

INTEGRATING ALTRUISM AND TECHNOLOGY ACCEPTANCE TO USE SOCIAL MEDIA AMONG PRESERVICE TEACHERS

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Abstract: Nowadays, we can see dramatic increases in the use of social media, especially among adolescents. Yet not much research is being published about what drives them to social media acceptance, especially for the learning process. Based on the technology acceptance model, researchers developed a model involving knowledge sharing and technology acceptance. The research model was supported by 209 preservice teachers who have used social media. The results have shown that the usefulness and ease of use were related positively to attitude toward the usage of social media and accounted for 25% of the variance. But knowledge sharing (altruism) was not related to attitude toward the usage of social media. On the other hand, attitude toward the usage of social media significantly influenced a social media preservice teacher's intention to use social media explain 43% of the variance of intention to use social media.

Keywords: Altruism, Technology Acceptance, Social media

Introduction

In learning at the Teacher Education Institute (IPG), students are required to register core elective subjects. Information and Communication Technology in 21st Century Learning is one of the core elective subjects found in IPG. The number of learning hours for the core elective is divided into two sections, face-to-face and non-face-to-face. For example, Information and Communication Technology in the 21st Century Learning (TMKS 3072). For face-to-face learning, 9 hours are allocated for lectures, 13 hours for tutorials and 2.5 hours for assessment. For non-face-to-face learning, 9 hours are allocated for lectures, 13 hours for tutorials and 36.5 hours for assessment. Overall, face-to-face and non-face-to-face learning hours are 83 hours.

By percentage only 29.52 percent of the time is allocated on a grand front. Another 70.48 percent is non-face-to-face learning. This shows that the learning of these subjects is dominated by non-face-to-face learning (Institute of Teacher Education Malaysia, 2015).

The use of ICT can facilitate the implementation of non-face-to-face learning. One of the tools to facilitate communication is social media. Social media is a space that can be regarded as a platform for collaboration among its users (Becheru & Popescu, 2017; Karakiza, 2015; Uzelac, 2011). Social media can also be regarded as interaction space for free content exchange that is not the same as traditional media. In today's world, technology especially in the field of social media has become a marketing campaign space amongst traders to consumers. This makes their campaigns wider and faster to reach users. As such, social media can also define as a channel or a personal link between users, and it can offer channels centered on social networking and interaction (Shu, Wang, Tang, Zafarani & Liu, 2017; Obar & Wildman, 2015). Social media is an important network for communicating within the local community. Social networking media has vast applications in today's society (Barczyk & Duncan, 2017). Social media also facilitates the delivery of learning in today's sophisticated era (Chawinga, 2017; Collin et al., 2011) and Baruah (2012) said that the importance of using social media is to share knowledge and information online in various groups that encourage communication skills especially between students or preservice teachers with educational institutions.

Social media selection for use in non-face-to-face learning is due to its high usage among Internet users in Malaysia. MCMC has released a comprehensive report on Internet users statistics for Malaysia. In 2018 the population of Malaysia was 31.83 million. More than 25 million people are internet users (79 percent of the population) while social media users are 24 million people (75 percent of the population). This shows nearly 96 percent of Internet users using social media. A total of 37 percent of Malaysians use Smartphone to use Search Engines while 59 percent also access social media. For computer use, the use of search engines is 16 percent while for social media access is 20 percent. This shows that Malaysians prefer to surf social media from using search engines. 85.6 percent of Malaysians spend their time on social media by using various devices (MCMC, 2018).

Problem Statement

The use of ICT can help students learn. With social media students can get in touch with educators and classmates faster. Discussions can also be done anywhere without the need to book a class or provide a specific place. Of course, discussions with social media are easier. This positive situation should have a good impact on student learning. However, many students who have not yet fully utilized social media as requested by lecturers. Students are still using traditional learning methods such as answering questions raised by the lecturer by printing and sending the answer sheet to the lecturer. This shows that students do not accept the use of social media for non-face-to-face learning processes for core elective subjects. Factors to accept social media as non-metrical learning tools are important to ensure maximum acceptance of their use. There are various factors that have been studied but there is still a lack of study on the intentions to use social media in knowledge sharing for learning purpose especially among preservice teachers. The altruism as one of factors that cause the preservice teachers to have the intentions to use social media must be understood.

