ANALYSIS OF TECHNOLOGY ACCEPTANCE MODEL IN THE LEARNING PROCESS IN JUNIOR HIGH SCHOOL/MADRASAH TSANAWIYAH TEACHERS IN KONAWE DISTRICT

Samrin[1], Tandri Patih[2], Syamsuddin[3], Puguh Resmono[4]
[1,2,3,4]IAIN Kendari
[1,2,3,4]Sultan Qaimuddin Street No. 17, Baruga, Kendari City, Southeast Sulawesi
Email: samrin@iainkendari.ac.id[1], tandripatih@iainkendari.ac.id[2],
syamsuddinjufry@gmail.com[3], puguhresmonon.iainkendari@gmail.com[4]

Abstract:
This quantitative causal study aims to determine the technology acceptance in the learning process among SMP/MTs teachers in Konawe, Southeast Sulawesi. Cluster random sampling was used to select the sample, considering the sampling area. The data collection was carried out through survey techniques using a questionnaire. The results show that the experience has a significant effect on perceived ease of use; both perceived usefulness and perceived ease of use have a significant effect on usage attitudes; the usage attitude, in turn, has a significant effect on the behavioral intention to use at α = 0.05. Whereas at α = 0.1, the innovativeness variable affects the perception of perceived usefulness, and facilitating conditions affect the perception of perceived ease of use. The influence of experience and facility conditions is the key for teachers to easily accept and use learning technology. Experience is also related to teachers' perceptions of the usefulness of technology in classroom learning. This requires teachers to continue to improve their skills. School leaders and policy makers are also expected to pay more attention to teacher skills and facilities that support the implementation of learning in the classroom. The more positive and interested teachers are in using learning technology, the easier it is for them to accept the technology.

Abstrak:
Penelitian ini merupakan penelitian kuantitatif kausalitas yang bertujuan untuk menganalisis penerimaan teknologi dalam proses pembelajaran pada populasi guru-guru SMP/MTs di Kabupaten Konawe Sulawesi Tenggara. Sampel dipilih menggunakan cluster random sampling, dengan memperhatikan wilayah pengambilan sampel. Pengambilan data dilakukan dengan teknik survei menggunakan angket. Hasil penelitian menunjukkan bahwa pengalaman (*Experience*) berpengaruh signifikan terhadap presepsi kemudahan dalam menggunakan (*Perceived Ease of Use*); presepsi kegunaan yang dirasakan (*Perceived Usefulness*) dan kemudahan dalam menggunakan (*Perceived ease of use*) berpengaruh signifikan terhadap sikap untuk menggunakan (*Attitudde toward using*); sikap untuk menggunakan (*Attitude toward using*) berpengaruh signifikan terhadap niat/minat untuk menggunakan (*Behavioral Intention to Use*) pada α = 0,05. Sedangkan pada α = 0,1 variabel Inovasi (*Innovativeness*) berpengaruh terhadap presepsi kegunaan yang dirasakan (*Perceived Usefulness*); dan kondisi fasilitas (*Facilitating Conditions*) berpengaruh terhadap presepsi kemudahan dalam menggunakan (*Perceived Ease of Use*). Berpengaruhnya pengalaman dan kondisi fasilitas menjadi kunci bagi guru agar mudah menerima dan menggunakan teknologi pembelajaran. Pengalaman juga berkaitan dengan persepsi guru akan kegunaan teknologi dalam pembelajaran di kelas. Hal ini mengharuskan guru untuk terus meningkatkan keterampilannya. Pimpinan sekolah dan para pemangku kebijakan juga diharapkan lebih memperhatikan keterampilan guru serta fasilitas yang

menunjang pelaksanaan pembelajaran di kelas. Semakin positif dan tertarik guru dalam menggunakan teknologi pembelajaran, maka semakin mudah mereka menerima teknologi tersebut.

Keywords:
Technology Acceptance, Learning Process

How to Cite: Samrin, Patih, T., Syamsuddin, & Resmono, P. (2023). Analysis of Technology Acceptance Model in the Learning Process in Junior High School/Madrasah Tsanawiyah Teachers in Konawe District. *Lentera Pendidikan : Jurnal Ilmu Tarbiyah dan Keguruan,* 26(2), 412-435. https://doi.org/10.24252/lp.2023v26n2i14.

INTRODUCTION

Acceptance and use of technology, particularly the Information and Communication Technology (ICT), is very important in assisting the learning process in the world of education (Syafrizal, Ernawati, & Dwiandiyanta, 2015). Salsabila, Sari, & Lathif (2020) found that educational technology can be used as a tool to support knowledge design; as a source of information to find out what knowledge that the students need; as a medium for students to express themselves; to increase the effectiveness and efficiency of the learning process; and as a tool to help students achieve their educational goals. This explains the importance of technology acceptance in the learning process. During the pandemic, the acceptance and use of technology to support the learning process, whether offline, online, or blended, has become essential. Both teachers and students must accept and be able to use all information and communication technology required for learning, particularly technology in the form of computer, laptop, notebook, or smartphone devices. However, according to the researchers' initial observations, the acceptance and use of computer, laptop, notebook, or smartphone devices in the classroom learning process is frequently ignored, and their use is minimal, particularly for teachers over 40 years old.

This is further supported by Aini (2021) who found that textbooks and blackboards are still the predominant learning media in schools. This occurs because teachers are unable to use or create learning media, and because it is difficult to accept and implement the new information and communication technology that is being developed. According to the preliminary interviews with junior high school teachers in Konawe Regency, it is known that technology is rarely used in the learning process, both in terms of hardware and software/ application systems. This is the circumstance in junior high schools in the Uepai and Bondoala subdistricts of Konawe Regency. The teachers can accept that technology is a part of the learning process because it can facilitate and simplify the learning and grading processes, but in actual use, the teachers rarely use technology, especially those who are over 50 years old.

Before, during, and after the COVID-19 pandemic, numerous studies on technology acceptance were conducted at both the elementary and higher education levels, such as

the latest research conducted by Frøsig (2017), Siregar (2017), and Ayele & Birhanie (2018); among teachers in elementary and middle schools before the COVID-19 pandemic. The research was conducted by Dumpit & Fernandez (2017) and Akar (2019) at the tertiary level before the COVID-19 pandemic. Then research was conducted by Hong, Zhang, & Liu (2021) on Preschool Teachers, Anindita, Lukito, & Amalia (2023), Fahmiyah, Utami, & Ningrum (2023) for teachers in elementary and middle schools, for lecturers and education staff, and Alsaffar, Alfayly, & Ali (2022) for students at tertiary level during the COVID-19 pandemic. After the COVID-19 pandemic, the research related to technology acceptance continued, such as the research conducted by Abubakari & Zakaria (2023), Övez & Demİr (2023) at the school level, and the research conducted by Lin & Yu (2023) at the university level.

Various models are utilized in the analysis of technological acceptance. The most popular model used is the Technology Acceptance Model (TAM) introduced by Davis (1989). Technology AcceptanceeModell (TAM) is a model designed to analyze and comprehend the factors that affect the acceptance of technology use. Dishaw, Strong, & Bandy (2002) stated that TAM is one of the behavioral models of information technology utilization in the management information systems literature. In information technology studies, TAM is the most influential and widely used technology acceptance model (B. C. Lee, Yoon, & Lee, 2009; Syafrizal, Ernawati, & Dwiandiyanta, 2015). Numerous studies in the field of education have applied TAM to examine the process of technology adoption. TAM is regarded as influential and can explain a participant's acceptance of information systems (Rahmawati & Narsa, 2019; Srinadi & Puspita, 2017). TAM is the model that captivates the most interest in the study of Information Systems (IS), where TAM is a continually evolving technology acceptance model (Srinadi & Puspita, 2017). Teo (2011) explained that TAM indicates that user acceptance of technology is based on three things: (a) perceived usefulness, (b) perceived ease of use, and (c) behavioral intentions.

