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#### **Research Article**



# Using technology acceptance model to discuss factors in university employees' behavior intention to apply social media

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#### **ARTICLE INFO**

#### **ABSTRACT**

Received: 5 Oct 2022 Accepted: 15 Feb 2023 In order to evaluate the problem of employees using social networking technology for business purposes, the technology acceptance model will be applied. The purpose of the study is to establish the levels of impact exerted by the elements that influence the intentions of individuals working in the university to utilize social media. Employees in the university's connections between "organizational support," "colleague support," "self-efficacy," "technology capacity," "perceived usefulness," "perceived ease of use," and "behavior intention" are acknowledged as factors in this study. It was possible to get a total of 247 copies that were legitimate. For the purpose of inferential statistics, the partial least squares structural equation modeling method was applied. The data indicate that colleague support and technological capabilities do not have any impact on how easily something may be used or how valuable it is thought to be. On the other hand, organizational support and self-efficacy have a favorable influence on the perceived ease of use, but they have no effect on the perceived effectiveness of the tool. Additionally, while perceived usefulness does not have any influence on behavioral intention, perceived simplicity of use does have a favorable effect on behavioral intention.

Keywords: technology acceptance model, social media, behavior intention

## INTRODUCTION

Coronavirus shows the highest number of confirmed cases and death in the history of human diseases. In order to prevent the epidemic from spread, governments in various countries adopt tough lockdown measures and restrict people's freedom of movement, expecting to control the epidemic by reducing contact. After many cities in the world are put on lockdown, a lot of enterprises are forced to shut down and employees cannot go to work (Qiu et al., 2020; Tsolou et al., 2021; Zhou et al., 2020).

In this instance, it has become a worldwide phenomenon, with many organizations using social media to distribute business information in lieu of traditional offices (Venkateswaran et al., 2019). A worldwide pandemic is both a crisis and an opportunity, allowing for the regrouping and reorganization of operations (Gruszczynski, 2020). However, the unexpected transition from face-to-face cooperation to remote work took office workers off surprise when they used to visit the workplace (Dunatchik et al., 2021). In addition to the apparent issues with the quality of the Internet connection and physical equipment, there are other intangible aspects that affect the team culture and job productivity of each remote employee (Radulovic et al., 2022; Wang et al., 2021).

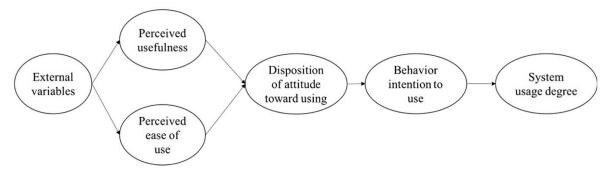


Figure 1. Technology acceptance model (Source: Authors' own elaboration)

The 21<sup>st</sup> century is an information age. The ongoing development of technology significantly alters people's lifestyles. Innovative technology and enhanced multimedia material might be used to develop a variety of occupations and lifestyles (Al Asyari & Rahman, 2020; Fibrianto & Yuniar, 2019). In the work and lifestyles of the future, employees will not merely work in corporate offices. In addition to the recurrence of epidemics, the use of social media to telecommuting, owing to real-time engagement, significantly improves real-time communication among employees and boosts job output (Newman et al., 2020; Yang et al., 2022).

Although social media offers numerous benefits, users must be ready to use it in order for it to be utilized properly (Korcsmáros & Csinger, 2022; Venkateswaran et al., 2019). In this context, the technology acceptance model (TAM) (Davis, 1989) will be utilized to assess the issue of employees utilizing social networking technologies for business objectives. In the study, the degrees of influence of the factors influencing university employees' intents to use social media will be determined.

#### LITERATURE REVIEW

#### **Social Media**

The promotion of social networking sites, e.g. Facebook, Tik-tok, and Instagram, attract millions of users. A lot of users combine such websites with their daily life (Fu & Cook, 2021). Although the key technology among such social networking sites are about the same, the cyberculture is diversified. Such diverse cyberculture mainly maintains users' common interests; some websites would cater different audience groups, including language, race, gender, and religion (Habes et al., 2020).

The constant development of social media allows users sharing information, ideas, pictures, and other contents (Oh & Syn, 2015). Social media therefore are called Web 2.0 or social network. Social media and the rich open resources allow knowledge acquisition occurring anytime anywhere (Juergensen et al., 2020). Such an informal learning model becomes popular and appears positive effects on learners. As a result, social media could be safely used in education environment; such a finding is exciting for educators and researchers (Syriopoulos, 2020).

Due to the advance of time, social media are creative forms of education that enable business personnel to acquire information whenever and wherever they want (Sanjeev & Natrajan, 2021). Besides, the progress of data transmission speed allows university employees, who are used to using social media, more rapidly acquire new information than those not using them (Arafah & Hasyim, 2022). People could develop innovative service, deliver information, and educate the community to build a healthy society through social media (Jacobson et al., 2020). The educational promotion of social media should consider faster information provision that social media like Facebook and Twitter are frequently applied to information communication between education professionals and university employees (Habes et al., 2020).

#### **Technology Acceptance Model**

TAM, a behavior intention model designed by Davis in 1989, aims to discuss users' acceptance of new technology (Davis, 1989) (Figure 1). Such a model provides a theoretical basis to find out the relations between "external variables" and "perceived usefulness", "perceived ease of use" to further affect users' "behavior intention" and eventually influence the "actual use behavior". Such a theory discusses factors of "external

variables" in users' "behavior intention" and "system usage degree" to use technology (Granić & Marangunić, 2019; Lazim et al., 2021; Miller & Khera, 2010).