Literature Review

The active involvement of the students in the learning process through the ICT medium can produce students with critical and creative thinking (Aini, Nor & Razak, 2015), as well as to enhance the level of learning among students (Genlott & Grönlund, 2016). ICT-based teaching

and learning aims to facilitate educators to manage teaching materials, create more effective and dynamic learning environments, and engage active participation among students in the teaching and learning process. In non-face-to-face learning, social media can be a tool for online interaction. The use of social media if used with the right methods can help learning.

Technology Acceptance Theory

Davis introduced the Technology Acceptance Model (TAM) in 1989. This model is a theoretical model of information systems and the use and acceptance of the technology by the user. In the same year, Davis, Bagozzi, and Warshaw, have reviewed the TPB and TRA. Through this review, there are two most important factors that predict the intention to use the technology, namely the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU is defined as "the probability that potential users using certain application systems will improve their performance" and PEOU is defined as "the extent to which users expect that they should not attempt to use the system" (Davis et al., 1989, p.985). Furthermore, their main conclusion is the use of predictable technology from user intentions, consistent with TRA and TPB, where the intentions of user behavior to perform certain actions are the key determinants of actual behavior.

The research hypotheses are as follows:

H1. Perceived usefulness will affect positively preservice teachers' attitudes toward usage a social media.

H2. Perceived ease of use will affect positively preservice teachers' attitudes usage a social media.

H3. Attitude will affect positively preservice teachers' intentions to usage a social media.

Altruism

In line with past research, it is found that altruism is a major factor in the sharing of knowledge available online. (Eddleston & Kellermanns, 2007; Fang & Chiu, 2010). Altruism can promote bonds with interdependence, commitment and foster loyalty for long-term prosperity. Hence altruism is an important element of the organization and society in general and individual families in particular. Social media environments are shaped by communities based on common interests. Hence, researchers suggest that altruism is an important element in the social media environment. However, relationships in social media are weak as users are in the community voluntarily. User can terminate contact without any reason. Therefore, a bond is required to ensure that users continue to maintain a relationship in social media and is always ready to be in the network. Individuals with altruistic values are referred to as someone who is always willing to help others. If in social media, these individuals will be more interested in using social media technology and communicating with others who are online (Wright & Li, 2011, p.1962). Knowledge sharing is complicated to understand. Various factors needed to create state of knowledge sharing. There are results of the model tested that altruism can be one of the complementary factors to the interpersonal perspective. This interpersonal perspective can also be a key determinant of knowledge sharing in social media or online. Suggestions from Eddleston and Kellermanns (2007) on alleged altruism can help in promoting the involvement of participation as well as reduce the conflicts encountered in online participation. In addition, altruism can trigger interpersonal relationships and can overcome the difficulties of the process for more complex knowledge sharing. This factor can also enable sharing of knowledge in social media to work.

The hypothesis of the study is as follows:

H4. Altruism will positively affect preservice teachers' attitudes toward usage a social media.