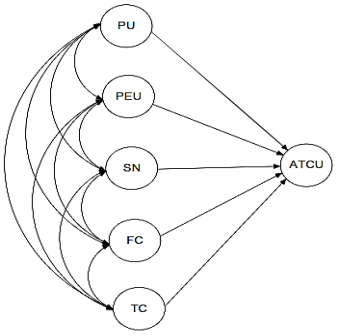

Figure 1. TAM in Research of Teo (2012)

In previous research, Lee, Kim, & Rhee (2006) conducted research on the role of exogenous factors in technology acceptance. The variables used are Innovativeness, Training, Experience, Access, Support, Group size, Usefulness, Ease of Use, Intention, and Usage with a relationship model as depicted in the following Figure:

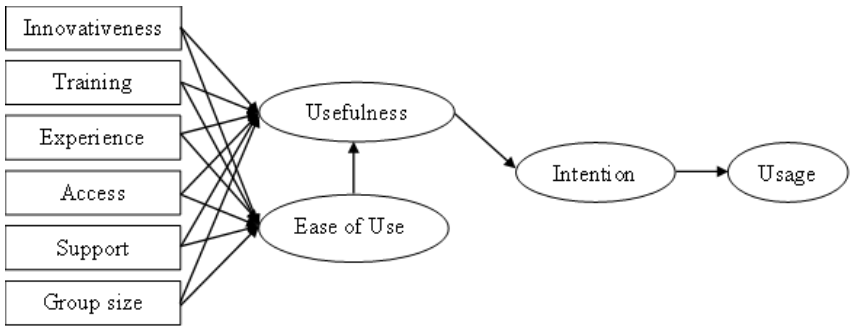

Figure 2. TAM in Research of Lee, Kim, & Rhee (2006)

In Indonesia, much research related to TAM has also been carried out, such as the research conducted by Azmi, Zasmita, & Sholihat (2021); Budiman, Arifudin, & Sugiharti (2020); Jatmikowati, Rachman, & Adiwitya (2020); Lestari, Amalia, & Puspita (2021); Saptomo & Rimawati (2020); Setiyani, Effendy, & Slamet (2021). At the higher education level, Setiyani, Effendy, & Slamet (2021) examined the acceptance of google drive and e-learning technology for students of the College of Informatics and Computer Management. Jatmikowati, Rachman, & Adiwitya (2020) investigated the acceptance of e-learning technology by Early Childhood Education Study Program students; Budiman, Arifudin, & Sugiharti (2020) also examined how students utilized online assessment tools despite COVID-19 social constraints. At the secondary education level, Saptomo & Rimawati (2020) conducted research on the application of blended learning with students as respondents. At the level of primary school, Lestari, Amalia, & Puspita (2021) examined the impact of student interest in home-based learning on the acceptance of zoom cloud meeting technology.

These studies examine only how students perceive technology. They do not consider how teachers feel about using technology as a source of information for students. This means that if the delivery is effective, students are expected to accept the material effectively. Several researchers have also conducted research on the technology acceptance of teachers in the learning process, including the most recent study (Azmi, Zasmita, & Sholihat, 2021) on science teachers in the province of Riau who employ the zoom application in the learning process. The study focused on show teachers accepted and used the zoom app to help students learn, thereby ignoring teachers' use of other learning media. In addition, the study was limited to a single subject and did not examine the acceptance of technology in the learning processes of other subjects.

In accordance with the previous description, the researchers intend to conduct an analysis of technology acceptance in the learning process of SMP/MTs teachers in Konawe Regency, by looking at these several questions, namely, what is the level of acceptance of technology in the learning process by teachers based on the characteristics of gender, subjects taught, highest level of education, employment status, devices used, ownership of the devices used, network providers used, years of teaching, and teacher age? Whether there is an influence of external variables (subjective norms, innovation, training, experience and facilitating conditions) on perceived usefulness and perceived ease of use, which is felt by teachers? Is there an influence of the variables perceived

usefulness, perceived ease of use, on the attitude toward the teachers' usage of technology? Is there an influence of attitude toward using on teachers' behavior intention to use? and, is there an influence of behavior intention to use on the actual system use of teachers at SMP/MTs in Konawe Regency? The results of this research can be used as a reference for designing policies for offline, online, and blended learning processes where policymakers can evaluate the learning process based on junior high school/MTs teachers' technology acceptance by gender, school type, latest education, teaching tenure, employment status, and age to optimize each subject's learning environment.

RESEARCH METHOD

This research is quantitative research (causality) that aims to determine the causal relationship between exogenous latent variables and endogenous latent variables as constructs, namely manifest variables (variable observed/indicator) which cannot be measured directly and require several indicators (Ghozali & Fuad, 2012). The population of this study consisted of junior high school/ MTsN teachers from 23 schools in Konawe Regency. The samples were selected using cluster random sampling. Considering Figures 1 and 2, as well as the conditions at the research site. The main variables in this study are Perceived Usefulness (PUu), Perceived Ease of Use (PE), Attitude Toward Using (OR), Behavioral Intention to Use (BI) and Actual Systemm Use (AUe). External variables affect the PU and PE in TAM. In this study, External variables were identified based on previous TAM research as well as the actual conditions of the research object. The external variables used in this study are Subjective Norms (SN), Innovativeness (I), Training (T), Experience (E) and Facilitating Conditions (FC). Figure 3 depicts the relationship model between latent variables/ constructs in this study. The data were analyzed using the Structural Equation Modeling with Partial Least Square (SEM-PLS) method.

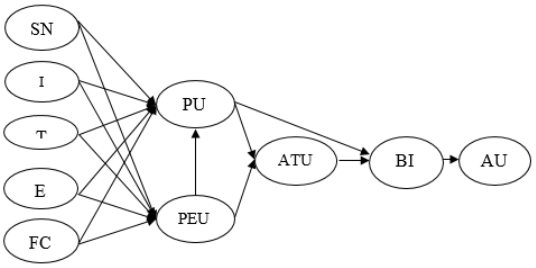

Figure 3. TAM of Technology Adoption in the Learning Process

RESULTS AND DISCUSSION

Description of the Level of Technology Acceptance in the Learning Process by Teachers

The results of the data analysis begin with a description of the level of acceptance of technology in the learning process by teachers based on the characteristics of gender, subjects taught, last education, employment status, devices used, ownership of the devices used, network provider used, teaching period, and teacher age. The data description for this study was reviewed based on several variables that were not

analyzed inferentially. This analysis describes teachers' acceptance of technology in the learning process based on the categorical variables of gender, subject taught, most recent education, employment status, device used, device ownership, provider used, teaching period, and age of respondents. The average acquisition score of each variable was used to do descriptive analysis, which was then categorized into high (average score of categorical variables ≥ average overall score + standard deviation of overall score), medium (average overall score - standard deviation of overall score < average score of categorical variables < average overall score + standard deviation of overall score), and low (average overall score - standard deviation of overall score ≤ average score of categorical variables) (Arikunto, 2012).

The results of an analysis of the descriptive data based on the gender characteristics of respondents indicate that both male and female teachers have a medium level of technology acceptance in the classroom learning process (seen based on subjective norms, innovation, training, experience, facilitating conditions, perceptions of usefulness, perceptions of ease of use, attitudes to use, behavioral interest in using, and actual system use). This indicates that both male and female teachers have the same level of acceptance of learning technologies in the classroom. Whether it be a computer, laptop, or smart phone, access to the internet, E-Learning, or another form of technology.

Based on the characteristics of the subjects taught by the respondents, it is known that only Information and Communication Technology (ICT) teachers have a positive attitude toward the use of technology in the classroom. In addition, the overall technology acceptance variable for each subject taught is in the medium category for each subject taught. This shows that ICT teachers are happier, like their jobs more, don't feel bored or overworked, and are more likely to use learning technology in the classroom than other subject teachers. This is inextricable from the expertise of the teacher, who employs technological devices on a daily basis. Based on the respondents' latest education, it is known that only teachers with an S3 degree have a high level of technology acceptance for the variables of experience and actual system use in classroom learning.

The overall technology acceptance variable for each level of teacher education is in the medium category. But teachers with only a high school degree or less have a low acceptance of technology for the variable of perceived ease of use of technology in classroom learning. This shows that teachers with a doctoral degree have more experience, are more used to using technology in the classroom, and believe it's crucial to use technology in classroom than teachers with a high school, bachelor's degree, or master's degree. This is entirely distinct from the fact that these teachers use technology more regularly than teachers with other levels of education. Teachers with a high school education are less tech-savvy; they require a lot of effort to interact with technology in order to accomplish their goals, and they find technology difficult to use.