After TAM is introduced, many researchers propose various research objectives, environmental applications, topics, and information systems for distinct applied research (Al-Mamary & Shamsuddin, 2015; Esen & Ozbag, 2014; Granić & Marangunić, 2019; Nugroho et al., 2021). TAM does not remain in the same place as it was in the original model; rather, it is regulated along with various research goals and contexts. TAM is consequently always progressing in some way (Abbad, 2021; Alam et al., 2020). Davis (1989) proposed external variables as important factors in "perceived usefulness" and "perceived ease of use" was determined by external variables, allowing users understanding the usefulness and the ease of use of such technology.

The factors contained the evaluation of time, money, and energy for users accepting and using new technologies (Sukendro et al., 2020). According to TAM, people will begin to accept and use technology primarily because they believe it will help them do better work (perceived usefulness) and is easy to master (perceived ease of use); additionally, "perceived ease of use" will influence "perceived usefulness" to further influence "behavior intention" and "actual use behavior" (Granić & Marangunić, 2019; Na et al., 2022; Rad et al., 2022; Sukendro et al., 2020).

TAM is comprised of four primary variables: perceived utility, perceived ease of use, action intention, and actual use behavior. Perceived ease of use refers to users' perceptions that technology is simple to use, whereas perceived utility refers to users' perceptions that technology is beneficial to their job. In this scenario, a user's attitude toward the usage of new technology would be favorable if they viewed it as beneficial. Behavior intention refers to a user's purpose to utilize technology; a user with a greater behavior intention would demonstrate a greater propensity to use technology. Perceived usefulness might be both an independent and a dependent variable, since it was predicted by perceived usability and could also predict behavior intention (Davis, 1989; Granić & Marangunić, 2019; Lazim et al., 2021; Sukendro et al., 2020).

Consequently, the correlations among "organizational support", "colleague support", "self-efficacy", "technology capability", "perceived usefulness", "perceived ease of use", and "behavior intention" of university employees are accepted as variables in this study.

# **Research Hypothesis**

The phrase "organizational support" derives from the study of organizational psychology and refers to the extent to which employees believe their supervisors care about them and value their contributions to the business (Conway, 2015). Organizational support related to workers' perceptions of the organization's wellbeing, care, and validation (Naujokaitiene et al., 2015). Abbad (2021) proposed positive effects of organizational support on users' perceived usefulness of technology use.

Environment circumstances would influence users' intentions to utilize technology; a user seeing sound technology use-related technology and equipment given in the workplace would lessen the perception of technology use-related effort (Miller & Khera, 2010; Na et al., 2022).

An organization might give management aid in the utilization of information systems and provide specialized guidance to users with varying technological skills (Mohamad et al., 2020). This mentorship for management included encouragement from the organization's upper level, organizational commitment, help from the information center, and resource allocation. This managerial mentorship would appear to have a beneficial impact on the perceived ease of use and perceived usefulness among users (Lee et al., 2010).

Colleague support is one of the main resources that employees use to overcome the problem situations they encounter and to provide new learning support (Wolgast & Fischer, 2017). Communication and collaboration with peers play an important role in daily tasks. When it comes to training given in business environments, this communication and cooperation becomes important. Formal and informal peer learning plays an active role for technology-enriched learning environments (Naujokaitiene et al., 2015). According to Jungert et al. (2018), employees' perceived colleague support could enhance the adaptation to dealing with new affairs and anti-stress when encountering difficult challenges. As a consequence, colleague support was defined as the degree of employees perceiving colleague support and assistance in the business or work.

Self-efficacy is the belief that a person has in their own ability to use technology well (Deng et al., 2004). It's the idea that someone can complete a task or get what they want with the help of technology (Achterkamp et al., 2015). Lestari and Tiarawati (2020) thought that many things affect how people act, and self-efficacy was one of the things that drove people to do certain things and got them done. Research has shown that people who have a high level of self-efficacy are more likely to use technology and to use it better. They do this because they think they have the skills and knowledge to do so (Awodoyin et al., 2017; Roney et al., 2017).

TAM is built around the idea of self-efficacy. TAM is a theory that tries to explain why and how people accept and use technology. TAM says that a person's self-efficacy is a key factor in how well they accept and use technology (Alharbi & Drew, 2019). Self-efficacy is also linked to how easy and useful people think technology is to use. Self-efficacy is more likely to be high in people who think that technology is easy to use and can help them reach their goals (Usman et al., 2021). In conclusion, self-efficacy is a crucial component in TAM that refers to an individual's belief in their capacity to utilize technology effectively, which determines their desire to use it as well as their perceptions of the technology's ease of use and utility. This study conducted by Na et al. (2022) examined end-user perceived of usefulness and perceived ease of use of Albased technology in construction enterprises, which affects implementation speed and efficiency. Structure equation modeling confirmed end-user intention analysis using TAM and technology organization environment framework. According to research, technical features associated with the external variable and personality positively influenced perceived of usefulness and perceived ease of use. However, external contextual influences like peer recommendations disrupted end-user technological uptake. Organizational elements including firm support and involvement were crucial to implementing and using Al-based technologies.

Technology capability, defined as the extent to which an individual is willing to try new technologies, and technological capability shown positive and direct effects on users' perceptions of the ease of using new technologies (Doulani, 2019; Mohamad et al., 2021). Acceptance of technology depended on individual job functions, positions, and tenure; also, prior experience with various computer systems influenced attitudes about the usage of information technology (Dai et al., 2020; Rad et al., 2022). Technology capability would positively and remarkably affect the "perceived ease of use" (Brown, 2002; Daryanto et al., 2019).

According to above literature review, the following hypotheses are proposed in this study:

- 1. **H1:** Organization support has an effect on perceived usefulness of social media.
- 2. **H2:** Organization support has an effect on perceived ease of use of social media.
- 3. **H3:** Colleague support has an effect on perceived usefulness of social media.
- 4. **H4:** Colleague support has an effect on perceived ease of use of social media.
- 5. **H5:** Self-efficacy has an effect on perceived usefulness of social media.
- 6. **H6:** Self-efficacy has an effect on perceived ease of use of social media.
- 7. **H7:** Technology capability has an effect on perceived usefulness of social media.
- 8. **H8:** Technology capability has an effect on perceived ease of use of social media.
- 9. **H9:** Perceived usefulness has an effect on behavior intension of social media.
- 10. H10: Perceived ease of use has an effect on behavior intension of social media.

