

Students' Acceptance of Blog Usage: Exploring the Extended TAM

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ABSTRACT

Currently, the use of blog in academic field has been increased from time to time to assist in the teaching and learning process. Blog enables user to get and share knowledge, information, experiences and thoughts. This paper aimed to identify the intrinsic factors that motivate students to use blog in their learning process as there is only a small number of research that has been conducted to investigate the Technology Acceptance Model (TAM) model in the context of UiTM. Based on Extended TAM, there are three main variables that influence the students' attitude which are perceived usefulness (PU), perceived ease of use (PEOU) and perceived playfulness (PP). Seventy eight sets of questionnaire were distributed among second year students at the Faculty of Business Management at UiTM Pahang. The result reveals positive relationships between those variables and students' attitude towards the usage of blog.

Keywords: *Technology Acceptance Model (TAM), blog, lifelong learning, academic*

Introduction

Blog can be defined as a log on the web that keeps articles in reverse chronological order where bloggers could log all the webpage they find interesting (Du & Wagner, 2006). Recently, blog becomes popular as a new medium to communicate, publish and exchange knowledge and build social network on the Internet. Blog enables the users to write and share their personal diary with instant publishing and feedback (Chuang, 2010). Besides that, blog also functions as a new marketing channel for business entity (Hsu & Lin, 2008; Wang & Lin, 2011), promoting new tools in education such as students e-portfolio, distance learning, and mentor blog project (Walker, 2005; Wheeler & Lambert-Heggs, 2009; Chuang, 2010), and as an innovative knowledge management system (Chai & Kim, 2010).

Since the function of blog is facing a rapid growth in all areas of human life, this study is therefore interested to investigate the blog acceptance among students. A study by Hsu and Lin (2008) indicated that most bloggers and blog readers are male, young and have high education level. Previous studies of TAM in academic fields indicated the important roles that blogs play to assist the students in enhancing their academic performance. According to Chai and Kim (2010), blog is considered as an online education tool, enables the users to share information and knowledge. Users can record their thoughts, experiences, post useful memos, maintain connection with peers, write reflective journal, and keep learning logs to track the progress of knowledge (Chuang, 2010; Chai & Kim, 2010; Hsu & Lin, 2008). Previous studies on TAM to measure the acceptance of blog were popularly employed in China, thus researchers wish to carry out similar study for local students.

This study aims:

1. To test the relationships of independent variables with dependent variable in TAM.
2. To test the difference users' acceptance based on gender and participating role in blog.

Extended TAM towards Blog Usage

Nowadays, most students are familiar with the blog functions. Normally, they use blog to publish opinions, chat, upload pictures and so on. Basically, TAM only measures two factors which is perceived usefulness and perceived ease of use. This model determines the user acceptance towards information system (IS). Davis (1989) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance," and defined perceived ease of use as, "the degree to which a person believes that using a particular system would be free of effort." With the evolution in information system (IS) itself, blog is considered as a new channel in communication process. According to Mah and Er (2009), students are able to perceive usefulness of the blog in their ESL classroom compared to the ease of use. Blogs have large audience of users, and students have become the significant group to study and emphasize on their acceptance towards blog usage. It is clearly mentioned by Gardner (2005):

"... Blogging, though young, has its share of format shaping event that have hugely impacted the evolution and form of the blogosphere".

Original TAM only discusses two factors that contribute to the acceptance towards IS, however in this study another that is also considered as relevant is perceived playfulness. Blogs are widely used by most students for their personal activities and indirectly contribute to their personal excitements as stated by Wang et al. (2011) in their research entitled “Investigating the individual difference antecedents of perceived enjoyment in students’ use of blogging”.

Sometimes, it is influenced by surrounding people that leads to perceived playfulness towards the blog usage among students. According to Park (1999), individuals are able to perceive something very subjective and based on personal needs at work that relates to their environment. Choo (1998) mentions that information behaviour is an information needs-seeking use cycle for resolving task problems at the individual level. It means that perceived playfulness is considered as an adaptation from acceptance of blog usage among students to transfer any information from one to another and create their consistent attitude towards blog usage. Therefore, blogging activities do not only include perceived playfulness in order to have the information but also create positive feedback of students’ attitude towards the blog usage. The social influences also influence the perceived of usefulness and ease of use towards online games because it encourages user participations (Hsu & Lu, 2004). Blogs are also used to play online games which may contribute to the same acceptance among students and directly enhance their attitudes towards blog usage. Based on the previous literature, we illustrate the research conceptual framework as figure 1:

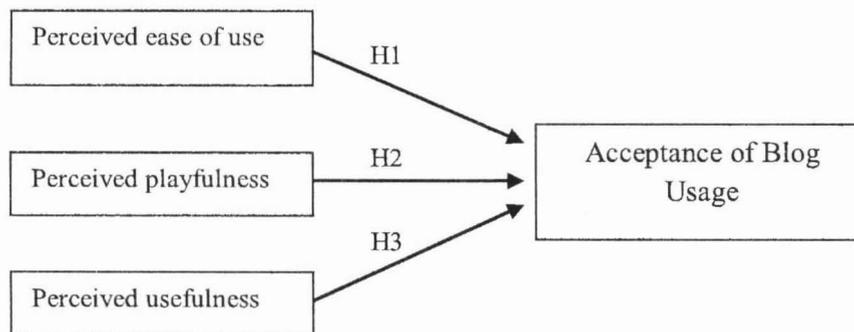


Figure 1: The theoretical framework

Based on the above framework, we proposed the hypotheses:

H1: perceived ease of use has a positive relationship on the students’ attitude toward blog.

H2: perceived playfulness has a positive relationship on the students’ attitude toward blog.

H3: perceived usefulness has a positive relationship on the students’ attitude toward blog.

RESEARCH METHODOLOGY

The questionnaire items used in this study were primarily adapted from previous studies. TAM measurements were adapted from two different studies by Moon and Kim (2001) and Sanchez and Hueros (2010). There are three independent variables, namely; perceived ease of use (PEOU), perceived usefulness (PU), perceived playfulness (PP) are hypothesised to have a positive relationship with attitude toward blog (ATT) as the dependent variable. The measurements were structured with closed end design using 5-point Likert scale; according to the degree of agreements, 1 for strongly disagree and 5 for strongly agree. The questionnaire consists two parts. Part A addressed demographic matters on gender and own personal blog. Part B included all the measurements of both variables. There are 35 items altogether in the questionnaire. Table 1 shows the details about measurements used.

The data used in this study were drawn from a sample of students who enrolled in the IT in Business subject (MGT300) at the Faculty of Business Management, UiTM Pahang during the May – October 2011 semester. The total population comprised 419 students, which all Part 4 students from the Diploma in Business Studies (80 students) and Part 5 students (339 students) from the Diploma in Banking program. 92 students were selected as sample which consists of students from group BM1125O (13 students), BM1114A (27), BM1114B (25), and BM1114C (27 students). Out of the 92 students, 78 (83.8%) students returned the questionnaire.

The questionnaire was completed by the students during the class period on the date the survey tool was circulated. The data from the questionnaire were analysed using the Statistical Package for Social Sciences, version 18.0. Descriptive statistics were employed to measure the frequencies of the demographic profiles, mean and standard deviation. To test the relationship among the independent variables with dependent variable, multiple linear regression analysis was used.

Table 1: Measurements and sources

Measurements	No. of measurements	Sources
PU	10	Moon and Kim (2001) Sanchez and Hueros (2010)
PP	10	
PEOU	10	
ATT	5	

FINDINGS

Demographic Profile

Table 2 presents descriptive statistics of respondents' profile. The total numbers of respondent are 78 students. Sixty-four percent of respondents were female and only 29.5 percent do have personal blog.

Table 2: Descriptive statistics of respondents' profile

Measure	Items	Frequency	Percent
Gender	Male	28	35.9
	Female	50	64.1
Have personal blog	Yes	23	29.5
	No	55	70.5
N = 78			

Internal consistency reliability

Cronbach alpha was used to assess the internal consistency reliability of the questionnaire. According to Sekaran (2003), reliability less than 0.60 are considered to be poor, those in the 0.70 range are acceptable, and those over 0.80 are good. These coefficients are represented for each of the constructs in Table 3. Out of four, three constructs are considered good including attitude toward blogging (0.923), perceived usefulness (0.906), and perceived playfulness (0.860). However, perceived ease of use (0.658) is considered poor. However, based on Hair et al. (1992), the value of 0.50 is acceptable.