According to the employment status of responden, Government Employees with Contract Agreement (PPPK) teachers have a high level of technology acceptance for the variables of training, experience, perceived usefulness, perceived ease of use, attitude

towards use, and behavioral interest in using. The overall technology acceptance variable for each employment status of teachers falls into medium category. This shows that PPPK teachers have more technology experience, knowledge, and proficiency. Through an adequate and comprehensive training program, the trainers assist the PPPK teachers in advancing their knowledge of and comfort with technology. PPPK teachers believe that technology can enhance their performance, effectiveness, and productivity, as well as facilitate their work. In addition, the ease of delivering teaching materials, the ease of use, the ability to be used anytime and anywhere, the effectiveness of the learning process, and the benefits to the learning process make PPPK teachers feel happy, use technology more often, and intend to use technology in learning activities regularly. The lack of technology use per day and the lack of frequency of technology use, especially among non-civil servant teachers, contributes to their low technology acceptance for the variable of perceived ease of technology use in classroom learning.

Based on the devices used by the respondents, it is known that teachers who use smartphones, netbooks, and notebooks have a similar level of technology acceptance in the classroom learning process, which falls into the category of medium (considering subjective norms, innovation, training, experience, facilitating conditions, perceptions of usefulness, perceptions of ease of use, attitudes toward use, behavioral interest in using, and Actual system use). This indicates that teachers who use the mobile devices such as smartphones, netbooks, and laptops have the same level of acceptance for classroom-based learning technologies.

Based on the respondent's device ownership, it is known that teachers who use office-owned devices have a high level of technology acceptance for subjective norm variables, level of innovation, level of training, facilitating conditions, perceived usefulness, perceived ease of use, attitude to use, behavioral interest in using, and Actual system use. The overall technology acceptance variable for each teacher's device ownership is categorized as medium. This shows that teachers using office-owned devices are encouraged and supported in their use of technology. In addition, they make optimal use of technology to find additional teaching materials, create inventive teaching materials, develop learning tools, and evaluate students' grades.

Teachers with access to office-owned devices are more knowledgeable and proficient with technology. Through comprehensive and adequate training programs, trainers assist teachers with self-improvement, technology comprehension, and technological confidence. The acceptance of technology by office-based teachers is also increased by assistance, direction, specific instructions, and the availability of specific individuals for assistance. Teachers believe that technology enhances their performance, effectiveness, and productivity, as well as facilitates their work. In addition, using technology facilitates of the instructional materials delivery, makes the learning process more efficient, and supports the learning process. Therefpre, it satisfies teachers with office-owned devices and encourages them to employ technology more frequently in learning activities. Teachers who use office-owned devices use technology for extended periods and more frequently than teachers who use their own devices.

From the aspect of the provider used by the respondents, it is known that only teachers who use school Wifi providers have high technology acceptance for the experience and perceived ease of use variables, but they have low technology acceptance for the actual system usage variable. Similarly, teachers who use XL Axiata providers have a low acceptance of technology in terms of perceived ease of use. For each provider used by teachers, the overall technology acceptance variables fall into the medium category. This shows that teachers who use school Wifi providers are more experienced, know how to use technology, and find it easy to do so. The teachers with a low frequency of technology use have a low level of technology acceptance for the variable of real classroom system use. Teachers who use XL Axiata providers have low acceptance of technology on the perceived ease of use variable, indicating that they do not understand and have difficulty interacting with new technology.

Regarding the subjective norm variable, in the aspect of respondents' teaching period, only teachers with 31 to 40 years of experience have a high level of technology acceptance. Teachers with 21 to 30 years of teaching experience have low technology acceptance for the facilitating conditions variable and perceived ease of use, so that for each teaching period, the teacher has a technology acceptance variable in the medium category. This indicates that teachers with 31 to 40 years of experience are more encouraged and supported to use learning technology in the classroom. In addition, The lack of instructors and assistance for teachers with 21 to 30 years of teaching experience makes them less understanding and difficult to interact with technology, so they have low technology acceptance for facilitating conditions and perceived ease of use.

Based on the age characteristics of the respondents, it is known that teachers between the ages of 20 and less than 60 have the same level of technology acceptance in the classroom, which is in the medium category (seen based on subjective norms, innovation, training, experience, facilitating conditions, perceived usefulness, perceived ease of use, attitude to use, behavioral interest in using, and actual system use). This indicates that teachers between the ages of 20 and 60 accept the use of educational technology in the classroom. Whether it be a computer, laptop, or smartphone, Internet access, E-Learning, or other learning technologies.

Inferential Analysis Results (Research Hypothesis Testing)

Hypothesis testing begins with the construction of a theoretical model, then evaluating the measurement model and evaluating the structural model.

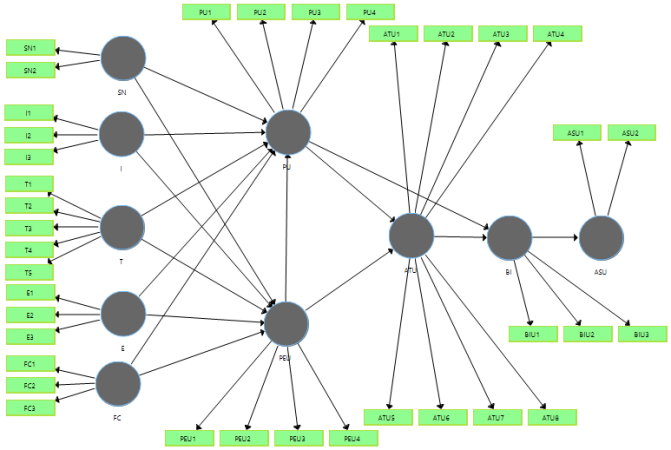

Figure 4. Theoretical Model of Technology Acceptance in the Learning Process of Junior High School/MTs Teachers in Konawe Regency

Measurement Model Evaluation

The measurement model in the study was evaluated before conducting research hypothesis testing on the evaluation of the research structural model. This evaluation includes convergent validity, discriminant validity, and reliability assessments.

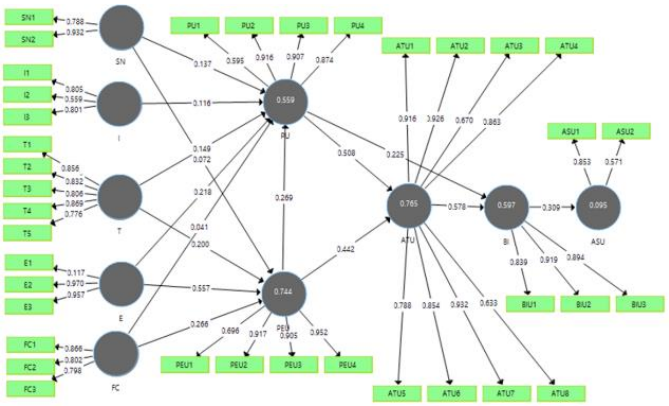

Figure 5. Model Evaluation (Preliminary Measurement of Technology Acceptance in the Learning Process for Junior High School Teachers in Konawe Regency)

a. Convergent Validity (Outer Loading)

The convergent validity is the first measurement model check, as indicated by the Outer loading value or loading factor. The criterion used is the outer Loading value ≥ 0.7. If the indicator has an outer loading value < 0.7, the indicator must be removed from the model in Table 1.