#### **METHOD**

## **Conceptual Framework of This Study**

Using TAM as the research framework, "perceived usefulness" and "perceived ease of use" would affect university employees' "behavior intention" of e-learning. According to the literature review, the most beneficial effects among "organizational support", "colleague support", "self-efficacy", and "technology capability" are proposed as **Figure 2**.

#### **Data Collection Tools**

The operational definitions of variables in the research framework are shown as followings.

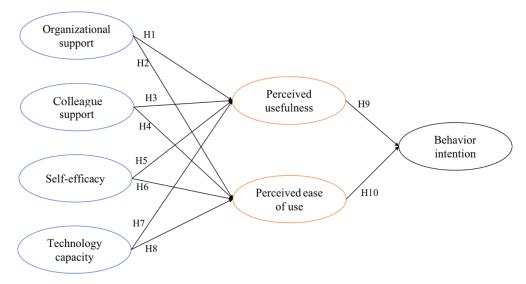


Figure 2. Hypothetical model (Source: Authors' own elaboration)

## Organizational support

Perceived organizational support is the dimension for this study. The scale, "survey of perceived organizational support (SPOS)", proposed by Eisenberger et al. (2020) is used. The subjects are requested to evaluate the degree of received organizational support.

## Colleague support

According to the items for colleague support proposed by Ninh Nguyen and Dung Tran (2021), the subjects are requested to evaluate the degree of perceived usefulness of the use of digital technology.

## Self-efficacy

The perceived self-efficacy scale in this study is referred to Awodoyin et al. (2017). The higher comprehension of new technology and cooperation with work could better experience the effect of new technology on work and smoothly integrate new technology into work.

#### Technology capability

The questions is adopted from study (Mohamad et al., 2020), individual information technology capability shows significant moderation effects on personal performance. The subjects are requested to evaluate the technology capability of the use of digital technology.

# **Perceived usefulness**

The scale items were obtained from the items obtained as a result of the literature review (Al-Mamary & Shamsuddin, 2015; Sukendro et al., 2020).

#### Perceived ease of use

Items related to perceived ease of use were obtained by examining related study items (Fardinal, 2020; Rad et al., 2022).

#### **Behavior** intention

According to the items for perceived ease of use proposed by Welch et al. (2020), the subjects are requested to evaluate the perceived ease of use of digital technology.

# **Data Analysis**

Employees of university in Bangkok, Thailand, as the research samples, are randomly distributed 280 copies of questionnaire. After removing invalid and incomplete ones, total 247 valid copies are retrieved, with

Table 1. Factors loading, Cronbach's alpha, rhoA, rhoC, & AVE for each dimension

Scale dimension	Items	Factor loadings	Cronbach's alpha	rhoA	rhoC	AVE
Organizational support	OS_1	0.833	0.857	0.871	0.897	0.635
	OS_2	0.768				
	OS_3	0.741				
	OS_4	0.812				
	OS_5	0.826				
Colleague support	CS_1	0.943	0.653	0.869	0.839	0.725
	CS_2	0.749				
Self-efficacy	SE_1	0.895	0.931	0.932	0.944	0.707
	SE_2	0.800				
	SE_4	0.855				
	SE_5	0.798				
	SE_6	0.848				
	SE_7	0.812				
	SE_8	0.874				
Technology capability	TC_1	0.795	0.805	0.913	0.882	0.715
	TC_2	0.810				
	TC_3	0.934				
Perceived usefulness	PU_1	0.922	0.901	0.919	0.926	0.714
	PU_2	0.851				
	PU_3	0.794				
	PU_4	0.869				
	PU_5	0.781				
Perceived ease of use	PEU_1	0.805	0.871	0.873	0.912	0.723
	PEU_3	0.869				
	PEU_4	0.835				
	PEU_5	0.889				
Behavior intention	BI_1	0.817	0.888	0.901	0.916	0.687
	BI_2	0.812				
	BI_3	0.852				
	BI_4	0.828				
	BI_5	0.835				

the retrieval rate 88%. The Shapiro-Wilk test was then used to determine whether the measures had a normal distribution. Since p<0.05 was calculated in the measurements, it was decided that they did not have a normal distribution. Partial least squares structural equation modeling (PLS-SEM) was used for inferential statistics. RSudio software and SEMinR package were used.

#### **FINDINGS**

In the study, firstly, the findings regarding the reliability and validity of the scales and related items will be shared. Later, the findings related to the models and hypotheses will be presented.

Factor loadings are expected to be .708 and above (Hair et al., 2021). The analyzes were repeated by removing 3 items (CS\_3, SE\_3 and PEU\_2) that did not meet this requirement. In the last model, all items are above the specified level. For internal consistency reliability, rhoC, rhoA, and Cronbach's alpha values were examined. These values are 0.70 and 0.90 range from "satisfactory to good". Also, reliability values between 0.60 and 0.70 are considered "acceptable". In addition, it should not be above 0.95. The rhoC value in the study ranges from .839 to .944. The rhoA values range from .869 to .932. Cronbach's alpha is between .653 and .931. Considering these values, it is possible to conclude that the reliability levels of the scales are acceptable. The average variance extracted (AVE) for all indicators for each concept is the statistic used to evaluate convergent validity. AVE is defined as the grand mean value of the squared loadings of the construct's indicators (i.e., the sum of the squared loadings divided by the number of indicators). Therefore, AVE is identical to a construct's frequency. Minimum acceptable AVE is 0.50; an AVE of 0.50 or above shows that the construct explains at least 50 percent of the variation of the indicators that comprise the construct (Hair et al., 2022). In the study, AVE values were calculated as min .635. As a result, it can be stated that all dimensions have convergent validity (Table 1).

