JURNAL AKUNTANSI, MANAJEMEN DAN EKONOMI
Vol. 25, No. 03, 2023, pp. 35 – 43
Published online ... in http://jos.unsoed.ac.id/index.php/jame
ISSN: 1410-9336/E-ISSN: 2620-8482

The Implementation Of Technology Acceptance Model Towards Mobile Photography Application Adobe Lightroom

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Abstract

The subjects in this research were anyone who used *Adobe Lightroom* Mobile Photography App in Purwokerto. The data gathered by poll or questionnaire technique directly or through google form and the Hypothesis test used was Smart PLS 3.0 The results of the t-test analysis it is known that the statistical t value of the Perceived Usefulness variable on Attitude is 2.458 with a p value of 0.014, t value of the Perceived Ease of Use variable on Attitude is 3,850 with a p value of 0.000, t value of the Perceived Enjoyment variable on attitude is 3,800 with a p value of 0.000, and a p value of less than 0.05 with a positive direction so the hypothesis research is accepted. Based of the t-test analysis, t value of the attitude variable to Continuance Intention is 7,697 with a p value of 0.000. with a positive direction, it can be concluded that attitude has a positive effect on Continuance Intention. so that the fourth hypothesis is accepted. Conclusion of research is Perceived usefulness, Perceived ease of use, and Perceived enjoyment have positive effect on user's attitude. And Attitude has a positive effect on user's continuance intention use Adobe Lightroom.

Keywords Technology; TAM; Attitude; Application; Photography

INTRODUCTION

Photography has recently emerged as a fascinating tool for its users to express themselves and demonstrate their presence in online media. The rise of a virtual photographic community signaled the start of the trend in society. As evidence on social media platforms such as *Instagram*.

Through the desire to gain coverage in social media, users also develop their skills in using graphics programs and this also increases market demand for the production of mobile applications for digital photo processing that enable fast photo editing as they like (Magdalena & Arcadiusz, 2020).

Adobe Lightroom is photo-editing application that has many advantages that other applications do not have. *Adobe* has always been reliable in making editing applications on PCs and mobile devices. *Lightroom* is one of *Adobe* software that is assured to solve photo editing problems focusing on lighting. *Lightroom* can produce great images with adequate lighting that creates maximum results.

Application usage causes reactions in its users, the responses which are acceptance and also rejection. Although the *Lightroom* application has advantages that are difficult enough to match by its rivals, it does not mean that *Lightroom* does not have disadvantages. Based on the rating provided by *IOS* and *Googleplay*, even some of these shortcomings can be considered contradictory to other features provided by *Lightroom* itself

A theory of Technology Acceptance Model (TAM) can explain and predict user acceptance of technology. The TAM model can explain the acceptance of information technology with specific dimensions that can affect the acceptance of technology by users. The TAM model is used to determine the factors of user attitudes, intentions, and behavior by using two main variables, these two namely perceived usefulness and ease of use (Davis et al., 1989).

The acceptance or rejection of technology items is reflected in a person's attitude. The attitude of using technology in TAM is conceptualized as an attitude towards system usage in the form of acceptance or rejection as an impact when someone uses technology in their activities.

Furthermore, technology users have psychological factors that support them to use various features contained in the application of

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Received: 10 June 2023
Accepted: 12 July 2023
Published: 5 Sep 2023

a system or better known as perceived enjoyment. The higher the level of comfort possessed by users of information technology, the better the attitude of the users which will later be related to the acceptance of the system technology. Feelings of pleasure and comfort in using information technology systems will make users do their jobs well and finish them on time. The various advantages of the application provide a pleasant experience for users and increase their motivation to use the applications offered

Their propensity to use the product will improve if they have a positive view about utilizing a digital application (Oh & Xu, 2003). Or, to put it another way, the more positive a person's mindset is while using an application, the more likely he is to utilize it again. Yahyapour (2008) shows that attitude is one form of evaluation towards the consequences of behavior and leads to an intention to continue using technology applications. Wu and Chen (2018), Amoroso (2020) stated that there is a significant positive relationship between attitudes towards and continuance intentions. Furthermore, Ifinedo (2018), Kasilingam (2020) revealed that attitude has a significant effect on the continuance intention

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) based on Davis (1989) in Jogiyanto (2007) is an application that is a development of Theory of Reasoned Action (TRA) that specialized to model user acceptance of information systems. Theory of Technology Acceptance Model (TAM) is a theory about information systems that includes how users accept and use a technology (Vankatesh, V, & Davis, 2000). The purpose of TAM is to provide users with an explanation of the general determinants of computer acceptance, then able to explain user behavior across various technologies to end-users (Davis, 1989 in Jogiyanto, 2007).