Research Methodology

In this study researcher used a quantitative research approach. Quantitative research in social sciences is interpreted as the accuracy of the description of a variable and the accuracy of the relationship between one variable and another (Ary, Jacobs, Irvine & Walker, 2018). This research was conducted by survey method, namely the collection of primary data obtained from the original source. This study is also an exploration study looking at the relationship between the variables of this study is correlational research whose research location is in IPGM. This research approach aims to measure the relationship between variables. The instrument was designed to evaluate the strength of the relationship. Items to measure behavioral intention, attitude, were generated based on the procedures suggested by Ajzen and Fishbein (1980) containing five items for intention and attitude. Items to measure the altruism was adapted from the measurement developed by Eddleston & Kellermanns (2007), containing ten items. Items to measure perceived ease of use and preceived usefulness was adapted from the measurements developed by Davis et al. (1989), containing five items each. All items designed based on a seven-point Likert's scales, ranging from “strongly disagree” (1) to “strongly agree” (7). Participants in the study were preservice teacher who have used the social media service for non-face-to-face in core elective subjects. The questionnaire was conducted using the online method. Questionnaires are placed on google pages using google form. During the course of the study, the participants can reach the questions that have been included in the google form. The URL address has been assigned to the participants of the study.

Research Model

The study is aimed at providing a research model that integrates altruism in the use of social media with TAM factors. Then researchers test the effect of factors on empirical intentions. Figure 1 shows the research model that has been conducted known as ATAM.

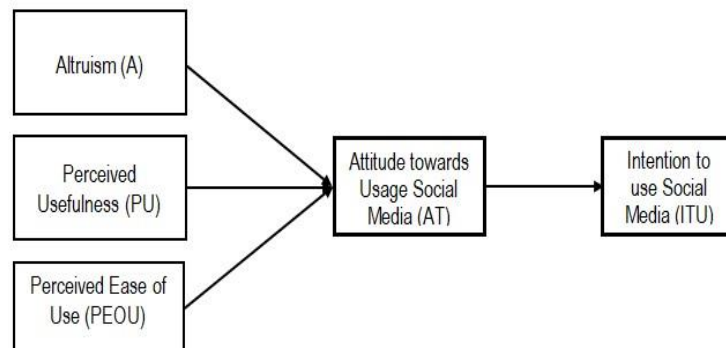


Figure 1: Proposed Research ATAM

Analyses Result

To answer the hypothesis in this study, the data analysis used is a variance based or component-based approach with the Analysis of Moment Structure (AMOS). Based on the research framework built, this study uses Structural equation modeling (SEM). SEM is an analytical technique that combines several independent and dependent variables to determine the effect of each of these variables. In addition, SEM is a tool for explanation or determinant factors that can be used to determine which variables have dominant influence or which pathway has a stronger influence and test models (Hair et al. 2009). As has been suggested by Hair, Black, Anderson and Basim (2010), used a two-step analysis. The first step is to measure the reliability

and validity of the measurement model. And the next step is to investigate strength and the relationship direction among the constructs through the structural model.

Measurement Model

By using the AMOS version 24 package, the Confirmatory Factor Analysis (CFA) is implemented to test the measurement model. The instrument used includes 30 items as shown in table 1. Hair et al. (2010) has suggested 0.50 is an acceptable value. Hence the value of the finding between 0.76 and 0.96 is acceptable. The Composite Reliability value shows internal consistency that is the consistency value of each indicator in measuring its construct. CR value expected > 0.7 (Hair et al., 2010). The Average Variance Extracted (AVE) value is used to measure the amount of variance that can be captured by its constructs compared to the variances caused by measurement errors. The Average Variance Extracted (AVE) value should be greater (>) 0.5 (Hair et al., 2010).

Table 1: Reliability

Item				Estimate	Reliability	AVE	CR
PU					0.972	0.865	0.970
PU5	<---	PU		0.988			
PU4	<---	PU		0.934			
PU3	<---	PU		0.988			
PU2	<---	PU		0.863			
PU1	<---	PU		0.869			
PEOU					0.954	0.805	0.954
PEOU5	<---	PEOU		0.92			
PEOU4	<---	PEOU		0.928			
PEOU3	<---	PEOU		0.869			
PEOU2	<---	PEOU		0.931			
PEOU1	<---	PEOU		0.833			
ITU					0.945	0.779	0.946
ITU5	<---	ITU		0.948			
ITU4	<---	ITU		0.933			
ITU3	<---	ITU		0.969			
ITU2	<---	ITU		0.858			
ITU1	<---	ITU		0.934			
AT					0.953	0.805	0.954