Table 2. Fornel-Larcker cross loading

Table 2. Former Earcher cross loading								
	OS	CS	S-E	TC	PU	PEU	BI	
OS	0.797							
CS	0.073	0.851						
S-E	0.658	-0.015	0.841					
TC	0.773	0.053	0.745	0.846				
PU	-0.102	-0.097	-0.083	-0.050	0.845			
PEU	0.433	0.008	0.535	0.405	-0.043	0.850		
BI	-0.250	-0.091	0.295	0.271	0.300	-0.150	0.829	

Note. OS: Organizational support; CS: Colleague support; S-E: Self-efficacy; TC: Technology capability; PU: Perceived usefulness; PEU: Perceived ease of use; & BI: Behavior intention

Table 3. Heterotrait-monotrait ratio

	OS	CS	S-E	TC	PU	PEU
CS	0.091					
S-E	0.732	0.044				
TC	0.895	0.093	0.833			
PU	0.114	0.108	0.098	0.052		
PEU	0.489	0.052	0.588	0.453	0.068	
BI	0.288	0.104	0.324	0.314	0.052	0.164

Note. OS: Organizational support; CS: Colleague support; S-E: Self-efficacy; TC: Technology capability; PU: Perceived usefulness; PEU: Perceived ease of use; & Bl: Behavior intention

Table 4. The variance inflation factor

	OS	CS	S-E	TC	PU	PEU
PU	2.598	1.014	2.353	3.296		
PEU	2.598	1.014	2.355	3.347		
BI					1.002	1.002

Note. OS: Organizational support; CS: Colleague support; S-E: Self-efficacy; TC: Technology capability; PU: Perceived usefulness; PEU: Perceived ease of use; & BI: Behavior intention

Discriminant validity evaluates the extent to which a construct is empirically distinguishable from other constructs in the structural model. The common variance across all model constructs should not be greater than their AVEs (Fornell & Larcker, 1981).

To measure discriminant validity, the heterotrait-monotrait ratio (HTMT) of correlations (Henseler et al., 2015). HTMT is the mean of the indicator correlations across constructs (i.e., the heterotrait-heteromethod correlations) compared to the (geometric) mean of the average correlations for indicators measuring the same construct (i.e., the monotrait-heteromethod correlations).

There are discriminant validity issues when HTMT scores are high (>.90). When **Table 2** and **Table 3** are analyzed together, it is possible to conclude that discriminant validity exists.

## **Formative Measurement**

The variance inflation factor (VIF) is the primary criterion utilized in the industry for evaluating indicator collinearity. If VIF values are high, then the level of collinearity will be high as well. Collinearity issues are indicated when VIF score is more than five (Hair et al., 2022). Since VIF values obtained in the study are less than five, it can be stated that there is no collinearity problem (Table 4).

#### **Model's Explanatory Power**

The R-square is a measure of the model's explanatory ability and also known as in-sample predictive power (Shmueli & Koppius, 2011). It is a representation of the variation that is explained in each of the endogenous components (Rigdon, 2012). R<sup>2</sup> values of 0.75, 0.50, and 0.25, respectively, might be considered considerable, moderate, and weak, respectively, in many different fields of social science. This is a broad guideline that can be followed (Hair, Ringle, & Sarstedt, 2011). According to R<sup>2</sup> results, it can be evaluated as a weak model. The model of perceived ease of use is classified as weak. Other models are not acceptable level (Table 5).

Table 5. R<sup>2</sup> values of the model

	Perceived usefulness	Perceived ease of use	Behavior intention
R-square	0.0239	0.302	0.023
Adjusted R-square	0.0077	0.290	0.015

**Table 6.** The results of effect size (f<sup>2</sup>)

	Perceived usefulness	Perceived ease of use	Behavior intention
Organizational support	0.006	0.022	0.000
Colleague support	0.010	0.000	0.000
Self-efficacy	0.003	0.145	0.000
Technology capability	0.004	0.006	0.000
Perceived usefulness	0.000	0.000	0.000
Perceived ease of use	0.000	0.000	0.012

Table 7. Path coefficients

Paths	Е	BM	BSD	ST ·	Cl	
Pauls	E			31	2.50%	97.50%
Organizational support -> Perceived usefulness	-0.123	-0.128	0.104	-1.187	-0.313	0.061
Organizational support -> Perceived ease of use	0.226	0.251	0.086	2.631	0.096	0.432
Colleague support -> Perceived usefulness	-0.094	-0.098	0.074	-1.272	-0.202	0.087
Colleague support -> Perceived ease of use	0.001	-0.006	0.069	0.010	-0.158	0.117
Self-efficacy -> Perceived usefulness	-0.048	-0.037	0.117	-0.409	-0.254	0.179
Self-efficacy -> Perceived ease of use	0.489	0.478	0.093	5.246	0.306	0.633
Technology capability -> Perceived usefulness	0.073	0.062	0.113	0.650	-0.181	0.324
Technology capability -> Perceived ease of use	-0.130	-0.151	0.088	-1.488	-0.315	-0.008
Perceived usefulness -> Behavior intention	-0.007	-0.020	0.091	-0.080	-0.162	0.180
Perceived ease of use -> Behavior intention	0.145	0.139	0.080	1.809	-0.076	0.275

Note. E: Estimated; BM: Bootstrap mean; BSD: Bootstrap standard deviation; ST: Statistical t; & CI: Confidence interval

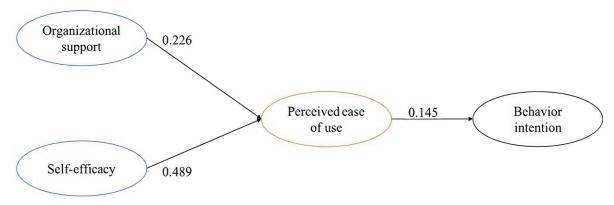


Figure 3. Final model (Source: Authors' own elaboration)

This measure is known as the f<sup>2</sup> effect size, and its value is comparable to that of the route coefficients. To be more specific, the rank order of the relevance of the predictor constructs in explaining a dependent construct in the structural model is frequently the same when comparing the size of the path coefficients and the f<sup>2</sup> effect sizes. This is because path coefficients and f<sup>2</sup> effect sizes are both measures of the strength of the relationship between two variables (Hair et al., 2022). According to the effect size, colleague support is most effective factor on perceived usefulness while self-efficacy is most effective factor on perceived ease of use. Also, the perceived ease of use is only factor affecting on behavior intension (**Table 6**).