Table 1. Results of Convergent Validity on the Measurement Model

Indicator	Outer Loading	Indicator	Outer Loading
SN1	0.788	PU1	0.595
SN2	0.932	PU2	0.916

I1	0.805	PU3	0.907
I2	0.559	PU4	0.874
I3	0.801	PEU1	0.696
T1	0.856	PEU2	0.917
T2	0.832	PEU3	0.905
T3	0.806	PEU4	0.952
T4	0.869	ATU1	0.916
T5	0.776	ATU2	0.926
E1	0.117	ATU3	0.670
E2	0.970	ATU4	0.863
E3	0.957	ATU5	0.788
FC1	0.866	ATU6	0.854
FC2	0.802	ATU7	0.932
FC3	0.798	ATU8	0.633
		BIU1	0.839
		BIU2	0.919
		BIU3	0.894
		ASU1	0.853
		ASU2	0.571

Based on Table 1, it can be seen that for the Subjective Norm (SN) variable, all of the indicators have an outer loading ≥ 0.7 (valid). For the Innovativeness variable (I), there are two indicators, I1 and I3, that have outer loading ≥ 0.7. For Experience variables (E), there are two indicators, E2 and E3, that have outer loading ≥ 0.7. For the Facilitating Conditions variable (FC), all indicators have outer loading ≥ 0.7. Moreover, for the Perceived Usefulness variable (PU), there are three indicators, PU2, PU3, and PU4, that have outer loading ≥ 0.7. Similarly, for the Perceived Ease of Use variable (PEU), there are three indicators, PEU2, PEU3 and PEU4, that have outer loading ≥ 0.7. For the Attitude toward Using variable (ATU), there are six indicators that have outer loading ≥ 0.7, those are ATU1, ATU2, ATU4, ATU5, ATU6, and ATU7. For the Behavioral Intention to Use variable (BIU), all indicators have outer loading ≥ 0.7. Meanwhile, for the Actual System Use variable (ASU), there is one indicator, ASU1, that has outer loading ≥ 0.7 (valid). Since there are invalid indicators in the first model, the model is revalidated, which leads to the following results:

Table 2. Convergent Validity Results for the Measurement Model After Invalid Indicators Are Eliminated

Indicator	Outer Loading	Indicator	Outer Loading
SN1	0.791	PU2	0.943
SN2	0.930	PU3	0.931
I1	0.923	PU4	0.867
I3	0.654	PEU2	0.934
T1	0.857	PEU3	0.931

T2	0.832	PEU4	0.958
T3	0.808	ATU1	0.923
T4	0.869	ATU2	0.929
T5	0.773	ATU4	0.876
E2	0.969	ATU5	0.786
E3	0.960	ATU6	0.880
FC1	0.863	ATU7	0.920
FC2	0.798	BIU1	0.841
FC3	0.804	BIU2	0.918
		BIU3	0.893
		ASU1	1.000

After reiterating the validity test, it was determined that there was still one invalid indicator variable; therefore, the validity test was repeated by eliminating the invalid variable to make all indicator variables valid.

Table 3. Measurement Model Convergent Validity Test Results After All Invalid Indicators Removed

Indicator	**Outer Loading**	**Indicator**	**Outer Loading**
SN1	0.791	PU2	0.943
SN2	0.930	PU3	0.931
I1	1.000	PU4	0.868
T1	0.857	PEU2	0.934
T2	0.832	PEU3	0.931
T3	0.808	PEU4	0.958
T4	0.869	ATU1	0.923
T5	0.773	ATU2	0.929
E2	0.969	ATU4	0.876
E3	0.960	ATU5	0.786
FC1	0.863	ATU6	0.880
FC2	0.798	ATU7	0.920
FC3	0.804	BIU1	0.841
		BIU2	0.918
		BIU3	0.893
		ASU1	1.000

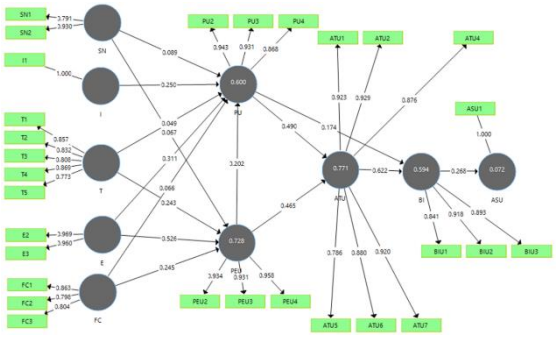

Figure 6. Evaluation Model (Preliminary Measurement of Technology Acceptance in the Learning Process for Junior High School Teachers in Konawe Regency)

b. Discriminant Validity Test

The following examination is the discriminant validity test which relates to the principle that variables measuring different latent variables (constructs) should not be highly correlated (Ghozali, 2012). There are numerous ways to determine discriminant validity, including:

1) Fornell-Larcker criteria

The first method for convergent validity testing is the Fornell-Larcker method which is the square of the Average Variance Extracted (AVE) value of the construct or latent variable. If the Fornell-Larcker criterion value for each construct is greater than the correlation between the construct and other constructs, then the indicator variable is discriminantly valid (Ghozali & Latan, 2015; Henseler, Ringle, & Sarstedt, 2015).

Table 4. Results of Discriminant Validity Tests Based on Fornell-Larcker Criteria

Latent Variable	Actual System Use	Attitude Toward Using	Behavioral Intention to Use	Experience	Facilitating Conditions	Innovativeness	Perceived Ease of Use	Perceivedd Usefulnes	Subjectivee Norm	Training
Actual System Use	**1.000**									
Attitude Toward Using	0.121	**0.887**								
Behavioral Intention to Use	0.268	0.764	**0.885**							
Experience	0.142	0.702	0.547	**0.964**						
Facilitatingg Conditions	0.026	0.404	0.439	0.350	**0.822**					
Innovativeness	0.432	0.624	0.535	0.583	0.194	**1.000**				
Perceived Ease of Use	0.072	0.803	0.667	0.786	0.520	0.569	**0.941**			
Perceivedd Usefulness	0.426	0.811	0.679	0.700	0.369	0.620	0.690	**0.914**		
Subjectivee Norm	0.022	0.426	0.218	0.348	0.299	0.393	0.395	0.409	**0.863**	
Training	0.060	0.639	0.514	0.620	0.292	0.532	0.661	0.554	0.298	**0.829**

Based on Table 4 above, it is indicated the Fornell-Larcker criterion value for each construct is higher than the correlation between other constructs, indicating its discriminant validity.

2) Main Factor Cross-loading Values

The cross-loading value, which describes the correlation between an indicator and its construct and other constructs (latent variables), can be used to determine discriminant validity. If the correlation between the construct and its indicators is higher than the correlation with other constructs, this means that the latent construct can predict its indicator better than other constructs (Ghozali & Latan, 2015; Henseler, Ringle, & Sarstedt, 2015). The discriminant validity test results for each indicator are shown in Table 5.

