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Exploring Hospitality Undergraduate Students' Behavioral Intentions to Use the E-learning System

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Abstract

With the advancement and wide-spread of internet, the academic field also welcomed and placed its focus on e-learning in that it can record the student's learning process with accuracy and hence raise student learning efficiency. This study combines Expectation Confirmation Theory by Oliver in 1980 combined with Task-Technology Fit Theory by Goodhue and Thompson in 1989 and Technology Acceptance Model by Davis in 1989 to create a new research model in attempt to further investigate on key factors affecting hospitality undergraduate students' behavioral intentions to use the e-learning system in Taiwan. Furthermore, this study use structural equation modeling for analytical method. By examining hospitality undergraduate students' behavioral intentions from a user's perspective, these findings will help develop a more friendly e-learning system and determine the best way to promote that system for better learning.

Key Words: *Hospitality Undergraduate Student, E-learning System, Expectation Confirmation Theory, Task Technology Fit Theory.*

Introduction

Widespread use of the Internet has caused the academics to place new focus on e-learning system as a learning tool for students. This research combines task -technology fit (TTF) model, the expectation confirmation model (ECM), and technology acceptance model (TAM) and proposes a new research model for examining the key factors affecting hospitality undergraduate students' behavioral intentions to use the e-learning system in Taiwan. The structural equation modeling technique evaluated the causal model, while confirmatory factor analysis was performed to examine the reliability and validity of the measurement model.

Based on 318 questionnaires, the research found that studies strongly support this new research model for predicting student behavioral intentions and that task technology fit has a positive effect on both perceived usefulness and perceived ease of use of an e-learning system.

Literature Review

Task-technology fit (TTF) model

Task-technology fit is the degree to which a technology assists an individual in performing a specific portfolio of tasks (Lin & Huang, 2008). Goodhue and Thompson (1995) utilized user evaluations to measure task-technology fit. Their results found supportive evidence that user evaluations of TTF are

a function of both systems characteristics and task characteristics, and strong evidence that to predict such performance for both TTF and utilization must be included (Goodhue & Thompson, 1995). The TTF model has also been used to explain user adoption of mobile technologies, such as location-based systems (LBS) (Junglas et al., 2008) and mobile insurance (Lee et al., 2007).

Recently, the TTF model has been applied to explain user adoption of emerging Internet services, such as blogs (Shang et al., 2007). The empirical evidence shows that the interaction between task and technology characteristics affects users' evaluation of blogs and further determines their use (Shang et al., 2007).

Expectation-confirmation model (ECM)

There are five main hypotheses in the ECM. First, users' confirmation of expectations will have a positive effect on their perceived usefulness of IT and users' satisfaction. The ECM posits users' satisfaction has a positive effect on their intention to using the IT. Lastly, the ECM posits users' perceived usefulness of IT has a positive effect on users' satisfaction and intention (Bhattacherjee, 2001a,b ; Thong *et al*.,2006). Originally this theory was used mainly to investigate consumer relationship satisfaction and repeat purchase decisions in the consumer behavior literature (Oliver, 1993).ECM has been widely used to study consumer satisfaction and purchase behavior, online shopping and online banking use of an information system. (Bhattacherjee, 2001a, b; Thong *et al*., 2006).Lee (2010) found that users' confirmation of expectations has a positive effect on their perceived usefulness of IT. Lee (2010) also found that users' confirmation of expectations has a positive effect on users' satisfaction. Thong *et al*., (2006) found that users' perceived usefulness of IT has a positive effect on users' satisfaction.

Technology acceptance model (TAM)

TAM, adapted from the theory of reasoned action (TRA), appears to be the most widely accepted among information systems researchers (Davis *et al*., 1989). TAM originally suggested that two beliefs, namely, perceived usefulness and perceived ease of use, are instrumental in explaining the variance in users' intentions. Perceived usefulness is the degree to which a person believes that using a particular system will enhance his or her job performance. Perceived ease of use is the degree to which a person believes that using a particular system will be free of undue effort. Information system researchers have investigated TAM and agree that it is valid in predicting the individual acceptance of various corporate IT systems (Ramamurthy *et al*., 2008).

Theoretical Framework

We integrated TTF, ECM, TAM to design a new hybrid model that can be used to study hospitality undergraduate students' behavioral intentions to use the e-learning system.

Hypotheses

H1:Task characteristics will have a positive effect on the task technology fit.
H2:Technology characteristics will have a positive effect on the task technology fit.
H3:Task-technology fit will have a positive effect on the perceived usefulness of the e-learning system.
H4:Task-technology fit will have a positive effect on the perceived ease of use of the e-learning system.
H5.Confirmation will have a positive effect on the perceived usefulness of the e-learning system.
H6.Confirmation will have a positive effect on the satisfaction of the e-learning system.
H7.Satisfaction will have a positive effect on the behavioral intention to use the e-learning system.
H8.Perceived usefulness will have a positive effect on the satisfaction of the e-learning system.

