E-learning evaluation using general extended technology acceptance model approach at schools in COVID-19 pandemic

by Ngabiyanto -

E-Learning Evaluation Using General Extended Technology Acceptance Model Approach at Schools in COVID-19 Pandemic

Ngabiyanto [ID]	**Ahmad Nurkhin** [ID]	**Hasan Mukhibad** [ID]	**Harsono** [ID]
Universitas Negeri Semarang, INDONESIA	Universitas Negeri Semarang, INDONESIA	Universitas Negeri Semarang, INDONESIA	Universitas Muhammadiyah Surakarta, INDONESIA

Abstract: The purpose of this research is to provide empirical evidence of the influence of perceived usefulness, convenience, experience, gender, and age on the intention to use e-learning after the government's school closure policy due to the Coronavirus disease (COVID-19) pandemic. Our sample is junior high school teachers in Indonesia and the data are analyzed using the Structural Equation Model (SEM). We show that perceived usefulness has a positive influence on e-learning intentions. The perceived convenience is not the reason for the teachers to use e-learning because they have no other alternative in carrying out their duties apart from e-learning. Besides, we have also found that gender and experience influence e-learning intentions. The teachers with different genders and experiences continue to implement e-learning as their way of teaching during the pandemic. The younger teachers have a higher intention of using e-learning. They have adequate digital abilities and are more confident in using e-learning, so they have a great intention in implementing e-learning for the delivery of the materials. Experienced teachers will find it easier to find the use and convenience of e-learning. Apart from experience, male teachers also report that it is easier to grasp the ease of e-learning. However, older teachers show more concern about their perception of system usability as a reason for using e-learning than system convenience.

Keywords: *E-learning, perceived usefulness, COVID-19, high school teachers.*

Introduction

Republic of Indonesia Law number 20 of 2003 concerning the National Education System states that education has the function of developing capabilities and enhance the character and civilization of the nation with dignity to educate the nation's life, aiming at developing the potential of the students to become human beings who believe and fear God Almighty, have a noble character, are healthy, knowledgeable, competent, creative, independent, and become democratic and responsible citizens. Education is carried out to form the students' character and provide them with knowledge and skills. The character that is formed through this education system is following the noble values of the nation. Thus, besides developing the economic aspects and society, education is also a medium for shaping the national identity (Idris et al., 2012)

Those vital roles of education have been disrupted by the Covid-19 Pandemic. The school closure policy is aimed at reducing the spread of covid-19 (Karasan & Erdogan, 2021; Nariman, 2021). The Indonesian Government through Circular Number 4 of 2020 concerning the Implementation of Education Policies in an Emergency Situation for the Spread of Corona Virus Disease (COVID-19) has adopted a policy to replace face-to-face learning with the online system. However, many parties consider that the online learning method raises new problems, such as unequal internet networks, unclear teachers' voice, non-standard teaching materials, lack of concentration, parental factors for school works, and an ineffective learning system (Handayani, 2020; Wismawarin, 2020). Furthermore, Aji (2020) viewed that this learning disorder has an impact on the students' psychology and decreases the quality of students' skills. This has led many experts to research online learning system (e-learning), particularly on some factors that influence the teachers and the students to do online learning (Al-Maroof & Salloum, 2021; Ansong-Gyimah, 2020; Mohan et al., 2020; Prasojo et al., 2020; Rizun & Strzelecki, 2020; Siron et al., 2020; Sukendro et al., 2020).

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* **Corresponding author:**

Ngabiyanto, Universitas Negeri Semarang, Faculty of Social Sciences, Indonesia. ✉ ngabiyanto@mail.unnes.ac.id

Siron et al. (2020) found that the intensity of students using e-learning is significantly influenced by perceived enjoyment, experiences, computer mastery, perceived self-efficacy, perceived ease of use, and perceived usefulness. Rizun and Strzelecki (2020) stated that the best predictors of the students' acceptance of distance learning are enjoyment, self-efficacy, and perceived ease of use and usability. Sukendro et al. (2020) found significant relationships among facilities, perceived ease of use, and perceived use of intention to use e-learning. Online quality management proved as significant predictor on e-learning adoption.