The TAM model is derived from psychological theory to explain the behavior of information technology users with beliefs, attitudes, intentions, and user behavior relationships as explanatory factors. According to this model, an individual's behavioral interest in adopting a particular part of a technology is determined by a person's attitude towards the use of that technology (Vankatesh, V, & Davis, 2000). TAM uses TRA as a theoretical basis to determine a causal relation between two beliefs, that is: (Davis, 1989 in Jogiyanto, 2007).

Perceived Usefulness

Perceived ease of use in technology is defined as a measure of person's trust in computers that are easy to understand and use (Davis, 1993 in Jogiyanto). Furthermore, it is said that users will like and use a technology system if it is easy to use. Perceived ease of use in technological systems will affect behavior and attitudes. The higher a person's perception of the ease of using the system, the higher the level of use of the technology system (Amijaya, 2010).

Based on the explanation above, it can be concluded that the perceived ease of use in terms of using information technology is defined as a person's belief that the use of information technology can be easily understood and used.The dimensions of perceived usefulness of the system for users according to Davis et al. (1986) are productivity, job performance or effectiveness, importance to job, and overall usefulness.

Kasilingam (2020) explains several indicators of perceived ease of use, including: does not require great effort to use application; able to use application without the help of an expert, learning to operate application is easy, overall, believe using application is easy, working with application is not complicated.

Perceived Ease of use

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Perceived Enjoyment

Perceived enjoyment is the degree to which the activity of using a particular system is considered enjoyable in itself, regardless of the performance consequences resulting from using the system (Venkatesh & Davis, 2000). The enjoyment that a person feels using technology will have an impact on the intention and intensity of using technology (Venkatesh

& Bala, 2008). Convenience and enjoyment in someone who uses technology will make the user's perception of the application feel comfortable because it has obtained initial comfort. Kasilingam (2020) describes several indicators of perceived enjoyment, including: enjoyable; pleasant; fun.

Attitude

Based on Schiffman & Kanuk (2010), attitude is a learned predisposition in responding consistently to an object, in the form of a favorable or unfavorable manner. The components of attitude are (Fishbein and Ajzen, 1975). Cognitive Component.It is the knowledge (cognition) and perceptions obtained from a combination of direct experience with the attitude objects and related information from various sources. This knowledge and perceptions are usually in the form of belief, namely consumers believe that the product has several attributes.Affective Component. It is an emotion or feeling towards a certain product or brand which has the evaluations; which includes a person's assessment of the attitude object directly and thoroughly (whether the product is liked or disliked; or whether the product is good or bad).Conative component. It is person's tendency to carry out an action and behavior in a certain way towards an attitude object. The conative component is an expression of the consumer's intention to buy or reject a product or service. The conative component is often thought of as a consumer statement to buy.

Continuance Intention

Continuance Intention is the user's intention to continue using the related application services and willingness to pay (Bhattachherjee, et al. 2008). Continuing intention refers to an individual's intention to continue to engage in an activity after previously adopting it (Chen, Minghong, and Xianjun Qi, 2015). It is concluded that Continuance Intention is a person's intention to continue using technology applications. According to Amoroso, D., & Lim, R. (2017) continuance intention is the level of strength of an individual's intention to make repeated purchases through finance mobile applications.

Continuance intention is measured based on the following indicators (Ifinedo, 2018; and Chang et al., 2015): continue to use the application; increase usage of the application; didn't think to stop using application; will recommend to other to using application.