H9.Perceived usefulness will have a positive effect on the behavioral intention to use the e-learning system.
H10.Perceived ease of use will have a positive effect on the perceived usefulness of the e-learning system.
H11.Perceived ease of use will have a positive effect on the behavioral intention to use the e-learning system.

Research Method

Sampling Method

The study delivered 360 questionnaires in December 2015, and 330 were returned by March 2016. The rate of response o was 91.6%., with 12 discarded because some questions were answered. Thus the number of valid questionnaires totaled 318.

Sample Demographics

The demographic profile for the survey respondents indicated that 42% were male and 58% were female. Most (56%) were between 18 and 20 years old. The majority of those who replied to the questionnaire were people having than 3-years of Internet experience at 88% of the sample. Sample demographics are depicted thus in Table 1:

Table 1 Sample demographics

Gender		Age		Internet Experience	
Male =	58%	18-20	56%	<1 year	4%
Female =	42%	20-22	26%	1 to 3 years	8%
		＞22	18%	>3 years	88%

Analysis

The data obtained were tested for reliability and validity using confirmatory factor analysis (**CFA**). χ^2/df = 2.28; **CFI** = 0.91; **NFI** = 0.92; **NNFI** = 0.92; **IFI** = 0.93; **RMSR**= 0.009. The **CFI** was 0.91, which is greater than the 0.90 benchmark. The **NFI** here was 0.92, which is greater than the 0.90 benchmark suggested by Bentler (1989). The **NNFI** here was 0.92, which is greater than the 0.90 benchmark suggested by Bentler (1989). The **IFI** here was 0.93, which is greater than the 0.90 benchmark suggested by Bentler (1989). The **RMSR** was less than 0.1 being 0.009. The various goodness of-fit statistics are summarized in Table 2.

Table 2 Goodness-of-fit measures of the research model

Fit Indices	χ^2/ **df**	**CFI**	**NFI**	**NNFI**	**IFI**	**RMSR**
Recommended Value	≦ 3.0	≧ 0.9	≧ 0.9	≧ 0.9	≧ 0.9	≦ 0.1
Result Value	2.28	0.91	0.92	0.92	0.93	0.009

Task characteristics have a positive effect on the task-technology fit (γ= 0.12, p < 0.05), supporting H1. Technology characteristics have a positive effect on the task-technology fit (γ= 0.82, p < 0.01), which means that H2 was supported. Task-technology fit has a positive effect on the perceived usefulness of the e-learning system (β = 0.27, p < 0.01). Task technology fit also has a positive effect on the perceived ease of use of the e-learning system (β = 0.20, p < 0.01). Therefore, H3 and H4 were supported. These findings are consistent with the results of Zhou et al., (2010).Our results indicate that confirmation has a

positive effect on the perceived usefulness of the e-learning system (γ= 0.13, p < 0.05). This finding means that H5 was supported. Confirmation has a positive effect on the user satisfaction with the e-learning system (γ= 0.75, p< 0.01). This finding means that H6 was supported. Satisfaction has a positive effect on the behavioral intention to use the e-learning system. (β = 0.22, p < 0.01). This finding means that H7 was supported. Perceived usefulness has a positive effect on satisfaction (β = 0.12, p < 0.05) and the behavioral intention to use the e-learning system. (β = 0.21, p < 0.01). Therefore, both H8 and H9 were supported. These findings are consistent with the results of Roca *et al*., (2006). Perceived ease of use has a positive effect on the perceived usefulness of the e-learning system (β = 0.15, p < 0.05). Perceived ease of use has a positive effect on the behavioral intention to use the e-learning system (β = 0.37, p < 0.01). Therefore, H10 and H11 were both supported.

Conclusion

This study combined the TTF model of Goodhue and Thompson (1989) with the ECM by Bhattacherjee (2001a) and the TAM by Davis (1989) to create a new research model and further investigate the key factors affecting hospitality undergraduate students' behavioral intentions to use the e-learning system in Taiwan. The contributions of this study on the research into the acceptance of the e-learning system are fivefold. These major contributions are:

1. This research integrated TTF, ECM, and TAM and proposed a new hybrid model for studying hospitality undergraduate students' behavioral intentions to use the e-learning system.
2. This research found that task-technology fit has a positive effect on the PU and PEOU of the e-learning system.
3. This research found that PU and PEOU have a major positive and direct effect on the behavioral intention to use the e-learning system.
4. Satisfaction has a positive effect on the behavioral intention to use the e-learning system.
5. Confirmation has a positive effect on the user satisfaction with the e-learning system.

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