Buabeng-Andoh(2018); Lin et al. (2020); Majid and Shamsudin(2019); and Prasojo et al. (2020) explained the e-learning issues using the Theory Acceptance Model (TAM). Their research relates with one of the media in implementing e-learning. Majid and Shamsudin (2019) found that perceived ease of use and perceived usefulness would influence the teachers' attitudes and intentions to use virtual reality in the classroom. Prasojo et al. (2020) found that subjective norms and facilities received by users have a significant effect on the use of Use Web 2.0. Buabeng-Andoh (2018) who combined TAM and Theory of Reasoned Action (TRA) in explaining behavioral intentions among the students in Ghana using mobile learning found that attitudes towards use and subjective norms had a significant effect on the students' intentions in using mobile learning. Also, Lin et al. (2020) examined the students' attitudes towards mobile devices in the learning process in Taiwan, China, Indonesia, and Vietnam. Lin et al. (2020) found that the use of mobile learning is influenced by attitudes, subjective norms, and behavioral control.

From previous studies, we have identified at least two factors that were ignored by previous researchers in explaining the teachers' intentions to use e-learning, namely age and gender. E-learning is a learning system where students and teachers do not meet directly within a classroom and its implementation is through communication technology, information, and other media. Thus, it requires information technology supported by the internet connection. Grande-De-prado et al. (2020); Mutambik et al. (2020); Mouakket and Sun (2020), and Venkatesh et al. (2003) have found that the use of the information system is influenced by gender. Besides, Amichai-Hamburger (2002) and Mouakket and Sun (2020) found that users' gender and age are two personality traits that can influence behavior using the internet. We also pay attention to the experience in explaining e-learning intentions as recommended by Abdullah and Ward (2016) in General Extended Technology Acceptance Model for E-learning (GETAMEL) concept.

Other researchers extended the TAM model by adding three new variables (time flexibility, learning flexibility and social isolation) that can affect perceived usefulness (Vladova et al., 2021a). The use of technology in the learning processes of students of different disciplines became essential and the only way to teach, communicate and collaborate for months. They also investigate disciplinary differences that will affect the acceptance of technology (Vladova et al., 2021b). They emphasize the importance of social interaction, the combination of different learning formats, and thus context-sensitive hybrid learning as the learning form of the future.

The results of this research are presented in several sections. First, we present the research background. This section explains the reasons and research gaps and the differences between this research and the previous ones. In the second part, we describe the theoretical framework and hypotheses. The next section is the research methods, and the fourth explains the results and discussions. In this part, we discuss the results of this research and confirm them with previous studies. The final part of this research is the conclusions and recommendations for regulators and further research.

Literature Review

E-learning is a learning system that uses system information media. The use of system information media by users can be explained by the TAM (Technology Acceptance Model) theory, where the users' attitudes in using a system are strongly influenced by perceived usefulness and perceived ease of use of the system (Davis, 1989; Dishaw & Strong, 1999). TAM was developed from TRA (Theory of Reasoned Action). TAM is used as a model for user acceptance of an information system. TAM can be used to explain the system acceptance behavior of the user. Thus it will be understood the determinants of acceptance and use of the system by users.(Davis, 1989). The assumption used by TAM is that users have the freedom to use or not use the system (Dishaw & Strong, 1999).

The perceived usefulness is related to the users' belief that a system has benefits to improve their performance (Buabeng-Andoh, 2018; Davis, 1989; Hamid et al., 2016; Hashim & Tan, 2018). For example, in the case of e-learning, perceived ease of use measures the extent to which teachers or students believe that e-learning can provide the same or greater benefits with the face-to-face learning methods. This measurement of perceived usefulness is important because system developers can provide benefits for the system. However, for users, it could be the other way around, namely, the system does not provide any benefit at all in increasing user performance. Many researchers have proven this TAM theory in various system applications. For example, Al-Maroof and Salloum (2021) found that the students' perceived usefulness on Google Classroom had a positive effect on their intentions to use it. Buabeng-Andoh (2018) found that perceived usefulness influenced decisions to use e-learning. Thus, when the teachers or students consider that e-learning can be used as a good medium in the teaching and learning process amid the Covid-19 pandemic, they will certainly use it as best as possible.

H1: Perceived usefulness of e-learning influences positively the teachers' intentions to use e-learning.