The influence between Perceived Usefulness, Perceived ease of use, and Perceived Enjoyment towards Attitude and Continuance Intention to use is described in the research model as shown in Chart 1.1

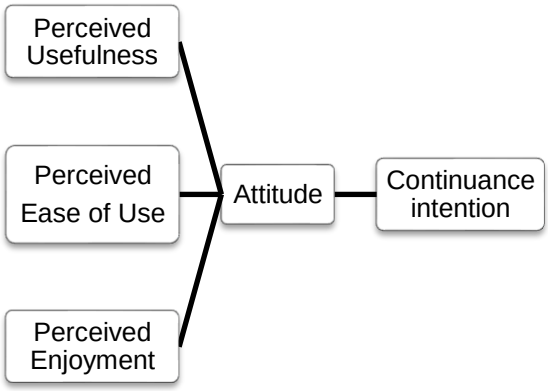

Figure 1. Research Model

Based on the hypothetical model, the hypotheses in this study are:

H1: Perceived usefulness has a positive effect on user's attitude toward Adobe Lightroom use

H2: Perceived ease of use has a positive effect on user's attitude toward Adobe Lightroom use

H3: Perceived enjoyment have positive effect on user's attitude towards *Adobe Lightroom*

H4: Attitude has a positive effect on user's continuance intention use Adobe Lightroom

METHODS

Research Type and Subject

Associative research has been the name for this type of research. Associative research aims to determine the relationship or consequence between two or more variables (Sugiyono, 2016). While the key characteristics is a survey involving respondents filling out a worksheet

The subjects in this research were Purwokerto *Adobe Lightroom* Mobile Photography App participants.

Data Source

The primary data source used in this study was directly accessed from the researchers' statements distributed through questionnaires. And for the Secondary data sourced from text books, scientific publications, and scientific journals accessed

from the service quality to research variables is classified as secondary data in this study.

Sample Population

Users of the *Adobe Lightroom* Mobile Photography Application in Purwokerto will be investigated in the present study. Determination of sample size using the interval estimation formula. The interval estimation formula is written with the following formula: (Umar, 2000):

n > $pq(Z_{\alpha/2} / e)^2$
n = Minimum number of sample
Z = Area under the normal curve
e = Level of eror that might accure (10%)
p = probability of eror (0,05)
q = probability of being correct
> $pq (Z_{\alpha/2} / e)^2$
n > 0,5 x 0,5 $(1,96/0,1)^2$
n > 96,04 ≈ 96

So the minimum sample size used is 96 respondents and in this study, the authors took a sample of 100 people.

Sampling Method

The convenience sampling approach was used to collect information. Anyone who met and used the *Adobe Lightroom* Mobile Photography Application in Purwokerto for at least once, completed the criteria, and was willing to become a respondent, was selecte accidentally as a sample.

Technique Data Analysis

The measurement of variables in this study used a Likert scale. In the Likert scale, variables are translated into variable indicators.and after that we can measure by other tools

Partial Least Square

PLS is a variant-based structural equation analysis (SEM) that can test the measurement model as well as test the structural model as a prediction for the
development of previous theories. PLS assumes all measures of variance can be explained by the latent variable estimation approach which is considered as a linear combination of indicators. PLS also provides general models of statistical tools such as canonical correlation, redundancy analysis, linear regression, MANOVA, and principal component analysis

RESULT

Outer Model

Convergent Validity

is used to see whether the indicators used to measure the research variables are in the valid category or not. An indicator is declared valid if the Loading value is greater than 0.7. The results of the convergent validity analysis

Discriminant Validity

is still part of the measurement model to see the validity of a model. In this study, the method used to assess discriminant validity is to compare the square root value of the Average Variance Extracted for each construct with the correlation between that construct and other constructs. According to Ghozali (2018) the model has sufficient discriminant validity if the AVE root of each construct is greater than the correlation between constructs. The results of the discriminant validity analysis are presented.

Composite Reliability nd Cronbach Alpha

Are used to see the reliability of a construct. A construct is said to be reliable if it has composite reliability and Cronbach's alpha values greater than 0.70.