Table 3: Internal consistency reliability

Component	Cronbach's α	Items
PEOU	0.658	10
PP	0.860	10
PU	0.906	10
ATT	0.923	5

Mean and Standard Deviation

The mean and standard deviation for all the four components were obtained and tabulated in Table 4. Generally, students responded favourably to all constructs on the attitude toward blogging activities. The result indicates that the highest score of respondents in on the perceived usefulness with a mean of 3.7286 (s.d. 0.58195), followed by perceived playfulness (3.7168) and perceived ease of use (3.4755). A mean score for attitude is 3.8622. The overall mean of 4 components was above 3.00, which indicates a substantial degree of agreement with all the components.

Table 4: Mean and Standard Deviation

Component	Mean	S.D.
PU	3.7286	0.58195
PP	3.7168	0.54433
PEOU	3.4755	0.41600
ATT	3.8622	0.63554

T-Test

An independent sample t-test is conducted to analyse the difference between gender and students who have personal blog. Based on the gender, Table 5 shows there is no significant t-value for each perceived usefulness and perceived ease of use. It indicates that there is no difference in the perception of male and female students on both constructs. However, for perceived playfulness, female students scored significantly higher than male students.

Table 5: T-test based on the Gender

Component	Mean		Mean difference	t-value	Sig.
	Male	Female			
Perceived usefulness	3.6369	3.7800	- 0.14310	- 1.048	0.299
Perceived playfulness	3.5464	3.8122	- 0.26579	- 2.101	0.040*
Perceived ease of use	3.4639	3.4820	- 0.01811	- 0.176	0.861

*significant at $p < 0.05$

To study the different acceptance of blog based on students' behaviour, respondents were asked whether they have personal blog, with value 1 for *yes* and 2 for *no*, with assumption that students who own personal blog will have more acceptance towards blog compared to students who are only the blog reader. However, the t-test analysis indicates that there is no difference between groups who have personal blog and do not have personal blog. In other words, those students who own personal blog show no difference in their perception on usefulness, playfulness and ease of use compared to students who do not own the personal blog. Detailed results are tabulated in Table 6.

Table 6: T-test based on the Own Personal Blog

Constructs	Mean		Mean difference	t-value	Sig.
	Yes	No			
Perceived usefulness	3.6174	3.7752	- 0.15776	- 1.066	0.293
Perceived playfulness	3.7696	3.6947	0.07482	0.524	0.603
Perceived ease of use	3.5986	3.4240	0.17451	1.771	0.083

Correlation

To examine the relationship between variables, correlation is conducted. The results indicate that the 3 dimensions of TAM have significantly strong relationship on the students' attitude towards blog. Detailed result is presented in Table 7.

Hypothesis Testing

In order to support the hypotheses formed, multiple regression analysis was conducted to examine the relationship between the independent variables and the dependent variable. From the results obtained in regression analysis, the R-square (R^2) is 0.601 indicating that 60.1% of the dependent variable is explained by the independent variables, whereas another 39.9% is not explained.

Table 8 shows the result obtained from the multiple regression analysis. The result indicates that there are positive and significant effects among all three independent variables with dependent variable. Hypothesis 1 examined the relationship between perceived ease of use and attitude of students towards blogging activities. The perceived ease of use has significant positive relationship with attitude towards blog ($\beta = 0.374$, $p < 0.05$). The significant and positive relationship means that every unit increase in perceived ease of use will increase attitude toward blog by 0.374. Therefore, H1 was supported.

Hypothesis 2 examines the relationship between perceived usefulness and students' attitude toward blog. A path coefficient of 0.490, which is significant at $p < 0.05$, specifies that every unit increased in perceived usefulness will increase students' attitude by 0.490. Thus, H2 was supported.

Hypothesis 3 examines the relationship between perceived usefulness and students' attitude toward blog. A path coefficient of 0.273, which is significant at $p < 0.05$, indicates that every unit increase in perceived usefulness will increase students' attitude toward blog. Therefore, H3 was supported.