#### **Significance of Path Coefficient**

If the t-value is over 1.96 for %5 confidence interval, the path is acceptable level. According to path analysis results (**Table 7**), the effect of organizational support on perceived ease of use is approved. The effect of self-efficacy on perceived ease of use is also approved and finally the effect of the perceived ease of use on the behavior intention is approved. Other paths are not acceptable level (**Figure 3**).

# **DISCUSSION**

The importance of organizational support cannot be overstated when attempting to successfully integrate technology-enhanced learning into employee training programs (Naujokaitiene et al., 2015). The term "organizational support" comes from the field of organizational psychology and describes the degree to which workers think that their employers care about them and respect the contributions they make to the company (Conway, 2015). It plays a pivotal role as a precursor to a variety of employee outcomes, including work satisfaction, organizational commitment, and desire to leave the company (DeConinck et al., 2017; Nazir & Islam, 2017; Panaccio & Vandenberghe, 2009; Wang & Rashid, 2022). Self-report surveys are the most common method for calculating POS (Chen et al., 2022). Organizational support has a positive effect on affective outcomes and employee performance (Aldabbas et al., 2021; Panaccio & Vandenberghe, 2009). The results point out that organizational support is a main factor for perceived usefulness and perceived ease of use (Esen & Ozbag, 2014; Feriady et al., 2020; Lee et al., 2010; Nugroho et al., 2021). In this study, the result showed that while organizational support has no effect on perceived usefulness, organizational support has a positive effect on perceived ease of use. The opinions of the participants regarding the use of social media may have been effective in obtaining these results. Although they think that social media tools are easy to use, they may think that social media are not useful enough in work environment.

Employees do not work or study in isolation; innovation, such as the incorporation of technology-enhanced learning, includes the entire workforce (Naujokaitiene et al., 2015). Peer support in the learning process is important for all age groups. Colleague support is a factor that facilitates the process in order to overcome the difficulties encountered in business life (Jungert et al., 2018; Ninh Nguyen & Dung Tran, 2021; Wolgast & Fischer, 2017). Although it was said that having support from colleagues had a favorable influence on perceived usefulness and perceived ease of use as a result of a studies (Naujokaitiene et al., 2015; Ninh Nguyen & Dung Tran, 2021), the findings from this study indicate that having support from colleagues had no effect on either perceived usefulness or perceived ease of use. These results may have been obtained because the participants could not find face-to-face support from their colleagues because the study data was related to the pandemic process.

The confidence a person has in their own abilities to effectively use technology is known as self-efficacy (Deng et al., 2004). According to research, persons with a high sense of self-efficacy are more inclined to utilize technology and to do so more effectively. They act in this manner because they believe they are capable of doing so (Awodoyin et al., 2017; Roney et al., 2017). In many studies, self-efficacy has a positive effect on perceived usefulness (Alharbi & Drew, 2019; Usman et al., 2021) and perceived ease of use (Alharbi & Drew, 2019; Brown, 2002; Miller & Khera, 2010; Usman et al., 2021). According to findings, while the self-efficacy has not effect on perceived usefulness, it has positive effect on perceived ease of use.

Both technical capability, which may be loosely described as the amount to which an individual is ready to explore new technologies, and technological capability have been proven to have positive and direct effects on users' judgments of the ease of using new technologies (Doulani, 2019; Mohamad et al., 2021). Perceived ease of usage would be significantly influenced by technological capacity (Brown, 2002; Daryanto et al., 2019). However, in the findings, it is stated that the technology capacity has not effect on perceived usefulness and perceived ease of use.

Perceived usefulness refers to individuals' propensity to use or avoid an application based on their belief that it would improve their work performance (Davis, 1989). It can be observed that if individuals have faith in their decision-making process and the technology that offers benefits to the system and is beneficial to them, they will employ it (Usman et al., 2021). The findings stated that the perceived usefulness does not affect on the behavior intention. However, there are studies (Erasmus et al., 2015; Nugroho et al., 2021; Usman et al., 2021) indicating that perceived usefulness has a positive effect on behavioral intention. Perceived ease of use refers to the extent to which a person feels that employing a specific technology would be effortless (Davis, 1989). The perceived ease of use, attitude toward utilizing, and behavioral intention to use are the key functions of TAM, whereas external factors and actual system usage are just inputs and outputs, respectively (Erasmus et al., 2015). In the literature (Erasmus et al., 2015; Lee et al., 2010; Nugroho et al., 2021; Usman et al., 2021) and the findings of this study, it is supported the hypothesis that perceived ease of use has a positive effect on behavior intention.

#### CONCLUSION

TAM will be utilized to assess the issue of employees utilizing social networking technologies for business objectives. In the study, the degrees of influence of the factors influencing university employees' intentions to use social media will be determined. The correlations among "organizational support", "colleague support", "self-efficacy", "technology capability", "perceived usefulness", "perceived ease of use", and "behavior intention" of university employees are accepted as variables in this study. A total of 247 valid copies are retrieved. PLS-SEM was used for inferential statistics. According to the findings, colleague support and technology capability have no effect on perceived ease of use and perceived usefulness. However, organizational support and self-efficacy have a positive effect on perceived ease of use, but they have no effect on perceived usefulness. Also, while perceived usefulness has no effect on behavioral intention, perceived ease of use has a positive effect on behavior intention.