Inner Model

Colinearity Statistic

It shows the value of VIF on the variables Perceived Usefulness, Perceived Ease of Use, and attitude less than 5, which means the research variables are independent and free from multicollinearity

R square

it can be seen that the R Square value for the Attitude variable is 0.518. In the research model, commitment is influenced by the variables Perceived Usefulness, Perceived Ease of Use, and Perceived Enjoyment. It can be interpreted that the attitude variable is influenced by the Perceived Ease of Use and Perceived Enjoyment variables by 51.8 percent. It also can be seen that the R Square value for the Continuance Intention variable is 0.357. In the research model, Continuance Intention is influenced by the attitude variable. This shows that the Continuance Intention variable is influenced by the attitude variable by 35.7 percent

Direct Effect Hypothesist Test

Hypothesis testing is used to see the significance of the independent variable on the dependent variable. The independent variable is declared influential if the t-statistical value has a value greater than 1.96 and the p value or significance is below alpha 0.05 and it is known that all hypothesis were accepted.

The high perception of respondents to the Perceived Usefulness of Adobe Lightroom is supported by the statement that according to respondents the use of Adobe Lightroom is felt to be very helpful for photography activities, can make it easier to edit photos quickly, and can increase productivity and also make photo editing more effective.

The results showed that Perceived Ease of Use had an influence on attitude with an average answer in the description analysis of 4.25 or in the very high category. Respondents gave the perception that Adobe Lightroom is very easy to use. Respondents felt that using Adobe Lightroom to edit photos was not difficult, they could be used even without the help of others, easy to learn, and making photo injections was very easy and not complicated.

The descriptive analysis show that the respondents gave a good perception of all indicators in the statement of perceived enjoyment with an average score of 4.10 or in the high category. This condition is supported by the statement that so far respondents feel that using the Adobe Lightroom application to edit photos is very enjoyable, as well as during the process of using it and overall respondents feel happy when editing photos in Adobe Lightroom.it shows that partially there is a significant influence with a positive direction between perceived enjoyment and is able to give a positive influence on attitude.

A good attitude towards someone in using the Adobe Lightroom application has an influence on their desire to use the application continuously. The results showed that the respondents' attitudes towards the Adobe Lightroom application were in good category with an average score of 4.10. This attitude is supported by the statement that using Adobe Lightroom is the best choice, and the application is very useful.

CONCLUSION

Perceived usefulness has a positive effect on user's attitude toward Adobe Lightroom use. Perceived ease of use has a positive effect on user's attitude toward Adobe Lightroom use. Perceived enjoyment have positive effect on user’s attitude towards Adobe Lightroom. Attitude has a positive effect on user's continuance intention use Adobe Lightroom. Based on the research limitation and the value of R-square stated. For further research, it is possible to add variables of perceived quality and application excellence because these two factors are considered a strong factor by the respondents in using an application in affecting their continuance intention. It is also hoped that future research will conduct a replication study by adding other mediating variables that are considered to be able to bridge the causality of the model that has been built, such as the confidence variable. Another thing that needs to be done is to provide a way to increase the image resolution and the photo editing results to be of higher quality. The problems with using Photoshop applications are that today's digital cameras have an average resolution of only about 24MP, and five years ago, cameras were still below 20MP.

For this reason, the Adobe Lightroom mobile photography application provides a solution to improve image quality, either increasing the quality of detail or increasing the number of pixels. That function can be applied to RAW files. There are two options, namely RAW Details (previously called Enhance detail) and Super Resolution. Raw Details aims to make photos sharper and correct misinterpretation caused by color filters on the sensor (bayer/x-trans) and also improve sharpness and contrast. RAW Detail does not increase the number of pixels.

Super Resolution is a new function available in Adobe Camera RAW version 13.2 that not only improves the pixel quality as in the RAW Details function, but also increases the resolution. In addition to improving image quality, the software will also duplicate the length and width of the pixels by 2x, bringing the total pixels to 4x. For example a 24MP digital image (6,000x4,000 pixels) will become 96MP (12,000x8,000 pixels).

Those facilities in pro-version can be generated to increase the organic buyer of the company because the app are more handy by the professionals market. While the novice can also enjoy the benefit of the free version.

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