Tabel 5. Results of Discriminant Validity Tests Based on Cross-loading

Laten indicator	Subjective Norm	Innovativenes	Training	Experience	Facilitating Conditions	Perceivedd Usefulnes	Perceived Ease of Use	Attitude Toward Using	Behavioral Intention to Use	Actual System Use
SN1	**0.791**	0.148	0.216	0.282	0.348	0.282	0.216	0.337	0.100	-0.109
SN2	**0.930**	0.463	0.289	0.320	0.211	0.406	0.425	0.396	0.245	0.096
I1	0.393	**1.000**	0.532	0.583	0.194	0.620	0.569	0.624	0.535	0.432
T1	0.335	0.636	**0.857**	0.658	0.222	0.680	0.617	0.613	0.368	0.221
T2	0.209	0.423	**0.832**	0.415	0.148	0.428	0.457	0.433	0.387	0.071
T3	0.226	0.330	**0.808**	0.488	0.160	0.299	0.444	0.320	0.299	-0.029
T4	0.187	0.355	**0.869**	0.565	0.338	0.425	0.626	0.622	0.580	-0.037
T5	0.252	0.383	**0.773**	0.382	0.323	0.358	0.545	0.582	0.480	-0.043
E2	0.309	0.602	0.589	**0.969**	0.350	0.712	0.806	0.708	0.560	0.219
E3	0.367	0.518	0.610	**0.960**	0.323	0.633	0.703	0.642	0.490	0.044
FC1	0.272	0.154	0.290	0.455	**0.863**	0.285	0.569	0.418	0.473	-0.090
FC2	0.249	0.186	0.172	0.136	**0.798**	0.114	0.261	0.214	0.239	-0.011
FC3	0.218	0.157	0.223	0.177	**0.804**	0.430	0.358	0.301	0.301	0.168
PU2	0.456	0.551	0.513	0.749	0.353	**0.943**	0.683	0.742	0.639	0.365
PU3	0.387	0.542	0.493	0.616	0.374	**0.931**	0.650	0.781	0.525	0.371
PU4	0.274	0.608	0.513	0.548	0.285	**0.868**	0.558	0.701	0.697	0.433
PEU2	0.424	0.530	0.646	0.743	0.452	0.674	**0.934**	0.707	0.529	0.114
PEU3	0.241	0.458	0.572	0.682	0.545	0.536	**0.931**	0.744	0.694	-0.012
PEU4	0.438	0.610	0.644	0.788	0.477	0.727	**0.958**	0.812	0.663	0.095
ATU1	0.390	0.564	0.588	0.759	0.310	0.817	0.802	**0.923**	0.594	0.090
ATU2	0.452	0.561	0.613	0.712	0.381	0.758	0.776	**0.929**	0.690	0.044
ATU4	0.523	0.656	0.564	0.564	0.400	0.692	0.706	**0.876**	0.553	0.100
ATU5	0.285	0.452	0.494	0.486	0.284	0.532	0.610	**0.786**	0.750	0.052
ATU6	0.256	0.591	0.557	0.588	0.413	0.778	0.677	**0.880**	0.802	0.241
ATU7	0.374	0.493	0.580	0.607	0.359	0.715	0.695	**0.920**	0.660	0.105
BIU1	0.176	0.574	0.479	0.549	0.477	0.522	0.575	0.613	**0.841**	0.289
BIU2	0.138	0.499	0.451	0.516	0.240	0.659	0.584	0.647	**0.918**	0.362
BIU3	0.264	0.356	0.438	0.392	0.460	0.615	0.613	0.765	**0.893**	0.062
ASU1	0.022	0.432	0.060	0.142	0.026	0.426	0.072	0.121	0.268	**1.000**

Based on Table 5 above, each indicator variable has a higher correlation with its

respective construct than with other latent constructs/ variables.

c. Reability Test

After the completion of the measurement validity, the next phase involves evaluating reliability of the latent variable (construct). This examination can be accomplished by reviewing the composite reliability values. Acceptable composite reliability must be higher than 0.70 (Ghozali & Latan, 2015).

Table 6. Results of Composite Reliability Test

Reliability Test / Latent Variables	Composite Reliability
Subjectivee Norm	0.853
Innovativenesss	1.000
Training	0.916
Experiencee	0.964
Facilitatingg Conditions	0.862
Perceivedd Usefulness	0.939
Perceived Ease of Use	0.959
Attitude Toward Using	0.957
Behavioral Intention to Use	0.915
Actual System Use	1.000

Table 6 above shows that all constructs have a composite reliability value> 0.70, so that the indicator variable measures the latent variable (construct) consistently.

Structural Model Evaluation (Inner Model)

a. Construct Significance Test Outer-loading

After completing the measurement model evaluation phase, The next phase involves verifying that the reflective model is valid and trustworthy as a construct relied upon to provide accurate information, which is demonstrated by the significance test for the outer-loading construct. The results of test are provided in Table 7.

Tabel 7. Test of Construct Significance Outer-loading

Statistics / Variable	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P-Values/ Signifikansi
SN1 <- Subjectivee Norm	0.791	0.250	3.166	0.002
SN2 <- Subjectivee Norm	0.930	0.116	8.004	0.000
I1 <- Innovativenesss	1.000	0.000	-	-
T1 <- Training	0.857	0.053	16.256	0.000
T2 <- Training	0.832	0.070	11.835	0.000
T3 <- Training	0.808	0.088	9.131	0.000
T4 <- Training	0.869	0.071	12.239	0.000
T5 <- Training	0.773	0.099	7.816	0.000
E2 <- Experiencee	0.969	0.013	76.843	0.000

E3 <- Experiencee	0.960	0.030	31.680	0.000
FC1 <- Facilitatingg Conditions	0.863	0.224	3.856	0.000
FC2 <- Facilitatingg Conditions	0.798	0.261	3.056	0.002
FC3 <- Facilitatingg Conditions	0.804	0.202	3.988	0.000
PU2 <- Perceivedd Usefulness	0.943	0.025	36.995	0.000
PU3 <- Perceivedd Usefulness	0.931	0.031	30.270	0.000
PU4 <- Perceivedd Usefulness	0.868	0.051	17.168	0.000
PEU2 <- Perceived Ease of Use	0.934	0.050	18.827	0.000
PEU3 <- Perceived Ease of Use	0.931	0.051	18.430	0.000
PEU4 <- Perceived Ease of Use	0.958	0.026	36.264	0.000
ATU1 <- Attitude Toward Using	0.923	0.037	24.929	0.000
ATU2 <- Attitude Toward Using	0.929	0.033	27.893	0.000
ATU4 <- Attitude Toward Using	0.876	0.072	12.258	0.000
ATU5 <- Attitude Toward Using	0.786	0.072	10.888	0.000
ATU6 <- Attitude Toward Using	0.880	0.047	18.570	0.000
ATU7 <- Attitude Toward Using	0.920	0.026	35.628	0.000
BIU1 <- Behavioral Intention to Use	0.841	0.078	10.808	0.000
BIU2 <- Behavioral Intention to Use	0.918	0.026	35.077	0.000
BIU3 <- Behavioral Intention to Use	0.893	0.061	14.670	0.000
ASU1 <- Actual System Use	1.000	0.000	-	-

Based on Table 7, it can be seen that all constructs have a significance value <0.05 (confidence level is 95%), Therefore, it is possible to assert that all reflective constructs are valid and persuade researchers to continue with the structural model analysis procedure (inner-model) (Ghozali & Latan, 2015).

b. Research Hypothesis Test (Significance Test of Structural Model)

The next stage involves testing the structural model hypothesis, particularly, analyzing the level of causal relationship between constructs and determining the significance of this relationship (P-value). The calculation outcomes are shown in table 8.

Table 8. Research Hypothesis Test

Relationship between Variables	Parameters/ Original Sample (O)	Standard Deviation	T Statistics (|O/STDEV|)	P Values/ Signifikansi
Subjective Norm -> Perceived Ease of Use	0.067	0.112	0.594	0.553
Subjectivee Norm -> Perceivedd Usefulness	0.089	0.129	0.684	0.494
Innovativenesss -> Perceived Usefulness	0.250	0.150	1.661	0.097
Training -> Perceived Ease of Use	0.243	0.156	1.559	0.120
Training -> Perceivedd Usefulness	0.049	0.125	0.390	0.696

Experience -> Perceived Ease of Use	0.526	0.163	3.234	0.001
Experiencee -> Perceived Usefulness	0.311	0.326	0.954	0.341
Facilitating Conditions -> Perceived Ease of Use	0.245	0.142	1.723	0.086
Facilitating Conditions -> Perceived Usefulness	0.066	0.182	0.363	0.717
Perceived Ease of Use -> Perceived Usefulness	0.202	0.270	0.750	0.454
Perceived Ease of Use -> Attitude Toward Using	0.465	0.169	2.751	0.006
Perceived Usefulness -> Behavioral Intention to Use	0.174	0.270	0.646	0.519
Perceived Usefulness -> Attitude Toward Using	0.490	0.157	3.130	0.002
Attitude Toward Using -> Behavioral Intention to Use	0.622	0.241	2.583	0.010
Behavioral Intention to Use -> Actual System Use	0.268	0.165	1.629	0.104

Based on Table 8, only four relationships between latent variables have a statistically significant impact α = 0.05, including:

1) There is an effect of experience on Perceived Ease of Use by a parameter size of 0.454 where the significance value of 0.001 is less than α = 0,05;
2) There is an effect of Perceived Usefulness on Attitude toward Using with a parameter size of 0.49 and a significance level of 0.001 that is less than α = 0.05;
3) There is an effect of Perceived ease of use on Attitude toward using with a parameter size of 0.465, where the significance value of 0.002 is less than α = 0.05.
4) There is an effect of Attitude toward using on Behavioral Intention to Use with a parameter size of 0.623 where the significance value of 0.011 is less than α a = 0.05;

Based on Table 8, there are only two significant relationships between latent variables at a significance level of α = 0.10.