Perceived ease of use is related to users' belief that the system is easy to use and free from burdensome efforts (Buabeng-Andoh, 2018). This perceived convenience is a basic level evaluation used to evaluate users' responses to the system (Hashim & Tan, 2018). The reason is that the users will be able to receive perceived usefulness if they can use the system (perceived ease of use) easily and appropriately. This has been proven by previous researchers such as Al-Maroof and Salloum (2021) who found that the perceived convenience of Google Classroom had a positive influence on the students' intention to use it. Majid and Shamsudin (2019) stated that perceived usefulness influenced the respondents' attitudes and intentions to use virtual reality in the classroom. Buabeng-Andoh (2018) who studied the use of mobile learning in Ghana also found that the students' perceived ease of use influenced their attitudes to use the mobile learning method. The same finding is also shown by Lin et al. (2020) that the ease of use affects the students in using mobile learning.

H2: Perceived ease of use of e-learning influences positively the teachers' intentions to use e-learning

In the TAM theory users' behavior to accept or reject a system is only seen from an external point of view or based on the facilities the system provides without paying attention to the users' factors. For this weakness, Buabeng-Andoh (2018) combined the TAM with TRA (Theory of Reasoned Action) in which the TRA theory pays attention to individual and environmental factors in explaining someone's actions. Martono et al. (2020) combined the TAM and TPB (Theory Planned of Behavior) where TPB also looks at individual factors in explaining a person's behavior.

Abdullah and Ward (2016) have developed a TAM model by viewing that Self-Efficacy, Enjoyment, Experience, Computer Anxiety, and Subjective Norms are some factors that affect the users' perceived usefulness and ease of use, and further influence behavior using e-learning. This model is called the General Extended Technology Acceptance Model for E-Learning (GETAMEL).

E-learning is a learning system that uses information technology. Individuals with higher computer-related experiences, such as those who use computers, the internet, and e-mail and store and search for files, are more likely to have a preferred feeling of the ease of use and usefulness of e-learning system (Abdullah & Ward, 2016). The results from Ching-Ter et al. (2017) and Rizun and Strzelecki (2020) found that experience affects perceived ease of use and usefulness in using e-learning.

H3a: Teachers' experiences influence the perceived ease of use of e-learning positively

H3b: Teachers' experiences influence the perceived usefulness of e-learning positively

Besides having an influence on perceived ease of use and perceived usefulness in using e-learning, teachers' experiences in information system also influence their decisions to use e-learning (De Smet et al., 2012; Martins & Kellermanns, 2004; Siron et al., 2020). Individuals with higher computer-related skills are more likely to have more positive feelings about using e-learning media (Rizun & Strzelecki, 2020).

H3c: Teachers' experiences influence their intention to use e-learning positively

So and Swatman (2010) and Mutambik et al. (2020) focused on users' gender and age as two factors that influence the use of e-learning. Even though women and men take the same computer training, their perceptiveness is different. Young (2000) found that boys were more likely to claim computers as a male area. Russell and Bradley (1997) who examined the teachers in Australia found that male teachers reported significantly greater self-confidence with computers than female ones. Grande-De-prado et al. (2020) identified and analyzed self-perception of digital skills and their relationship to gender. They found that men were more likely to consider themselves more competent in using Information and Communication Technology (ICT). Besides, they also found that men use the computer as the only device for browsing, downloading, and streaming, and feel more confident in solving problems using the computer than women. Thus, we develop the following hypothesis:

H4a: Gender influences the teachers' intention to use e-learning

The GETAMEL model developed by Abdullah and Ward (2016) considers that perceived ease of use and perceived usefulness are influenced by users' internal factors. We propose gender and age as the internal factors that can be included in the GETAMEL model. Gender and age are two personality traits that can influence behavior, including behavior in the acceptance of information systems (Mouakket & Sun, 2020). Male teachers tend to be more courageous, experienced (Grande-De-prado et al., 2020), confident (Russell & Bradley, 1997), and more casual (Young, 2000) to use the computer so that they will feel it easier to use the information system (ease of use) and capture its benefits (usefulness). However, male teachers reported being more selective in using information systems because they examined more carefully the benefits of information systems (Venkatesh et al., 2003). Thus, we develop the following proposition:

H4b: Gender influences perceived ease of use in e-learning

H4c: Gender influences perceived usefulness in e-learning

Besides gender, we propose users' age as a factor influencing their intention to use e-learning. According to Mouakket and Sun (2020), age is also a personality trait that influences the behavior of receiving information systems. This is reinforced by other findings Laar et al. (2020) that age will affect digital abilities. So and Swatman (2010) studied the influence of age and gender on the readiness of teachers and prospective teachers in implementing e-learning and found that there was an influence between teachers' age and readiness to implement the e-learning. Besides, Yawson and Yamoah (2020) also found that the users' age would influence the decision to use the system. Younger users will be more selective in using the system. Also, their young age makes them happy to explore the system and seek new things. Thus, we develop the following propositions:

H5a: Age influences the perceived ease of use of e-learning

H5b: Age influences perceived usefulness of e-learning

H5c: Age influences teachers' intention to implement e-learning.

Figure 1 below show the model of this research based on the explanation before.
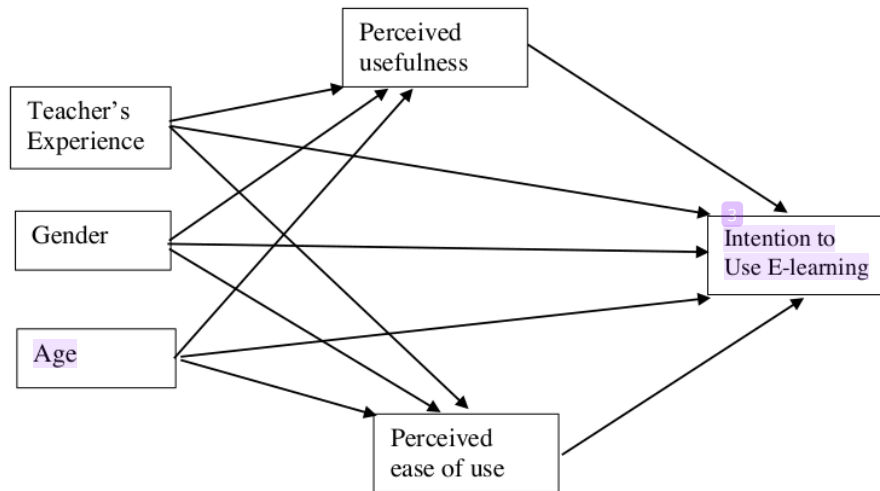

Figure 1. The Conceptual Research Model

Methodology

Research Goal

The purpose of this research is to provide empirical evidence of the influence of perceived usefulness, convenience, experience, gender, and age on the intention to use e-learning after the government's school closure policy due to the Covid-19 pandemic.

Sample and Data Collection

This research uses a sample of junior high school teachers in Semarang city (table 1). We conducted data collection in August-September 2020 in five schools. The data search is carried out by dividing the questionnaire manually. We use this method to accommodate the teachers who are unfamiliar with the questionnaire distributed through information technology such as Google Docs. The closure of schools due to Covid-19 causes the limited number of research respondents. After searching, we can only manage to find 88 or 57% respondents who have filled out the questionnaire completely.

Table 1. Distribution of Population

No.	Name of School	Total of Teachers
1.	SMP N 22 Semarang	40
2.	SMP N 24 Semarang	43
3.	MTs Al Asror	37
4.	MTs Al Islam	17
5.	MTs Al Hidayah	18
	Total	155

The questionnaires we used have been tested for validity and reliability. The validity test that we used is the Pearson correlation test. If the significance value obtained for each item is less than 0.05, the item is declared valid. We used the Cronbach's Alpha value to test the reliability. If the Cronbach's Alpha value is more than or equal to 0.70 then the variable can be declared reliable. We used IBM SPSS software to test the validity and reliability. The results can be seen in table 2 and table 3 below.

Table 2. Validity test

Variables	Pearson Correlation	Sig. (2-tailed)	Result
Perceived usefulness			
• USE1	0,964	0,000	Valid
• USE2	0,941	0,000	Valid
• USE3	0,952	0,000	Valid
• USE4	0,862	0,000	Valid
Perceived ease of use			
• EASE1	0,883	0,000	Valid
• EASE2	0,904	0,000	Valid
• EASE3	0,868	0,000	Valid
• EASE4	0,927	0,000	Valid
Experience			
• EXPER1	0,951	0,000	Valid
• EXPER2	0,917	0,000	Valid
Intention to use			
• INTEN1	0,839	0,000	Valid
• INTEN2	0,830	0,000	Valid

Table 3. Reliability test

Variables	Cronbach's Alpha	Result
Perceived usefulness	0,947	Reliable
Perceived ease of use	0,916	Reliable
Experience	0,841	Reliable
Intention to use	0,763	Reliable

We also do the test of common method bias (CMB) by using Harman's single factor score. The result show there is no common method bias. The total variance for a single factor is 29,683 or less than 50%.