#### **Suggestion**

According to the research results, the following suggestions are classified. The university should provide relevant benefits to encourage employees' use of social media so that the university can positively support and appreciate employees' performance while also making employees feel concerned and validated. When university employees perceive good equipment, adequate information, and perfect system planning provided by the school, they will promote perceived usefulness and perceived ease of use, as well as present the behavior intention to practice e-learning. An organization should provide relevant courses to enhance university employees' self-efficacy. University employees learning new knowledge and skills through education and training to enhance their self-efficacy and increase their self-confidence would demonstrate higher mastery and comprehension of information technology. University employees could therefore realize the effect of applying information technology to teaching and would feel that teaching with the use of technology made it easier to better apply technology to teaching. Future researchers can test new models by changing external variables such as technical aptitude and technology usage time.

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#### REFERENCES

- Abbad, M. M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and Information Technologies*, *26*(6), 7205-7224. https://doi.org/10.1007/s10639-021-10573-5
- Achterkamp, R., Hermens, H. J., & Vollenbroek-Hutten, M. M. R. (2015). The influence of success experience on self-efficacy when providing feedback through technology. *Computers in Human Behavior*, *52*, 419-423. https://doi.org/10.1016/j.chb.2015.06.029
- Al Asyari, M. K. H., & Rahman, M. (2020). Technology: Technological advances and changes in human lifestyles in a socio-cultural perspective. In *Proceedings of the International Conference on Science and Engineering* (pp. 721-730). https://doi.org/10.14421/icse.v3.592
- Alam, M. Z., Hoque, M. R., Hu, W., & Barua, Z. (2020). Factors influencing the adoption of mHealth services in a developing country: A patient-centric study. *International Journal of Information Management, 50*, 128-143. https://doi.org/10.1016/j.ijinfomgt.2019.04.016

- Aldabbas, H., Pinnington, A., & Lahrech, A. (2021). The influence of perceived organizational support on employee creativity: The mediating role of work engagement. *Current Psychology*. https://doi.org/10.1007/s12144-021-01992-1
- Alharbi, S., & Drew, S. (2019). The role of self-efficacy in technology acceptance. K. Arai, R. Bhatia, & S. Kapoor (Eds.), *Advances in intelligent systems and computing*. Springer. https://doi.org/10.1007/978-3-030-02686-885
- Al-Mamary, Y. H., & Shamsuddin, A. (2015). The impact of top management support, training, and perceived usefulness on technology acceptance. *Mediterranean Journal of Social Sciences*, *6*(6), 11-17. https://doi.org/10.5901/mjss.2015.v6n6s4p11
- Arafah, B., & Hasyim, M. (2022). Social media as a gateway to Information: Digital literacy on current issues in social media. *Webology*, *19*(1), 2491-2503. https://doi.org/10.14704/web/v19i1/web19167
- Awodoyin, A., Adetoro, N., & Osisanwo, T. (2017). Self-efficacy and new technology adoption and use among trainee mid-wives in Ijebu-Ode, Nigeria. *Education and Information Technologies, 22*(4), 1911-1925. https://doi.org/10.1007/s10639-016-9524-7
- Brown, I. T. J. (2002). Individual and technological factors affecting perceived ease of use of web-based learning technologies in a developing country. *The Electronic Journal of Information Systems in Developing Countries,* 9(1), 1-15. https://doi.org/10.1002/j.1681-4835.2002.tb00055.x
- Conway, E. (2015). Perceived organizational support. In *Wiley encyclopedia of management* (pp. 1-2). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118785317.weom110285
- Dai, H. M., Teo, T., & Rappa, N. A. (2020). Understanding continuance intention among MOOC participants: The role of habit and MOOC performance. *Computers in Human Behavior*, *112*, 106455. https://doi.org/10.1016/j.chb.2020.106455
- Daryanto, D., Rina, F., Massus, S., & Siswantari, S. (2019). Effect of perceived ease of use of ICT on stakeholder service quality in vocational high school in West Java. *Journal of Physics: Conference Series, 1402*, 077079. https://doi.org/10.1088/1742-6596/1402/7/077079
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems, 13*(3), 319-339. https://doi.org/10.2307/249008
- DeConinck, J. B., Moss, H. K., & DeConinck, M. B. (2017). The relationship between servant leadership, perceived organizational support, performance, and turnover among business to business salespeople. *Archives of Business Research*, *5*(10). https://doi.org/10.14738/abr.510.3730
- Deng, X., Doll, W. J., & Truong, D. (2004). Computer self-efficacy in an ongoing use context. *Behavior and Information Technology*, *23*(6), 395-412. https://doi.org/10.1080/01449290410001723454
- Doulani, A. (2019). An assessment of effective factors in technology acceptance model: A meta- analysis study. *Journal of Scientometric Research*, 7(3), 153-166. https://doi.org/10.5530/JSCIRES.7.3.26
- Dunatchik, A., Gerson, K., Glass, J., Jacobs, J. A., & Stritzel, H. (2021). Gender, parenting, and the rise of remote work during the pandemic: Implications for domestic inequality in the United States. *Gender and Society,* 35(2), 194-205. https://doi.org/10.1177/08912432211001301
- Eisenberger, R., Rhoades Shanock, L., & Wen, X. (2020). Perceived organizational support: Why caring about employees counts. *Annual Review of Organizational Psychology and Organizational Behavior, 7*, 101-124. https://doi.org/10.1146/annurev-orgpsych-012119-044917
- Erasmus, E., Rothmann, S., & van Eeden, C. (2015). A structural model of technology acceptance. *SA Journal of Industrial Psychology*, *41*(1), 1-12. https://doi.org/10.4102/sajip.v41i1.1222
- Esen, M., & Ozbag, G. K. (2014). An investigation of the effects of organizational readiness on technology acceptance in e-HRM applications. *International Journal of Human Resource Studies*, *4*(1), 232. https://doi.org/10.5296/ijhrs.v4i1.5643
- Fardinal, W. K. (2020). The effect of perceived ease of use on the quality of accounting information systems and its impact on the quality of accounting information. *Saudi Journal of Business and Management Studies*, *5*(12), 571-577. https://doi.org/10.36348/sjbms.2020.v05i12.004
- Feriady, M., Nurkhin, A., Mahmud, N., Setiani, R., & Astuti, D. P. (2020). Influence of organizational support and digital literacy on lecturer acceptance of e-learning in Indonesia: A modification of technology acceptance model. *International Journal of Scientific and Technology Research*, *9*(1), 2229-2233.