AT5	<---	AT	0.811			
AT4	<---	AT	0.929			
AT3	<---	AT	0.918			
AT2	<---	AT	0.898			
AT1	<---	AT	0.913			
A				0.949	0.668	0.908
A9	<---	A	0.852			
A8	<---	A	0.668			
A7	<---	A	0.735			
A6	<---	A	0.846			
A5	<---	A	0.859			
A4	<---	A	0.868			
A3	<---	A	0.889			
A2	<---	A	0.613			
A10	<---	A	0.885			
A1	<---	A	0.798			

Table 2 shows the value of the Average variances extracted is greater than the value of the correlation between the tested constructs. this illustrates that all the constructs tested are empirically distinct. In conclusion it can be stated that the measure convergent and discriminant validity of test measurement model, all values are satisfactory.

Table 2: Discriminant Validity Of Social Media Users						
	CR	A	PU	PEOU	AT	ITU
A	0.970	0.446				
PU	0.954	0.023	0.748			
PEOU	0.946	0.074	0.406	0.648		
AT	0.952	0.072	0.369	0.406	0.648	
ITU	0.908	0.016	0.209	0.502	0.64	0.607

Table 3 shows that the fitness measures for the measurement models. The proposed model goodness of fit will be tested, χ^2/df , IFI, TLI, CFI (Comparative Fit Index) and RMSEA (Root-Mean-Square Error Of Approximation) has been used. It is suggested χ^2/df should not exceed 5 but more than 1 while IFI, CFI and TFI should be greater than 0.9 (the recommended value). Value for RMSEA (Root-Mean-Square Error Of Approximation) was suggested not exceeding .08 should be considered prove of good fit (Hair et al., 2010).

Table 3: The Measurement Model Fit ATAM

Goodness of Fit Measures	Cut-off Value	Model Results	comment
χ^2/df	>1 and < 5	2.216	Good
IFI	≥ 0.90	.933	Good
TLI	≥ 0.90	.925	Good
CFI	≥ 0.90	.932	Good
RMSEA	<0.08	.076	Good

From Table 3, the five parameter fit models have exceeded the cut-off values, namely RMSEA, CMIN / DF, CFI, IFI and TLI. Thus, the test the suitability of this model resulted in an acceptance rate is quite good, therefore it can be concluded that the hypothesis which states that the indicators that the dimensions of the same reference (underlying dimension) for the constructs that exist so that the "model" can be accepted or feasible to use.

All indices of individual measurement models have reached or exceeded acceptable levels as recommended by previous researchers. Obviously here shows that the measurement model has a good fit with data collected (Bryne, 2008; Kline, 2005).

Table 4: Standard Regression Between Variables
Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
AT <--- PU	.107	.033	3.253	.001	
AT <--- PEOU	.185	.043	4.306	***	
AT <--- A	.259	.077	3.358	***	
ITU <--- AT	.716	.068	10.543	***	

Based on the results of SEM, hypothesis testing was conducted which resulted in the following answers and discussion:

1. Perceived usefulness has a significant effect on attitude of preservice teachers at IPGM. This is indicated by the coefficient value of standardized regression weight is 0.107 and C.R is 3.253, and probability is 0.001. Based on the statistical test results show that perceived usefulness has a significant effect on the attitude to use social media among preservice teachers at IPGM. Which means the better perceived usefulness, the better the attitude of using social media owned by preservice teachers. Perceived usefulness is a very important element for the attitude to use social media among preservice teachers because perceived usefulness can influence attitudes towards the use of social media. Therefore, it can be said that the higher the value of perceived usefulness provided by social media to the preservice teachers will be higher the value of the attitude to use social media among preservice teachers for their learning.
2. Perceived ease of use has a significant effect on attitude of preservice teachers at IPGM. This is indicated by the coefficient value of standardized regression weight is 0.185 and C.R is 4.306, and probability is 0.000. Based on the statistical test results show that perceived ease of use has a significant effect on the attitude to use social media among preservice teachers at IPGM. Which means the better perceived ease of use, the better

the attitude of using social media owned by preservice teachers. Perceived ease of use is a very important element for the attitude to use social media among preservice teachers because perceived ease of use can influence attitudes towards the use of social media. Therefore, it can be said that the higher the value of perceived ease of use provided by social media to the preservice teachers will be higher the value of the attitude to use social media among preservice teachers for their learning.

