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Acceptance Model (TAM)

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Perceives Ease of Use, Perceive Usefulness, And Behavioral Intention: The Acceptance of Crowdsourcing Platform by Using Technology Acceptance Model (TAM)

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Abstract

This study aims to identify the relationship between the acceptance of Crowdsourcing platform by using TAM model (Perceives Ease of Use, Perceive Usefulness, and Behavioral Intention). A survey questionnaire was designed as a research instrument to evaluate respondents and find out the relationship between perceive ease of use, perceive usefulness and behavioral intention. A total of 48 questionnaires were distributed via online among students of a business faculty from a public university in Kelantan. The data collected was analyzed using SPSS 21.0 and this study found that all the independent variable has significant positive relationship on behavioral intention. In addition, for all three variables which were perceive ease of use, perceive usefulness and behavioral intention, the result indicates that all variables reliability was high.

Keywords: Digital Workforce, TAM Model, Perceives Ease of Use, Perceive Usefulness, Behavioral Intention

1 Introduction

The term “crowdsourcing platform” was initially introduced by Howe (2006) which was defined it as the outsourcing of a function or task traditionally done by a designated agent to an undefined network of laborer’s carried out by a company or a similar institution using type of “open call” (Nicolas, Thimo & Daniel, 2011). In addition, according to Wael and Kristiina, (2012) crowdsourcing platform is a method for companies in utilizing the power of the crowd through internet-based platforms. Subsequently, it creates a relatively new phenomenon. Wael and Kristiina (2012) added that the media and entertainment companies have been struggling to adjust to the rapidly changing, technology-enabled industry eco-system, and many companies are yet to find their spot on the new map over the years. In supporting the crowdsourcing, with the combination of two elements, IT and sharing economic had contributed to new approach of income generation over the technologies and skill workers.

In Malaysian context for instance, research have shown that teachers in Malaysia may not be adequately prepared to integrate ICT in the learning environments (Wong & Timothy, 2009). However, in 2002, the Malaysian Ministry of Education (MMOE) commissioned a study to assess the impact of the Smart School Pilot Project on teaching and learning (Wong & Timothy, 2009). As the result was encouraging it clearly shows that students and teachers had benefited from the technology supported project (Wong & Timothy, 2009).

In the context of this study, positive attitudes toward the computer use are more likely to be accepted by student and teachers in addition to the usage of computers in the classroom (Wong, 2006). Students nowadays spend much of their time with technologies, in such playing multimedia, interactive and social online games and entertainment technology in general (Junco & Mastrodicasa, 2007). In fact, today's students are mostly Net Generation. They are considered as consumers of technology as they entered the university (Junco & Mastrodicasa, 2007). In a way, this creates a gap between the new and previous generation in ways that previous generations barely understand. The new generation tend to associate with technology more with playfulness than with learning (Melendez, Obra & Moreno, 2012). As the influence of the game and enjoyment, considering gender differences, regarding the intended use and the use of technology to support teaching and learning processes would produce interesting results, the objective of this study is 1) to know the relationship between perceived usefulness towards behavioral intention. 2) to know the relationship between perceived ease of use towards behavioral intention.

2 Literature Review

2.1 Crowdsourcing platform

Kittur (2010), one of the most interesting developments is the creation of general-purpose markets for crowdsourcing platform diverse tasks. These markets represent the potential for accomplishing work for a fraction of the time and money required by more traditional methods (Kittur, 2010). According to Jain (2010), while crowdsourcing platform initiative provides several benefits for the participants involved, it also poses several novel challenges to effectively manage the crowd, Blohm; Leimeister and Krcmar, (2013) and Kittur (2010) contended that crowdsourcing platform has worked especially well for certain kinds of tasks, typically, ones that are fast to complete, incur low cognitive load, have low barriers to entry, are objective and verifiable, require little expertise, and can be broken up into independent subtask (Soliman & Tuunainen, 2012).

2.2 Technology Acceptance Model (TAM)

TAM has proven to be a useful theoretical model in helping to understand and explain use behaviour in information system implementation (Legris, Ingham & Collette, 2003). It has been tested in many empirical researches and the tools used with the model have proven to be of quality and to yield statistically reliable results (Legris, Ingham & Collette, 2003). According to Davis (2000) Technology Acceptance Model (TAM) explains the perceived usefulness and usage intentions in terms of social influence and cognitive instrumental processes and the goal of this research is to develop and test a theoretical model of the effect of system characteristics on user acceptance of computer-based information systems (Davis, 2000). This model is being developed with two major objectives in mind (Davis, 1985).