- Fibrianto, A. S., & Yuniar, A. D. (2019). Technological development and its impact on community social behavior. In *Proceedings of the 1st International Conference on Social Knowledge Sciences and Education* (pp. 210-213). https://doi.org/10.2991/icskse-18.2019.42
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables. *Journal of Marketing Research, XVIII*(February), 39-50. https://doi.org/10.1177/002224378101800104
- Fu, J., & Cook, J. (2021). Everyday social media use of young Australian adults. *Journal of Youth Studies, 24*(9), 1234-1250. https://doi.org/10.1080/13676261.2020.1828843
- Granić, A., & Marangunić, N. (2019). Technology acceptance model in educational context: A systematic literature review. *British Journal of Educational Technology, 50*(5), 2572-2593. https://doi.org/10.1111/bjet. 12864
- Gruszczynski, L. (2020). The COVID-19 pandemic and international trade: Temporary turbulence or paradigm shift? *European Journal of Risk Regulation, 11*(2), 337-342. https://doi.org/10.1017/err.2020.29
- Habes, M., Alghizzawi, M., Ali, S., SalihAlnaser, A., & Salloum, S. A. (2020). The relation among marketing ads, via digital media and mitigate (COVID-19) pandemic in Jordan. *International Journal of Advanced Science and Technology*, 7(29), 12326-12348.
- Hair, J. F., Hult, T., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE. https://doi.org/10.1007/978-3-030-80519-7
- Hair, Joseph F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook. Springer. https://doi.org/10.1007/978-3-030-80519-7
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115-135. https://doi.org/10.1007/s11747-014-0403-8
- Jacobson, J., Gruzd, A., & Hernández-García, Á. (2020). Social media marketing: Who is watching the watchers? *Journal of Retailing and Consumer Services*, *53*, 101774. https://doi.org/10.1016/j.jretconser.2019.03.001
- Juergensen, J., Guimón, J., & Narula, R. (2020). European SMEs amidst the COVID-19 crisis: Assessing impact and policy responses. *Journal of Industrial and Business Economics*, 47(3), 499-510. https://doi.org/10.1007/s40812-020-00169-4
- Jungert, T., Van den Broeck, A., Schreurs, B., & Osterman, U. (2018). How colleagues can support each other's needs and motivation: An intervention on employee work motivation. *Applied Psychology, 67*(1), 3-29. https://doi.org/10.1111/apps.12110
- Korcsmáros, E., & Csinger, B. (2022). Sustainable competitiveness in the case of SMEs—Opportunities provided by social media in an international comparison. *Sustainability (Switzerland), 14*(19), 12505. https://doi.org/10.3390/su141912505
- Lazim, C. S. L. M., Ismail, N. D. B., & Tazilah, M. D. A. K. (2021). Application of technology acceptance model (TAM) towards online learning during COVID-19 pandemic: Accounting students perspective. *International Journal of Business, Economics and Law, 24*(1), 1.
- Lee, D., Lee, S. M., Olson, D. L., & Chung, S. H. (2010). The effect of organizational support on ERP implementation. *Industrial Management and Data Systems, 110*(2), 269-283. https://doi.org/10.1108/02635571011020340
- Lestari, D. A., & Tiarawati, M. (2020). The effect of hedonic motivation and consumer attitudes towards purchase decision on K-pop CD albums (study on KPOPSURABAYA community). *The Spirit of Society Journal*, *3*(2), 1-7. https://doi.org/10.29138/scj.v3i2.1084
- Miller, J., & Khera, O. (2010). Digital library adoption and the technology acceptance model: A cross-country analysis. *The Electronic Journal of Information Systems in Developing Countries, 40*(1), 1-19. https://doi.org/10.1002/j.1681-4835.2010.tb00288.x
- Mohamad, M. A., Radzi, S. M., & Hanafiah, M. H. (2021). Understanding tourist mobile hotel booking behavior: Incorporating perceived enjoyment and perceived price value in the modified technology acceptance model. *Tourism and Management Studies, 17*(1), 19-30. https://doi.org/10.18089/TMS.2021.170102
- Mohamad, N. I., Ismail, A., & Nor, A. M. (2020). Effect of managers support in technology based training on training transfer. *International Journal on Emerging Technologies, 11*(2), 985-990.