1) There is a significant influence of innovativeness on Perceived Usefulness with a large influence (parameter) of 0.250, where the significance value of 0.097 is less than α = 0.1;
2) There is an effect of Facilitating Conditions on Perceived Ease of Use with a parameter of 0.245 and a significance value of 0.086 that is less than α = 0.1;

The path diagram of the relationship between latent variables can be seen in Figure 5.

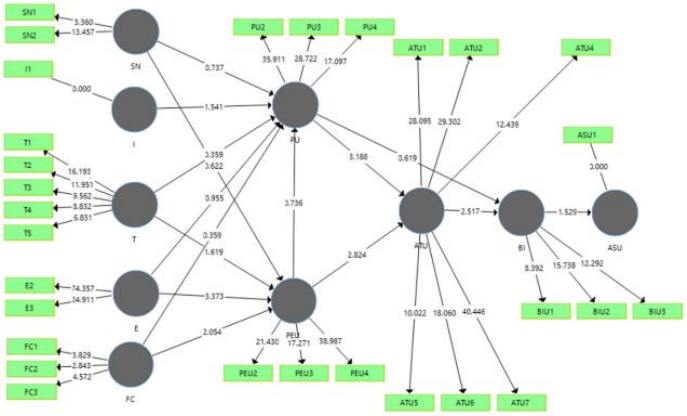

Figure 7. Path Diagram of Research Model

c. Evaluation of Inner Model

Several methods are used to evaluate the overall model, including the coefficient of determination (R2), the Effect Size value (f2), and the goodness of fit criteria based on the Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI) values. The calculation results can be seen as follows:

1) Coefficient of Determination (R^2)

Based on Table 9, the R2 value of the Actual System Use variable is 0.072, and the Adjusted R2 value is 0.056. This structural model is classified as weak based on the R2 value. The R2 value of the Attitude Toward Using variable is 0.771, and the Adjusted R2 value is 0.763. This structural model is classified as high based on the R2 value. The R2 value of the Behavioral Intention to Use variable is 0.594, and the Adjusted R2 value is 0.580. This structural model is classified as medium based on the R2 value. The R2 value of the Perceived Ease of Use variable is 0.728, and the Adjusted R2 value is 0.708. This structural model is classified as medium based on the R2 value. The R2 value of the variable Perceived Usefulness is 0.600, and the adjusted R2 value is 0.554. In other words, the structural model of this study based on the value of R2 is categorized as medium, according to Sarstedt, Ringle, and Hair (2011: 145), the value of R2 on endogenous latent variables of 0.75 is included in the high category (substantial), 0.50 is included in the moderate category, and 0.25 is included in the weak category.

Tabel 9. Evaluation of Structural Model Based on R^2 Value

	R^2	**Adjusted R^2**
Actual System Use	0.072	0.056
Attitude Toward Using	0.771	0.763
Behavioral Intention to Use	0.594	0.580
Perceived Ease of Use	0.728	0.708
Perceived Usefulness	0.600	0.554

2) Goodness of Fit Model

In addition to the R2 criteria, the Standardized Root Mean Square Residual (SRMR)

and Normed Fit Index (NFI) values can be used to determine the goodness of fit (GoF) criteria for the research structural model. The SRMR and NFI values are used to determine whether or not the structural model developed by researchers is truly accurate. Table 10 below shows the results of the calculations.

Table 8. Evaluation of the Structural Model Based on Standardized Root Mean Square Residual (SRMR) Value and Normed Fit Index (NFI)

	Saturated Model	Estimated Model
SRMR	0.095	0.101
NFI	0.450	0.435

According to Garson, (2016) the recommended SRMS value is less than 0.08. However, below 0.10 is also considered acceptable. Based on Table 10, the SRMR value of the research structural model is 0.095 <0.1; so the model is considered fit. Similarly, the closer the NFI value is to 1, the better the structural model is considered (Nabilah, Hermuningsih, & Gendro, 2020). This means that the structural model that was created does not have a fit mode.

At the 5% significance level, The results of testing the hypotheses indicate that only four variables affect the model of technology acceptance in the learning process of junior high school/ MTs teachers in Konawe Regency. The variable is experience on Perceived Ease of Use is 0.454, and the R2 value is 0.728 (72.8%). This indicates that for every one unit increase in teacher experience, there is a 0.454 unit increase in the perceived ease of using learning technology in the classroom. Whereas 27.2% of the perceived ease with which teachers use learning technology in the classroom is influenced by other variables not observed in this study. Furthermore, Perceived Usefulness to Attitudde toward Using with a large parameter of 0.490 and the effect of Perceived ease of use on Attitudde toward using with a large effect of 0.465, where the R2 value of attitude to use Attitudde toward using is 0.771 (77.1%). This indicates that for every one increment in the perceived usefulness of teachers, the attitude of teachers to use learning technology in the classroom will increase by 0.49 units, and for every one unit increase in the perceived ease of teachers in using learning technology, the attitude will increase by 0.46 units.

These results are line up with the research by Elizabeth & Tinaliah (2021); Gerhana, Irfan, & Cepy (2017); Liao, Wu, & Le (2022); Rimawati, Vulandari, & Prabowo (2018); Srinadi & Puspita (2017); Suparman (2020). In other words, the usefulness and ease of using technology in the classroom contribute positively to teachers' enjoyment and frequent use of learning technology whether in the form of computer/laptop/smartphone devices, internet access, E-Learning, or other learning technologies. In addition, 22.9% of teachers' attitudes toward the use of learning technology in the classroom are influenced by variables that were not observed in this study. The last variable, Attitude Toward Using on Behavioral Intention to Use Technology in the Learning Process in Class, has a significant causal relationship (influence) at $\alpha = 5\%$, with a magnitude of 0.622 and an R2 value of 0.594 (59.4%).

The findings of this study are also in line with the results of studies by Gerhana,

Irfan, & Cepy (2017); Rimawati, Vulandari, & Prabowo (2018); Srinadi & Puspita (2017); Suparman 2020). Several studies show that every unit increase in teacher attitudes toward technology can increase behavioral interest in using technology in the classroom by 0.622 units, where 40.6% of behavior interest in using technology in the classroom learning process is affected by other factors not observed in this study.

The results of hypothesis testing indicate, at a significance level of 1%, that only two variables influence the technology acceptance model in the learning process of junior high school/ MTs teachers in Konawe Regency. The variable is Innovativeness on Perceived Usefulness with an influence of 0.250 and an R2 value of 0.728 (72.8%). This shows that one unit increase in teacher innovation can contribute 0.250 unit in the perceived usefulness of learning technology in the classroom. Whereas 27.2% of the perceived usefulness of teachers' use of learning technology in the classroom is influenced by other variables not observed in this study. The results also show that teachers' performance, effectiveness, and productivity at work will improve the more they learn from the internet and find information using a computer, laptop, or phone.

The next variable, facilitating conditions on perceived ease of use with an effect of 0.245 and an R2 value of 0.728 (72.8%). This indicates that a one-unit increase in teacher innovation can result in a 0.245% in the perceived ease of using learning technology in the classroom. In contrast, 27.2% of teachers' perceptions of the ease of using learning technology in the classroom is influenced by variables not observed in this study. The effect of conditions that facilitate teachers' acceptance of learning technologies on perceived ease suggests that Teachers' perceived ease in using learning technology in the classroom depends on their need for facilitators from other people or system tutorials. Teachers need assistance from others or system tutorials in order to effectively adopt technology, so that it is simple to use. Teacher performance will also be enhanced by a positive attitude toward technology adoption. As reported by Hadi (2021), there is a positive correlation between the acceptance of learning technology and teacher performance.

CONCLUSION

Based on the the results of descriptive data analysis, both male and female teachers have subjective norms, levels of innovation, levels of training, experience, facilitating conditions, perceptions of usefulness, perceptions of ease of use, attitudes to use, behavioral interest in using, and actual system usage that is in accepting technology in the learning process in class. When it comes to incorporating technology into the classroom learning process, teachers in each subject generally fall into the moderate category. However, ICT teachers, in particular, have a positive attitude toward the use of learning technology systems or devices in the classroom. In general, teachers at each of the last levels of education have a medium level of technology acceptance in the classroom. However, teachers with a doctoral degree have the most experience with and positive attitudes toward the use of learning technology systems and devices in the classroom. Teachers with a high school education have a low perceived ease of use in

accepting technology in the classroom learning process.

