, pp.237-50.

[19] Klobas, J. E. and Clyde, L. A. Adults Learning to Use the Internet: A Longitudinal Study of Attitudes and Other Factors Associated with Intended Internet Use, *Library and Information Science Research*, Vol.22, No.1, 2000, pp.5-34.

[20] Kuo, Y. F. and Yu, C. W. A Study of Consumers' Behavioral Intention on Mobile Value-added Services Adoption: A Case of Young adults, *Journal of Information Management*, Vol.14, No.3, 2007, pp.125-153.

[21] Lee, C. Y. *A Study on the Acceptance and Usage Behavior of Federated Search Systems: A Case Study of Metalib in NCTU*. Unpublished MA Thesis, College of Computer Science, National Chiao Tung University, Taiwan, 2010.

[22] Liao S., Shao, Y. P., Wang, H. and Chen, A. The Adoption of Virtual Banking: An Empirical Study, *International Journal of Information Management*, Vol.19, No.1, 1999, pp.63-74.

[23] Lin, J. and Lu, H. Towards an Understanding of the Behavioural Intention to Use A Web Site, *International Journal of Information Management*, Vol.20, No.3, 2000, pp.197-208.

[24] Magda, V. and Jennifer, R. Progressing the Definition of E-book, *Library Hi Tech*, Vol.26, No.3, 2008, pp.355-368.

[25] Moore, G. C. and Benbasat, I. Development of

an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation, *Information Systems Research*, Vol.2, No.3, 1991, pp.192-222.

[26] Moon, J.W. and Kim, Y.G. Extending the TAM for a World-Wide-Web Context, *Information and Management*, Vol.38, No.4, 2001, pp.217-230.

[27] Nysveen, H., Pedersen, P. E. and Thorbjornsen, H. Intentions to Use Mobile Services: Antecedents and Cross-service Comparisons, *Journal of Academy of Marketing Science*, Vol.33, No.3, 2005, 330-346.

[28] Rogers, E. M. *Diffusion of Innovations*. New York, The Free Press, 1962.

[29] Rogers, E.M. and Shoemaker, Floyd F. *Communication of Innovations: A Cross-Cultural Approach*. New York, The Free Press, 1971.

[30] Rogers, E. M. *Diffusion of Innovations*, 3rd ed. New York, The Free Press, 1983.

[31] Rogers, E. M. *Diffusion of Innovations*, 4th ed. New York, The Free Press, 1995.

[32] Shih, T. Y. Key Factors of Marketing Strategies for Mobile Service Innovation Promotion, *Business and Information*, 2012, pp.375-389.

[33] Takacs, S. J. and Freiden, J. B. Changes on the Electronic Frontier: Growth and Opportunity of the World-Wide Web, *Journal of Marketing Theory Practice*, 1998, Vol.6, No.3, pp.24-37.

[34] Taylor, S. and Todd, P. A. Decomposition and Crossover Effects in the Theory of Planned Behavior: A Study of Consumer Adoption Intentions, *International Journal of Research in Marketing*, Vol.12, No.2, 1995, pp.137-155.

[35] Thong, James Y. L. An Integrated Model of Information Systems Adoption in Small Businesses, *Journal of Management Information Systems*, Vol.15, No.4, 1999, pp.187-214.

[36] Tung, F. C., Chang, S.C. and Chou, C. An Extension of Trust and TAM model with IDT in the Adoption of the Electronic Logistics Information System in HIS in the Medical Industry, *International Journal of Information Management*, Vol.77, No.5, 2008, pp.324-335.

[37] Wu, J. H. and Wang, S. C. What Drives Mobile Commerce? An Empirical Evaluation of the Revised Technology Acceptance Model, *Information and Management*, Vol.42, No.5, 2005, pp.719-729.

[38] Wu, M. Y. and Lin, I. C. A Study of Taiwan Universities' Intention and Behavior to Use Library 2.0, *Journal of Library and Information Science Research*, Vol.6, No.1, 2011, pp.139-180.

[39] Wu, M.Y., Weng, Y.C. and Kao, M.C. A Study of the Users' Attitudes and Intentions toward 4G WiMax', *Research Journal of Applied Sciences, Engineering and Technology*, Vol.7, No.6, 2014, pp.1-8.

[40] Wu, S. and Lin, T. C. Exploring Knowledge Sharing Behavior of IS Personnel with Theory of Planned Behavior, *Journal of Information Management*, Vol.14, No.2, 2007, pp.75-110.