First, it should improve the understanding of user acceptance processes, providing new theoretical insights into the successful design and implementation of information systems (Davis, 1985). Second, TAM should provide the theoretical basis for a practical "user acceptance testing" methodology that would enable system designers and implementers to evaluate proposed new systems prior to their implementation (Davis, 1985). Applying the proposed model in user acceptance testing would involve demonstrating system prototypes to potential users and measuring their motivation to use the alternative systems (Davis, 1985). Such user acceptance testing could provide useful information about the relative likelihood of success of proposed systems early in their development, where such information has greatest value (Davis, 1985). For better understanding of the development and the emergence of TAM, a brief description of theories and models, which pre-

ceded and influenced its appearance, is required (Marangunic & Granic, 2014). At the very beginning of technology entering users' everyday life, there was a growing necessity for comprehending reasons why the technology is accepted or rejected (Marangunic & Granic, 2014).

2.3 Behavior Intention

Flow theory emphasizes the role of a specific context rather than individual differences in explaining human motivated behaviors and, provided there is not a consensus in how to measure flow, playfulness is a concept that is used most widely to measure it (Byoung, 2009). Perceived enjoyment is the extent to which the activity of using a specific system is perceived to be enjoyable, aside from any performance consequences resulting from system use (Venkatesh, 2000). Computer playfulness has been defined as "the degree of cognitive spontaneity in microcomputer interactions" (Webster & Martocchio, 1992). Playfulness is a complex variable, which includes individual's pleasure, psychological stimulation, and interests (Csikszentmihalyi, 1990). Perceived playfulness has been considered together with TAM quite since the beginning of it (Chung & Tan, 2004; Venkatesh, 2000).

Technology Acceptance Model with or without modifications, has been successfully applied to a wide range of empirical studies to predict and explain acceptance and adoption of a variety of technologies such as electronic banking (Al-Smadi, 2012), mobile education (Tan, 2012) and social networks (Pinho & Soares 2011; Shin & Kim 2008), as well as to understand consumer markets for technological products and services such as online shopping (Vijayarathy, 2004) and mobile shopping (Kim, 2009).

According to Davis (1989) the attitude of an individual is not the only factor that determines his use of system, but it is also influenced by the impact which the system may have on his performance. It is mean, whether the student do not really use an information system, the possibility that student will use the system is high if they perceived the system will increase their performance. According to Dillon and Morris (1996), the model hypothesizes a direct link between perceived usefulness and perceived ease of use, which suggests that with two systems offering the same features, the one which is easier to use will be perceived as more useful by the user as demonstrated in the conceptual framework in Figure 1.

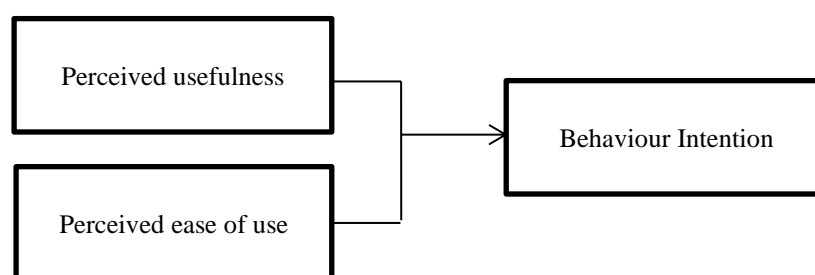


Fig. 1. Conceptual Framework of Technology Acceptance Model

3 Methodology

Research design was a plan and procedure to explain how researcher sets out specific details of their research enquiry in which it enabled researcher to arrive at valid findings, comparisons and conclusions (Ranjit, 2011). The portion of the population is 57 randomly picked students. For the purpose of this study, the researcher chose a non-probability sampling designs of convenience sampling. The sample of this study consists of students of the business faculty of one of the public

universities in Kelantan. The researcher used Krejcie and Morgan (1970) table, in determining a minimum of 48 respondents that were required to complete this research. The questionnaires were distributed to 57 students via online questionnaire. The Item in Section A of the questionnaire consists of demographic profile of the respondents and ranking the interest of using crowdsourcing platform. Section B of the questionnaire will cover those related to independent variables and the five-point Likert scale was used. The five-point Likert scale represented by the number 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree and lastly 5 for Strongly Agree. In terms of validity, it was often defined as the extent to which a measure what it purports to measure. Validity requires that an instrument was reliable, but an instrument can be reliable without being valid (Kimberlin & Winterstein, 2008). The questionnaire was validated by expert of the subject matters. All the findings that had been formulated in the study was analyzed by the SPSS software.