Acceptance of technology in the classroom learning process is generally moderate among civil servants, PPPK teachers, and non-ASN teachers. Teachers with PPPK employment status, on the other hand, have a level of training, experience, perception of usefulness, perception of ease of use, attitude to use, and behavioral interest in using technology in the classroom learning process. Teachers with non-ASN employment status have a low acceptance of technology in the classroom learning process and a low attitude toward using the actual system.

Teachers who use mobile devices such as smartphones, netbooks, and laptops have a moderate level of technology acceptance in the classroom. Teachers who use their own devices have a moderate level of acceptance of technology in the classroom learning process, whereas those who use office-owned devices have a high level of acceptance. Teachers who use office-owned devices have a medium acceptance of technology in the classroom learning process, given their level of experience.

Teachers who use Telkomsel and Three provider have a moderate category in accepting technology in the classroom learning process. Meanwhile, teachers who use XL Axiata providers have a moderate level of technology acceptance in the classroom. but the perceived ease of use of the system is in the low category. Teachers who use the school WiFi have a medium category, a high level of experience and perceived ease of use, and low actual system usage when it comes to embracing technology in the classroom learning process

In the classroom learning process, the acceptance of technology by teachers of various instructional periods falls into a moderate category. However, especially among teachers with 21 to 30 years of teaching experience, have facilitating conditions and moderate category of Perceived Ease of Use towards the use of learning technology systems in the classroom. Subjective norms of teachers with a teaching period of 31 to 40 years are in the high category towards the use of learning technology systems. Subjective norms of teachers with a teaching period of 31 to 40 years are in the high category towards the use of learning technology systems in the classroom.

The results of hypothesis testing show that there is an effect of experience on Perceived Ease of Use with an amount of 0.454 where the significance value of 0.001 is less than than $\alpha = 0.05$. There is an effect of Perceived Usefulness on Attitudde toward using with a parameter of 0.490 where the significance value of 0.001 is less than $\alpha = 0.05$. There is an effect of Perceived ease of use on Attitudde toward using with a parameter of 0.465 where the significance value of 0.002 is less than $\alpha = 0.05$. There is an effect of Attitude toward using on Behavioral Intention to Use with a parameter of 0.623 where the significance value of 0.011 is smaller than α a = 0.05. There is an effect of Innovativeness on Perceived Usefulness with a parameter of 0.250 where the significance value of 0.097 is less than $\alpha = 0.1$. There is an effect of Facilitating Conditions on Perceived Ease of Use with a parameter size of 0.245 where the significance value of 0.086 is less than $\alpha = 0.1$.

As an implication of this research, experience and facility conditions are the key for

teachers to easily accept and use learning technology. Experience is also related to teachers' perceptions about the usefulness of technology in the classroom learning process. Therefore, it is recommended that teachers continue to improve their skills. School leaders and policy makers are also expected to pay more attention to teacher skills and facilities that support the implementation of learning in the classroom. The more positive and interested teachers are in using learning technology, the easier it is for them to accept the technology. It is recommended that further research examine the impact of technology acceptance on teacher performance during the learning process. In addition, future researchers can examine the acceptance of educational technology among students. So that a comparison can be obtained between teacher data and student data when implementing learning technology.

ACKNOWLEDGMENT

Thanks are due to the Ministry of Religious Affairs of the Republic of Indonesia for funding this research. In addition, gratitude are addressed to all who have participated in and assisted with the implementation of this research.

REFERENCES

Abubakari, M. S., & Zakaria, G. A. N. (2023). Technology Acceptance Model in Islamic Education (TAMISE) for Digital Learning: Conceptual Framework Proposal. *Canadian Journal of Educational and Social Studies*, *3*(4), 25–42. https://doi.org/10.53103/cjess.v3i4.153.

Aini, N. (2021). *Pengembangan Media Pembelajaran Matematika Berbasis Multimedia Interaktif di Kelas VII SMPN 3 Kendari*. IAIN Kendari.

Akar, S. G. M. (2019). A Structural Model for Relationship between Web Pedagogic Content Knowledge and Technology Acceptance of Preservice Teachers. *Malaysian Online Journal of Educational Technology*, *7*(1), 1–14. https://doi.org/10.17220/mojet.2019.01.001.

Alsaffar, R. D., Alfayly, A., & Ali, N. (2022). Extended Technology Acceptance Model for Multimedia-Based Learning in Higher Education. *International Journal of Information and Education Technology*, *12*(12), 1300–1310. https://doi.org/10.18178/ijiet.2022.12.12.1754.

Anindita, R., Lukito, L., & Amalia, L. (2023). Teachers and Technostress During Covid-19 Pandemic : A Modification of Technology Acceptance Model. *Proceedings of the International Conference on Education, Humanities, Social Science (ICEHoS 2022)*, 237–249. https://doi.org/10.2991/978-2-38476-088-6.

Arikunto, S. (2012). *Dasar-Dasar Evaluasi Pendidikan* (R. Damayanti (ed.); 2nd ed.). Jakarta: Bumi Aksara.

Ayele, A. A., & Birhanie, W. K. (2018). Acceptance and use of e-learning systems: the case of teachers in technology institutes of Ethiopian Universities. *Applied Informatics*, *5*(1), 1–11. https://doi.org/10.1186/s40535-018-0048-7.

Azmi, K., Zasmita, A. A., & Sholihat, N. (2021). Science Teacher Technology Acceptance Model On Zoom Cloud Meeting Application. *Natural Science: Jurnal Penelitian*

Bidang IPA Dan Pendidikan IPA, *7*(2), 96–103. https://doi.org/10.15548/nsc.v7i2.3089.

Budiman, K., Arifudin, R., Sugiharti, E., Abidin, Z., & Purwinarko, A. (2020). Analisis Keberterimaan Pengguna Terhadap Penerapan Online Assesment Tool Ditengah Pembatasan Sosial Covid-19 Menggunakan Technology Acceptence Model. In A. M. Muslim, A. Purwinarko, B. Prasetiyo, T. A. Putra, R. Hijriyani, A. Adiansya, A. Khasanah, K. Laksono, & R. I. Aditya (Eds.), *Seminar Nasional Ilmu Komputer (SNIK 2020)* (pp. 89–97). Universitas Negeri Semarang.

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.

Dishaw, M. T., Strong, D. M., & Bandy, D. B. (2002). Extending the task-technology fit model with self-efficacy constructs. *Eighth Americas Conference on Information Systems*, 1021–1027. https://aisel.aisnet.org/amcis2002/143.

Dumpit, D. Z., & Fernandez, C. J. (2017). Analysis of the use of social media in Higher Education Institutions (HEIs) using the Technology Acceptance Model. *International Journal of Educational Technology in Higher Education*, *14*(1). https://doi.org/10.1186/s41239-017-0045-2.

Elizabeth, T., & Tinaliah, T. (2021). Analisis Sistem Pembelajaran Online XYZ Menggunakan Technology Acceptance Model (TAM). *EXPERT: Jurnal Manajemen Sistem Informasi Dan Teknologi*, *11*(1), 15–20. https://doi.org/10.36448/expert.v11i1.1959.

Fahmiyah, I., Utami, I. Q., Ningrum, R. A., Fakhruzzaman, M. N., Pratama, A. I., & Triangga, Y. M. (2023). Examining the Effect of Teacher's Age Difference on Learning Technology Adoption Using Technology Acceptance Model. *AIP Conference Proceedings*, *2536*(May). https://doi.org/10.1063/5.0123943.

Frøsig, T. B. (2017). Expanding the Technology Acceptance Model (TAM) to Consider Teachers Needs and Concerns in the Design of Educational Technology (EdTAM). *JET: International Journal of Emerging Technologies in Learning*, *18*(November 2017), 164–187. https://doi.org/10.3991/ijet.v18i16.42319.