Table 7: Pearson correlation among Constructs

Constructs	ATT	PEOU	PP	PU
ATT	1.000	0.576*	0.711*	0.645*
PEOU		1.000	0.510*	0.469*
PP			1.000	0.667*
PU				1.000

*significant at the 0.01 level

Table 8: Results of hypotheses tests

Model	R ²	β	Sig.	Hypothesis result
Attitude toward blog (ATT)				
ATT=PEOU+PP+PU	0.601			
PEOU		0.374	.006*	H1 was accepted
PP		0.490	.000*	H2 was accepted
PU		0.273	.015*	H3 was accepted

*Significant at $p < .05$

Discussion

Based on multiple linear regression analysis, all hypotheses were supported. Perceived playfulness was found to have the most significant influence towards attitude with the highest coefficient among others ($\beta = 0.490$, followed by perceived ease of use ($\beta = 0.374$) and perceived usefulness ($\beta = 0.273$). A previous study done by Hsu and Lin (2008) stated if the users did not perceive blogging as enjoyable, fun and playful, they were unlikely to participate in blogging.

Hsu and Lin (2008) also described, the perceived ease of use could influence user's attitude, while difficulties can make users resist using the blog. The students also agreed that the blog is useful for them to get the most accurate and newest information. It proves that the more useful the blog the more likely student participate in blogging.

The results of this study are accepted with caution due to certain limitations. The number of 78 students involved in this study is considered small compared to the total number of students' population in UiTM Pahang. Furthermore, the respondents were self selected sample. The low score in cronbach's alpha in perceived ease of use component ($\alpha = 0.658$), revealed difficulty of respondents in responding and understanding the reversed questions. In future, researcher should avoid reverse questions and rephrase into positive statements.

References

- Chai, S. & Kim, M. (2010). *What makes bloggers share knowledge? An investigation on the role of trust*. International Journal of Information Management, 30, 408-415.
- Choo, C.W. (1998). *The Knowing Organization*, Oxford University Press, New York.
- Chuang, H.-H. (2008). *Weblog-based electronic portfolios for student teachers in Taiwan*. Education Tech Research Dev, 58, 211-227.
- Davis, F.D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology*. MIS Quarterly, 13 (3), 319-339.
- Du, H. S. & Wagner, C. (2006). *Weblog success: exploring the role of technology*. International Journal of Human-Computer Studies 64, 789-798.
- Gardner, S. (2005). *Buzz marketing with blogs for dummies*. Indiana: Wiley Publishing, Inc. Page 135. Retrieved July 30, 2011 from www.books.google.com
- Hair, J.F., Anderson, R.E., & Black, W.C. (1992). *Multivariate Data Analysis with Readings*, New York, Prentice Hall.
- Hsu, C.-L & Lin, J.C.-C. (2008). *Acceptance of blog usage: the roles of technology acceptance, social influence and knowledge sharing motivation*. Information & Management, 45, 65-74.
- Hsu, C.-L and Lu, H.-P. (2004). *Why do people play on-line games? An extended TAM with social influences and flow experience*. Information & Management, 41(7), 853–868. doi:10.1016/j.im.2003.08.014
- Mah Boon Yih & Er Ann Nah .(2009). *Writing Web Logs in the ESL Classroom: A Study of Student Perceptions and the Technology Acceptance Model*. Asian Journal of University Education. 5(1).
- Moon, J.-W & Kim, Y.-G. (2001). *Extending TAM for a world-wide-web context*. Information & Management, 38, 217-230.
- Park, T.K. (1994). *Toward a theory of user-based relevance: a call for a new paradigm of inquiry*. Journal of the American Society for Information Science, 45 (3), 135–141.
- Sekaran, U. (2003). *Research Methods for Business*. Singapore, John Wiley & Sons, Inc.
- Shih, H.-P. (2004). *Extended technology acceptance model of Internet utilization behavior*. Information & Management, 41(6), 719–729.
- Venkatesh, V. & Davis, F.D. (2000). *A theoretical extension of the technology acceptance model: four longitudinal field studies*. Management Science, 46, 186-204.
- Walker, J. (2005). *Weblogs: learning in public*. On the Horizon. 13(2). 112-118.
- Wang, S. & Lin, J. C.-C. (2011). *The effect of social influence on bloggers' usage intention*. Online Information Review, 35 (1), 50-65.
- Wang, Y-S., Lin, H–H., Liao and Y-W. (2011). *Investigating the individual difference antecedents of perceived enjoyment in students' use of blogging*. British Journal of Educational Technology, Abstract. doi: 10.1111/j.1467-8535.2010.01151.x
- Wheeler, S. & Lambert-Heggs, W. (2009). *Connecting distance learners and their mentors using blogs, the mentor blog project*. The Quarterly Review of Distance Education, 10 (4), 323-331.

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