4 Findings and Result

Out of 57 questionnaires distributed, only a total of 48 questionnaires were returned, thus there's only 84.21 % of participation rate within the time period given. The demographic profile of this study is based on table 1.0. The demographic profile shows that there are 56.3% (27 respondents) was male respondents and another 43.8% (21 respondents) were female. The findings show that the highest age group of respondents was 21 – 23 years old which have total amounts for age 21 years old which was 35.4%, for age 22 years old was 52.1%%, meanwhile at age 23 years old was 12.5%. The highest number of respondents answer the questionnaire was age 22 years old. Next, the highest amount of percentage was respondents pursuing their degree with 77.1% of respondents. The lowest amount of percentage was 22.9% respondents pursuing their diploma.

Table 1. Demographic Profile

Item	Percentage
Gender	
Male	56%
Female	44%
Age	
21	35%
22	52%
23	13%
Education	
Diploma	23%
Degree	77%

Table 2 Descriptive Statistics, Cronbach Alpha, and Pearson Correlation of All Study Variables

Variables	PEOU	PU	BI
PEOU	(.815)		
PU		(.736)	
BI	0.768**	0.940**	(.707)
<i>Mean</i>	4.37	4.29	4.27
SD	.452	.499	.452

Note: ** Correlation is significant at the 0.01 level (2-tailed); Entries in parenthesis indicate Cronbach Alpha values.

The Table 2 shows the descriptive statistics of all study variables. The mean for Perceive Ease of Use (PEOU) was the highest i.e. 4.37 out of 5, while Perceive Usefulness was 4.29 and the highest was Behavioral Intention (BI) at 4.27. These indicate that the respondents mostly agree to strongly agree to the items that have been asked in the questionnaire. Based on table 2, it shows that the highest item was perceive ease of use and perceive usefulness as it had the highest value which were 4.27 simultaneously and this value was considered high. For the lowest value in this variable

was behavioral intention which value was 4.23. Hence it can be concluded that their Perceive Ease of Use, Perceive Usefulness and Behavioral Intention were at high level.

The first independent variable which is Perceive Ease of Use (PEOU) indicated that $r = 0.768$ while $p = 0.000$. The result shows that there was a positive significant and strong association between Perceive Ease of Use and Behavioral Intention. The second independent variable which is Perceive Usefulness indicated that $r = 0.940$ while $p = 0.000$. The result showed that there was a positive significant and strong association between Perceive Usefulness and Behavioral Intention. The result shows that there was a positive significant and strong association between both variables. Therefore, the findings confirmed that increasing Perceive Ease of Use and Perceive Usefulness will increase the Behavioral Intention.

The first objective is to identify is to identify the relationship between Perceive Ease of Use towards behavioral intention with the Hypothesis: Perceive Ease of Use will have a positive effect on behavioral intention. Based on the findings discussed above, it shows that Perceive Ease of Use has positive strong relationship with Behavioral Intention with ($r=0.768$, $p<0.05$). Therefore, the hypothesis is accepted.

The second objective is to identify the relationship between perceived usefulness towards behavioral intention with the Hypothesis: Perceived usefulness will have a positive effect on attitude. The findings show that shows that Perceive Usefulness has positive strong relationship with Behavioral Intention with ($r=.940$, $p<0.05$). Therefore, the hypothesis is accepted.

Students in this new era, spend most of their time immersing themselves in technology, i.e.: using multimedia software and applications, interactive and social online games and entertainment technology in general (Junco & Mastrodicasa, 2007). Junco and Mastrodicasa, (2007) further explained that students nowadays are the consumer of technology that they are already tech-savvy when they arrived at the university. In fact, this creates a gap between the new generation and the older generation. The new generation may associate technology more with playfulness than with learning (Melendez, Obra & Moreno, 2012). Melendez, Obra and Moreno (2012) mentioned that it was interesting to analyze the influence of the game and enjoyment, with regards to gender differences, regarding the intended use and the use of technology to support teaching and learning processes. This is clearly shown based on the results demonstrated above.

5 Conclusion and Recommendations

Looking back at the research objective of this study, which is 1) to know the relationship between perceived usefulness towards behavioral intention. 2) to know the relationship between perceived ease of use towards behavioral intention. The results have shown that both elements of TAM which is Perceive Ease of Use and Perceive Usefulness has positive strong relationship with Behavioral Intention. Therefore, it is important for organization to know the relationship crowdsourcing platform between technologies. Crowdsourcing is highly unlikely to deliver the best educational experience on itself. Over the years, crowdsourcing has increasingly become a recognized sourcing mechanism for problem solving in organizations by outsourcing the problem to an undefined entity or the crowd and alternate way building the carrier for a sustainable living over the technology. This study has identified and proven the acceptance of Crowdsourcing platform by using TAM model among the students of a business faculty from a public university in Kelantan.

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