Garson, G. D. (2016). Partial Least Squares: Regression and Structural Equation Models. In *Garson* (3rd ed.). Asheboro: Statistical Associates Publishing.

Gerhana, Y. A., Irfan, M., & Cepy, S. (2017). Implementasi Technology Acceptance Model Untuk Mengukur Penerimaan Guru Terhadap Inovasi Pembelajaran (Studi Kasus Model Pembelajaran CBR di SMA). *Istek*, *X*(2), 52–67. https://journal.uinsgd.ac.id/index.php/istek/article/view/1474.

Ghozali, I., & Fuad. (2012). *Structural Equation Modeling: Teori, Konsep, dan Aplikasi dengan Program LISREL 8.80* (3rd ed.). Semarang: Badan Penerbit Universitas Diponegoro.

Ghozali, I., & Latan, H. (2015). *Partial Least Squares: Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0 Untuk Penelitian Empiris* (2nd ed.). Semarang: Badan Penerbit Universitas Diponegoro.

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.

Hong, X., Zhang, M., & Liu, Q. (2021). Preschool Teachers' Technology Acceptance During

the COVID-19: An Adapted Technology Acceptance Model. *Frontiers in Psychology*, *12*(June). https://doi.org/10.3389/fpsyg.2021.691492.

Jatmikowati, T. E., Rachman, A. U., & Adwitiya, A. B. (2020). Technology Acceptance Model in using E-learning on Early Childhood Teacher Education Program's student during pandemic. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *5*(2), 1501–1511. https://doi.org/10.31004/obsesi.v5i2.801.

Lee, B. C., Yoon, J. O., & Lee, I. (2009). Learners' acceptance of e-learning in South Korea: Theories and results. *Computers and Education*, *53*(4), 1320–1329. https://doi.org/10.1016/j.compedu.2009.06.014.

Lee, S. M., Kim, I., Rhee, S., & Trimi, S. (2006). The role of exogenous factors in technology acceptance : The case of object-oriented technology The role of exogenous factors in technology acceptance : The case of object-oriented technology. *Information & Management*, *42*(2006), 469–480. https://doi.org/10.1016/j.im.2005.11.004.

Lestari, A. F., Amalia, H., & Puspita, A. (2021). Penerimaan Teknologi Zoom Cloud Meeting terhadap Minat Belajar Siswa Dari Rumah Dengan TAM. *INOVTEK Polbeng - Seri Informatika*, *6*(1), 27--36. https://doi.org/10.35314/isi.v6i1.1857.

Liao, Y. K., Wu, W. Y., Le, T. Q., & Phung, T. T. T. (2022). The Integration of the Technology Acceptance Model and Value-Based Adoption Model to Study the Adoption of E-Learning: The Moderating Role of e-WOM. *Sustainability (Switzerland)*, *14*(2), 1–16. https://doi.org/10.3390/su14020815.

Lin, Y., & Yu, Z. (2023). Extending Technology Acceptance Model to Higher-Education Students' Use of Digital Academic Reading Tools on Computers. *International Journal of Educational Technology in Higher Education*, *20*(1), 1–24. https://doi.org/10.1186/s41239-023-00403-8.

Nabilah, Z., Hermuningsih, S., & Gendro, W. (2020). Pengaruh Operating Leverage Dan Likuiditas Terhadap Nilai Perusahaan Dengan Struktur Modal Sebagai Variabel Intervening Pada Perusahaan Sektor Consumer Goods Industry Yang Terdaftar Di Bursa Efek Indonesia Tahun 2016 - 2018. *Bisman (BIsnis & Manajemen)*, *3*(2015), 148–159. https://doi.org/10.37112/bisman.v3i2.794.

Naibaho, R. S. (2017). Peranan Dan Perencanaan Teknologi Informasi Dalam Perusahaan. *Jurnal Warta*, *52*(1), 1–2. https://doi.org/10.46576/wdw.v0i52.253.

Övez, F. T. D., & Demİr, S. (2023). Examination of Secondary School Mathematics Teachers ' Digital Literacy Self-Efficacy , E-learning Readiness , Technology Acceptance Levels , and Attitudes Towards Distance Education. *Journal of Science and Mathematics Education*, *17*(October), 371–397. https://doi.org/10.17522/balikesirnef.1352405.

Rahmawati, R. N., & Narsa, I. M. (2019). Penggunaan e-learning dengan Technology Acceptance Model (TAM). *Jurnal Inovasi Teknologi Pendidikan*, *6*(2), 127–136. https://doi.org/10.21831/jitp.v6i2.26232.

Rimawati, E., Vulandari, R. T., & Prabowo, I. A. (2018). Analisis Technology Acceptance Model Dalam Pemanfaatan Internet Sebagai Media Belajar Siswa. In P. Hadi, Sarsono, H. A. A. Putri, N. Oktyajati, & R. Y. Seto (Eds.), *Prosiding Diseminasi Hasil Penelitian dan Pengabdian kepada Masyarakat Lembaga Penelitian Pengembangan dan Pengabdian Kepada Masyarakat* (pp. 70–82). Universitas Islam Batik Surakarta.

Salsabila, U. H., Sari, L. I., Lathif, K. H., Lestari, A. P., & Ayuning, A. (2020). Peran Teknologi Dalam Pembelajaran Di Masa Pandemi Covid-19. *Al-Mutharahah: Jurnal*

Penelitian Dan Kajian Sosial Keagamaan, *17*(2), 188–198. https://doi.org/10.46781/al-mutharahah.v17i2.138.

Saptomo, W. L. Y., & Rimawati, E. (2020). Path Analisis Technology Acceptance Model pada Penerapan Blended Learning. *Jurnal Sains Dan Informatika*, *6*(2), 130–138. https://doi.org/10.34128/jsi.v6i2.235.

Setiyani, L., Effendy, F., & Slamet, A. A. (2021). Using Technology Acceptance Model 3 (TAM 3) at Selected Private Technical High School: Google Drive Storage in E-Learning. *Utamax : Journal of Ultimate Research and Trends in Education*, *3*(2), 80–89. https://doi.org/10.31849/utamax.v3i2.6746.

Sinaga, A. V. (2023). Peranan Teknologi dalam Pembelajaran untuk Membentuk Karakter dan Skill Peserta Didik Abad 21. *Journal on Education*, *06*(01), 2836–2846. https://doi.org/10.31004/joe.v6i1.3324.

Siregar, N. R. (2017). Persepsi Siswa Pada Pelajaran Matematika: Studi Pendahuluan Pada Siswa yang Menyenangi Game. In I. P. Perkembangan (Ed.), *Prosiding Temu Ilmiah X Ikatan Psikologi Perkembangan Indonesia* (pp. 224–232). HIMPSI. https://jurnal.unissula.ac.id/index.php/ippi/article/view/2193.

Srinadi, N. L. P., & Puspita, N. N. H. (2017). Implementasi Technology Acceptance Model pada Penggunaan Metode Pembelajaran Berbasis Teknologi Informasi. *Konferensi Nasional Sistem & Informatika 2017*, 170–174. https://knsi.stikom-bali.ac.id/index.php/eproceedings/article/view/32.

Suparman, A. (2020). Pengaruh Penerimaan Teknologi Dalam Pembelajaran E-Learning Terhadap Peningkatan Minat Belajar Siswa (Studi Kasus Di Smk Pasundan Subang). *Ijd-Demos*, *1*(2), 159–181. https://doi.org/10.31506/ijd.v1i2.18.

Syafrizal, A., Ernawati, E., & Dwiandiyanta, B. Y. (2015). Penerapan Model Technology Acceptance Model (TAM) untuk Pemahaman Media Pembelajaran Berbasis Multimedia Interaktif. *Scientific Journal of Informatics*, *2*(1), 9–14. https://doi.org/10.15294/sji.v2i1.4524.

Teo, T. (2011). Technology Acceptance in Education. In *Technology Acceptance in Education*. https://doi.org/10.1007/978-94-6091-487-4.

Teo, T. (2012). *Modelling the Influences of Beliefs on Pre- Service Teachers' Attitudes Towards Computer Use*. *3*(1), 13–22. https://doi.org/10.12973/eu-jer.1.1.13.