- Na, S., Heo, S., Han, S., Shin, Y., & Roh, Y. (2022). Acceptance model of artificial intelligence (Al)-based technologies in construction firms: Applying the technology acceptance model (TAM) in combination with the technology-organization-environment (TOE) framework. *Buildings*, *12*(2), 90. https://doi.org/10.3390/buildings12020090
- Naujokaitiene, J., Tereseviciene, M., & Zydziunaite, V. (2015). Organizational support for employee engagement in technology-enhanced learning. *SAGE Open, 5*(4). https://doi.org/10.1177/215824401560 7585
- Nazir, O., & Islam, J. U. (2017). Enhancing organizational commitment and employee performance through employee engagement: An empirical check. *South Asian Journal of Business Studies, 6*(1), 98-114. https://doi.org/10.1108/SAJBS-04-2016-0036
- Newman, S. A., Ford, R. C., & Marshall, G. W. (2020). Virtual team leader communication: Employee perception and organizational reality. *International Journal of Business Communication*, *57*(4), 452-473. https://doi.org/10.1177/2329488419829895
- Ninh Nguyen, H., & Dung Tran, M. (2021). The effect of perceived organizational support on employee engagement during the COVID-19 pandemic: An empirical study in Vietnam. *Journal of Asian Finance, 8*(6), 415-426. https://doi.org/10.13106/jafeb.2021.vol8.no6.0415
- Nugroho, H. S. W., Notobroto, H. B., & Rosyanti, L. (2021). Acceptance model of a mandatory health information system in Indonesia. *Healthcare Informatics Research*, 27(2), 127-136. https://doi.org/10.4258/HIR.2021.27.2.127
- Oh, S., & Syn, S. Y. (2015). Motivations for sharing information and social support in social media: A comparative analysis of Facebook, Twitter, Delicious, YouTube, and Flickr. *Journal of the Association for Information Science and Technology, 66*(10), 2045-2060. https://doi.org/10.1002/asi.23320
- Panaccio, A., & Vandenberghe, C. (2009). Perceived organizational support, organizational commitment and psychological well-being: A longitudinal study. *Journal of Vocational Behavior*, 75(2), 224-236. https://doi.org/10.1016/j.jvb.2009.06.002
- Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: Implications and policy recommendations. *General Psychiatry*, 33(2), 1-4. https://doi.org/10.1136/gpsych-2020-100213
- Rad, D., Egerau, A., Roman, A., Dughi, T., Balas, E., Maier, R., Ignat, S., & Rad, G. (2022). A preliminary investigation of the technology acceptance model (TAM) in early childhood education and care. *Broad Research in Artificial Intelligence and Neuroscience, 13*(1), 518-533. https://doi.org/10.18662/brain/13.1/297
- Radulovic, J., Deretic, N., Vujanovic, N., Matic, R., & Djurica, N. (2022). Challenges and perspectives for remote work. *41st International Conference on Organizational Science Development*, *5*(3), 841-853. https://doi.org/10.18690/um.fov.3.2022.61
- Roney, L. N., Westrick, S. J., Acri, M. C., Aronson, B. S., & Rebeschi, L. M. (2017). Technology use and technological self-efficacy among undergraduate nursing faculty. *Nursing Education Perspectives, 38*(3), 113-118. https://doi.org/10.1097/01.NEP.0000000000000141
- Sanjeev, R., & Natrajan, N. S. (2021). A systematic review on education 4.0 using social media platform. Independent Journal of Management & Production, 12(7), 1901-1918. https://doi.org/10.14807/ijmp.v12i7. 1438
- Sukendro, S., Habibi, A., Khaeruddin, K., Indrayana, B., Syahruddin, S., Makadada, F. A., & Hakim, H. (2020). Using an extended technology acceptance model to understand students' use of e-learning during COVID-19: Indonesian sport science education context. *Heliyon*, *6*(11), e05410. https://doi.org/10.1016/j.heliyon.2020.e05410
- Syriopoulos, K. (2020). The impact of COVID-19 on entrepreneurship and SMES. *Journal of International Academy for Case Studies*, *26*(2), 5822.
- Tsolou, O., Babalis, T., & Tsoli, K. (2021). The impact of COVID-19 pandemic on education: Social exclusion and dropping out of school. *Creative Education*, *12*(03), 529-544. https://doi.org/10.4236/ce.2021.123036
- Usman, O., Septianti, A., Susita, D., & Marsofiyati. (2021). The effect of computer self-efficacy and subjective norm on the perceived usefulness, perceived ease of use and behavioral intention to use technology. *Journal of Southeast Asian Research*, 2020(2020), 753259. https://doi.org/10.5171/2020.753259

- Venkateswaran, R., Ugalde, B., & T., R. (2019). Impact of social media application in business organizations. *International Journal of Computer Applications, 178*(30), 5-10. https://doi.org/10.5120/ijca2019919126
- Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology*, 70(1), 16-59. https://doi.org/10.1111/apps. 12290
- Wang, G. X., & Rashid, A. M. (2022). Job satisfaction as the mediator between a learning organization and organizational commitment among lecturers. *European Journal of Educational Research*, *11*(2), 847-858. https://doi.org/10.12973/eu-jer.11.2.847
- Welch, R., Alade, T., & Nichol, L. (2020). Using the unified theory of acceptance and use of technology (UTAUT) model to determine factors affecting mobile learning adoption in the workplace: A study of the science museum group. *IADIS International Journal on Computer Science and Information Systems, 15*(1), 85-98. https://doi.org/10.33965/ijcsis\_2020150107
- Wolgast, A., & Fischer, N. (2017). You are not alone: Colleague support and goal-oriented cooperation as resources to reduce teachers' stress. *Social Psychology of Education*, 20(1), 97-114. https://doi.org/10.1007/s11218-017-9366-1
- Yang, L., Holtz, D., Jaffe, S., Suri, S., Sinha, S., Weston, J., Joyce, C., Shah, N., Sherman, K., Hecht, B., & Teevan, J. (2022). The effects of remote work on collaboration among information workers. *Nature Human Behavior,* 6(1), 43-54. https://doi.org/10.1038/s41562-021-01196-4
- Zhou, P., Yang, X.-L, Wang, X.-G., Hu, B., Zhang, L., Zhang, W., Si, H.-R., Zhu, Y., Li, B., Huang, C.-L., Chen, H.-D., Chen, J., Luo, Y., Guo, H., Jiang, R.-D, Liu, M.-Q., Chen, Y., Shen, X.-R., Wang, X., ..., & Shi, Z.-L. (2020). A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature*, *579*(7798), 270-273. https://doi.org/10.1038/s41586-020-2012-7