Data Analysis

The perceived usefulness variable (USE) is measured by four indicators, namely the speed of the system in carrying out tasks, increasing performance, increasing productivity, and increasing efficiency (Buabeng-Andoh, 2018). Perceived ease of use variable (EASE) is measured by indicators of suitability of users' desires, cost of using the system, user skills, user control, user expertise. The use of the system (e-learning) (INTENT) is measured by indicators of wishes, hopes, and plans of using e-learning in the future (Farah, 2017). The perceived experience variable (EXPER) is measured by two indicators, namely the experience of using e-learning and understanding the application of e-learning. These four variables are measured using 7 Point-Likert scales (1 means strongly disagree and 7 means strongly agree). The age (AGE) is measured by the number of age (years), and gender (GENDER) is measured by a dummy (1 for men, 0 for women).

The data are analyzed using the Structural Equation Model. We use Warp-PLS as a statistical tool. The data will also be tested for model feasibility, including Average path coefficient (APC), Average R-squared (ARS), Average Adjusted R-squares (AARS), Average full collinearity VIF, and Average Block VIF (AVIF). The fit indices model is a very important measure because it shows the suitability of the model with the data and shows the quality of the model under study.

Findings / Results

The description of the variables we present in Table 4 shows that the average respondent has an age of 36.80 years-old. 62.65% of respondents are female and the remaining 37.5% are male. Viewing from the latent variables, perceived ease of use has an average score (4.16) that is lower than the average perceived usefulness of 4.49. The teachers' experience has an average score of 5.09. This score indicates that the teachers are still having problems or difficulties in implementing e-learning. Even though they have better-perceived usefulness of e-learning and have good experiences, but due to the limited ability to use e-learning, the e-learning learning process still constrains some problems. This is evidenced by the low intention of the teachers to use e-learning with an average score of 3.98.

Table 4. Descriptive Latent Variable

	Age	Perceived Usefulness (USE)					perceived ease of use (EASE)					Experience (EXPER)			Intention (INTEN)		
		U1	U2	U3	U4	Means	E1	E2	E3	E4	Means	EX1	EX2	Means	I1	I2	Means
Maximum	16	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1	1
Minimum	60	7	7	7	7	7	7	7	6	7	6	7	7	7	7	7	7
Means	36.80	4.50	4.48	4.51	4.49	4.49	4.05	4.22	3.85	4.53	4.16	4.91	5.26	5.09	3.63	4.34	3.98
St. Dev	12.10	1.27	1.38	1.36	1.44	1.20	1.24	1.50	1.25	1.38	1.13	1.22	1.06	1.01	1.50	1.51	1.34

Table 5 shows the results of the model quality test. Table 4 shows that in general, the model we use is fit and has met the quality to be used to underline the research hypotheses.

Table 5. Model fit and quality indices

Indicator	Conclusion
Average path coefficient (APC)=0.211, P<0.01	Significant
Average R-squared (ARS)=0.249, P=0.003	Significant
Average adjusted R-squared (AARS)=0.216, P=0.008	Significant
Average block VIF (AVIF)=1.114, acceptable if <= 5, ideally <= 3.3	Ideal
Average full collinearity VIF (AFVIF)=1.616, acceptable if <= 5, ideally <= 3.3	Ideal
R-squared contribution ratio (RSCR)=0.909, acceptable if >= 0.9, ideally = 1	acceptable

The next stage is to test the hypotheses. The results of the hypotheses test that we have developed are presented in table 6 below:

Table. 6 Results of Model Tests

Causality	Hypothesis	Path Coefficients	P values	Result
USE → INTENT	H1	0.30***	<0.01	Accepted
EASE → INTENT	H2	-0.11	0.13	Rejected
EXPERIEN → EASE	H3a	0.41***	<0.01	Accepted
EXPERIEN → USE	H3b	0.43***	<0.01	Accepted
EXPERIEN → INTENT	H3c	0.09	0.20	Rejected
GENDER → INTENT	H4a	-0.01	0.45	Rejected
GENDER → EASE	H4b	0.31***	<0.01	Accepted
GENDER → USE	H4c	0.02	0.41	Rejected
AGE → INTENT	H5a	-0.33***	<0.01	Accepted
AGE → EASE	H5b	0.12	0.13	Rejected
AGE → USE	H5c	0.19**	0.03	Accepted

*** sig. at 1%; ** sig. 5%

Table 6 shows that the relationship between perceived usefulness and intention of e-learning has a coefficient of 0.30 with a p-value <0.01. This indicates that users' perceived usefulness of e-learning has a strong influence on the teachers' intentions to use e-learning. The effect of perceived ease on intention has a coefficient of -0.11 with a significance of 0.13. This indicates that perceived ease of use does not affect the teachers using e-learning. The effect of perceived experience on convenience resulted in a coefficient of 0.41 with a significance of <0.01. This indicates that the teachers' experiences have a very significant positive effect on the perceived usefulness of e-learning. Besides, the teachers' experiences have a very strong influence on the perceived usefulness of e-learning (coefficient 0.43 and significance <0.01). However, the experience is not proven to influence the teachers' intentions to use e-learning because it has a coefficient of 0.20 with a significance of 0.20.

The relationship between gender and intention results in a coefficient of -0.01 with a significance of 0.45. This provides that gender does not affect e-learning intentions. Gender relations to the perceived ease of e-learning result in a coefficient of 0.31 with a significance of <0.01. These findings show that gender influences the perceived ease of e-learning. Male teachers find it easier to use e-learning. However, gender is proven not to affect the perceived usefulness of e-learning because it has a coefficient of 0.02 with a significance of 0.41.

The results of the correlation test between teachers' age and intention result in a coefficient of -0.33 with a significance of <0.01. The test results indicate that age has a very significant negative effect on the intention of the teachers to implement e-learning. The results of the test on the relationship between age and perceived convenience generate a coefficient of 0.12 with a significance of 0.13. The results of the test on the relationship between age and perceived usefulness generate a coefficient of 0.19 with a significance of 0.03. These indicate that age does not affect the perceived ease of use, but it has a positive and significant effect on the perceived usefulness of e-learning.

Discussion

Our results show that the perceived usefulness of e-learning has a positive influence on the teachers' intentions to use e-learning. Our results corroborate the TAM theory and other studies (Al-Maroof & Salloum, 2021; Buabeng-Andoh, 2018). This perceived usefulness measures the teachers' perception that e-learning provides benefits as an alternative to hold distance learning and this is the best solution to deal with school closure due to the Covid-19 pandemic. Ibrahim et al. (2021) found that about three-fifths of students emphasized that e-learning could replace classic on-campus learning and was an adaptable and time-saving method.

Our results indicate that the perceived ease of e-learning does not influence e-learning intentions. The results reject the TAM theory and weaken other research results (Al-Hadban et al., 2016; Al-Maroof & Salloum, 2021; Buabeng-Andoh, 2018; Lin et al., 2020). The difference between the results of this research and the previous ones lies in the users' conditions. In our research, the use of e-learning is applied due to the Covid-19 pandemic which causes the government to adopt a policy of closing schools and replacing classical learning with e-learning. The policy that forces the teachers to implement e-learning leaves them with no choice to use other teaching methods. Therefore, the teachers ignore the convenience aspects of e-learning in determining their choice to use or not use it. This causes no influence between perceived ease of use on the teachers' intentions to use e-learning. In TAM, users' behavior using IT is voluntary (Dishaw & Strong, 1999).

The results of this research indicate that the teachers' experiences positive influence the perceived usefulness and ease of e-learning. This finding is in line with the GETAMEL theory. The results corroborate other findings (Ching-Ter et al., 2017; Rizun & Strzelecki, 2020). Abdullah and Ward (2016) argued that users who are accustomed to using computers, the internet, and e-mail as well as storing and searching for files are more likely to have a preferred feeling of the ease of use and usefulness of the e-learning system (Abdullah & Ward, 2016). Those who are experienced in using computers will better understand the usefulness and ease of e-learning. However, the results of this research also indicate that this experience does not affect the teachers' intention to use e-learning. This fact contradicts other research findings (De Smet et al., 2012; Martins & Kellermanns, 2004; Siron et al., 2020). This difference is likely caused by the teachers who are suddenly forced to use e-learning due to government policies to close the schools. As a result, those who have experience or have no experience do not influence them to use e-learning.