3. Altruism has a significant effect on attitude of preservice teachers at IPGM. This is indicated by the coefficient value of standardized regression weight is 0.259. C.R is 3.358 and probability is 0.000. Based on the statistical test results show that altruism has a significant effect on the attitude to use social media among preservice teachers at IPGM. Which means the better altruism, the better the attitude of using social media owned by preservice teachers. Altruism is a very important element for the attitude to use social media among preservice teachers because altruism can influence attitudes towards the use of social media. Therefore, it can be said that the higher the value of altruism among the preservice teachers will be higher the value of the attitude to use social media among preservice teachers for their learning.
4. Attitude has a significant effect on intention to use social media of preservice teachers at IPGM. This is indicated by the coefficient value of standardized regression weight is 0.716. C.R is 10.543 and probability is 0.000. Based on the statistical test results show that attitude has a significant effect on the intention to use social media among preservice teachers at IPGM. Which means the better attitude, the better the intention to use social media owned by preservice teachers. Attitude is a very important element for the intention to use social media among preservice teachers because attitude can influence intention to use social media. Therefore, it can be said that the higher the value of attitude among the preservice teachers will be higher the value of the intention to use social media among preservice teachers for their learning.

Discussion and Implications

The research has been carried out to present and validate the proposed model to assist in understanding the factors that contribute to the use of social media. The empirical analysis conducted, some implications obtained. First, perceived usefulness and ease of use appeared to be important variables in the context of social media. Specifically, ease of use was found to have the most significant influence on attitudes, with a coefficient higher than usefulness ($\beta = 0.315$). These results were in line with Lin & Kim (2016) studies. Perceived usefulness also had effect on the use of the social media ($\beta = 0.241$). These results were in line with previous studies (Mouakket, 2015; Elkaseh, Wong & Fung, 2016), which support that perceived usefulness played a factor in social media environments.

A factor for knowledge sharing, altruism not affected a preservice teachers's attitude. Altruism had no significant effect toward attitude to use social media for learning process. Generally, people participating in social media were motivated intrinsically to contribute knowledge (Kwahk & Park, 2016) to others because they enjoy helping each other's (Muhammad, Dey & Weerakkody, 2018). However, this study showed the opposite result. Such result from survey is similarly to Rode (2016) research.

Some of the insights gained from studies performed such as: The present social media is indeed an easy to use app. The results of this study support and show that easy to use is still a major factor that encourages users or preservice teachers to accept social media for learning. Many institutions launch social media as a educational or sharing knowledge channel. Stake holders

should understand what drives student or preservice teachers to share in the social media context. The findings check the importance of altruism reputation. In this study, altruism has effect as expected by researchers.

Conclusion

This paper has examined the relationship between perceived ease of use, perceived usefulness, altruism and preservice teachers' intention to use social media. The results provide evidence for the theoretical model embracing TAM, and the construct of knowledge sharing. The results support the view that altruism, perceived ease of use and usefulness are predicting variables. They have played a significant role in influencing individuals' attitudes toward adoption of social media. At the same time, the result showed that attitude has a significant and positive effect on individuals' intention to accept social media services. All hypotheses were supported. Possible preservice teachers share information simply because to get a response from a lecturer. From the model fit perspective, the study shows the model is fitted with the study data. In general, the model has provided an understanding of the tested factor. The model shows approximately 43.1% of the variance on the preservice teachers' behavioral intention.

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