Gender has been shown to positively influence the perceived ease of e-learning and does not affect perceptions of usefulness and intention. This means that male teachers will easily grasp the convenience of e-learning than female ones. Male teachers are more experienced (Grande-De-prado et al., 2020) and more familiar (Young, 2000) with computers and cause them to easily grasp the usefulness of e-learning. Besides, the male teachers are more selective in evaluating the usefulness of information systems Venkatesh et al. (2003) which causes them to easily grasp the usefulness of e-learning. However, gender difference does not affect the perceived usefulness and intention of using e-learning. These results reinforce previous findings that the school closure policy causes the teachers to implement e-learning, so that male and female teachers have the same obligation to implement it in distance learning. This research also cannot confirm the results of other studies.

Age has been shown to have a positive influence on perceived usefulness and does not affect perceived convenience. Older ages will view the broader benefits of the system than younger ones. Also, young teachers use e-learning more frequently. This may be because they have been familiar to use computers so that e-learning policy becomes their best way of proving their mastery of information technology. Younger ages push them to have better digital abilities (Laar et al., 2020). These results also reinforce another study So and Swatman (2010) that the teachers' age affects their readiness to conduct e-learning methods.

Conclusion

The purpose of this research is to provide empirical evidence of the influence of perceived usefulness, convenience, experience, gender, and age on the intention to use e-learning after the government's school closure policy. Our results indicate that perceived usefulness has a positive influence on e-learning intention. Also, we have found that teachers' perceived usefulness, experience, and gender do not influence e-learning intentions. This is due to the use of e-learning at schools is only caused by the government policy to close schools due to the COVID-19 pandemic. This condition causes the teachers of different genders and experiences to continue to implement e-learning as their way of teaching during the pandemic. They have no other alternative besides e-learning to teach the students, so they ignore the system's ease of using the e-learning aspect. However, we found that younger teachers have a higher intention of using e-learning. They have sufficient digital abilities and are more confident in using e-learning, so they have a great intention of implementing e-learning in their virtual classrooms.

The results of this research conclude that the teachers' experience has positive perceptions of the usefulness and ease of e-learning. This is in line with GETAMEL's theory that experienced teachers will find it easier to get the utility and convenience of e-learning. Apart from experience, male teachers also report that it is easier to grasp the ease of e-learning. However, older teachers report more concern about the perceived usefulness of the system as a reason for using e-learning.

Recommendations

The contribution we provide to the government is that there is a need for training for teachers in using e-learning. The main goal is that all teachers with diverse personal backgrounds and the ability to use computers can continue to use e-learning effectively so that e-learning can replace other conventional learning techniques. Recommendations for practitioner are to be able to develop e-learning applications according to user needs and design the interface of the e-learning platform to be easy to use. Future research can combine technology acceptance theory (e-learning) such as Unified Theory of Acceptance and Use of Technology (UTAUT) so that it can find more comprehensive results.

Limitations

The focus of this research is the intention of e-learning in general and does not specifically discuss certain media used by the teachers for the implementation of e-learning. Government laws and policies do not require the teachers to use any particular information media that can be used as parts of e-learning. We recommend further researchers to focus on one of the e-learning media to complement the results of this research. Another limitation is that this study does not analyze the intention to use e-learning based on the subjects taught by the teacher. Computer teachers will have different intentions than economics teachers or sports teachers. The small sample size is a limitation in this study. So that it will influence the interpretation of the results obtained.

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Authorship Contribution Statement

Ngabiyanto: Conceptualization, design, drafting manuscript, critical revision of manuscript, securing funding, supervision, final approval. Nurkhin: Conceptualization, design, data acquisition, drafting manuscript, critical revision of manuscript, supervision, admin. Mukhibad: Conceptualization, design, data analysis/interpretation, statistical analysis, drafting manuscript, critical revision of manuscript. Harsono: Drafting manuscript, critical revision of manuscript, technical or material support.

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