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ANALYSIS TECHNOLOGY ACCEPTANCE MODEL (TAM) PRE-SERVICE ELEMENTARY SCHOOL TEACHERS

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Abstract

This study seeks to reveal the level of technology acceptance of pre-service elementary school teachers, and the model of technology acceptance of pre-service elementary school teachers and analyze the relationship between the two components of pre-service elementary school teachers' TAM (perceived usefulness and perceived ease of use). This research, in its implementation, uses quantitative research methods with explanatory, descriptive research types. Data collection was carried out through an online survey. The population in this study were all students in the Madrasah Ibtidaiyah Teacher Education study program at the Islamic University of Malang and the Islamic University of Lamongan. While the sample in this study were 100 pre-service elementary school teachers (students who had already implemented PPL) in the Madrasah Ibtidaiyah Teacher Education study program, the Islamic University of Malang and the Islamic University of Lamongan, which were taken using a proportional random sample technique. The instrument used was a questionnaire containing two variables: perceived usefulness and perceived ease of use. Statistical analysis of the Structural Equation Model (SEM) was used as a data analysis method. The study results showed that the level of technology acceptance for pre-service elementary school teachers was in the high category. The goodness of fit for the chi-square table was 94.842 < 98.27018, CMIN/DF 1.232 with a probability of 0.082, RMSEA 0.048, GFI 0.905, TLI 0.986, and CFI 0.991. The size of the feasibility model is included in the "good/appropriate" category. Furthermore, the results of the analysis show that perceived usefulness (PU) has a positive and significant relationship with perceived ease of use (PEOU).

Keywords Elementary teachers, pre-service teachers, technology acceptance model.

INTRODUCTION

We are in the digital era marked by the rapid development of Information and Communication Technology (ICT). Information and Communication Technology (ICT) has grown rapidly, affecting all aspects of people's lives. So we must accept the use of technology, especially regarding educational activities (Birisci & Kul, 2019). ICT innovation puts emphasis on the use of traditional teaching techniques, changes classroom learning routines, and creates opportunities for the emergence of new teaching techniques.

21st-century learning also requires teachers to integrate ICT into learning. Teachers are increasingly confronted with integrating ICT into pedagogical practice in response to innovation and professionalization demands (Ottested, Geir & Gudmundsdottir, 2018). Research studies show that using ICT in learning can improve the preparation and presentation of material in class (Goriss-Hunter et al., 2022). In addition, integrating ICT into classroom learning has a more positive effect on student motivation and learning outcomes than traditional learning (Lin et al., 2017). ICT integration in classroom learning can also help students do homework more easily than just using the traditional method (Nawzad et al., 2018).

Innovations in the field of ICT challenge the use of conventional teaching methods, eliminate classroom practices, and offer new perspectives in developing new teaching methods. From this point of view, ICT is becoming an important component of education reform and the school curriculum. Teachers integrate ICT into learning to facilitate learning, and ICT is a learning medium with many benefits. ICT is unlikely to make a significant contribution to education reform without integrating it into education.

ICT is important in developing 21st-century teacher skills, such as creativity, problem-solving, and technological literacy. In this context, the intended use of ICT should be determined based on the quality of teachers' and students' ICT use rather than the timing, frequency, or diversity of technologies. Technology integration improves the quality of education by helping teachers do their jobs and by helping students to learn more effectively (Goktas et al., 2009). ICT is widely used by teachers in finding teaching resources and materials, preparing lesson plans, and administrative use. The use of ICT by teachers in lesson planning includes preparing lesson materials and finding resources. Second, using ICT in implementing learning includes activities such as motivating students, delivering material, and reviewing lessons to convey objectives. Third, ICT for learning enhancement includes activities encouraging students to develop 21st-century skills. The use of

technology in learning in the 21st century can encourage the communication patterns needed to create a culture of innovation and promote new ways to learn, participate, and contribute to local and global culture (de Aldecoa et al., 2015).

In the future, Madrasah Ibtidaiyah Teacher Education students at the University of Islam Malang and the University of Islam Lamongan will become Madrasah Ibtidaiyah teachers/elementary school teachers. As elementary school teachers, they are also required to be able to integrate ICT into the learning they do. Student prospective teachers are prepared to become professional teachers in their field. The elementary school teachers referred to in this study are Madrasah Ibtidaiyah Teacher Education students who have carried out Field Experience Practice.

One variable that influences the use of ICT in teaching teachers or pre-service teachers is the Technology Acceptance Model (TAM) (Adam, 2017). Davis (1989) first presented this concept when he explained why people in their work use some technologies. (Davis, 1989) proposed the Technology Acceptance Model (TAM). This model suggests that people accept technology for usability and ease of use. Teachers' beliefs about the ease of use and usefulness of technology are the most important factors influencing their acceptance of technology and their consequent intention to use it. The model was originally introduced to understand the use of technology in a business context. However, it has been used by many researchers to understand technology-integrated pedagogy in various research contexts. TAM has received substantial empirical support for its predictive validity across various technologies and user populations (Teo et al., 2018). Acceptance of technology in the educational context is a relevant factor in determining the intention of teachers or pre-service teachers to use ICT in their teaching practice (Antonietti et al., 2022).

TAM consists of three components that can be developed in research TAM consists of three components that can be developed in research. These three components are perceived usefulness, perceived ease of use, and intention to use (Davis, 1989; Ma et al., 2017). However, previous research from (Sugandini et al., 2018) showed that perceived usefulness and ease of use are the components that most influence the application of technology in learning. This is also reinforced by research (Tubaishat, 2018), that perceived usefulness and ease of use are the most influential components, especially technology integration. Another study by (Rafique et al., 2019) revealed that perceived usefulness and perceived ease of use are very important factors for users in accessing this technology.

Based on the analysis of the results of these previous studies, research related to perceived usefulness and perceived ease of use, especially for pre-service elementary school teachers, is still very much needed. Therefore, research related to the model of acceptance of technology in learning, especially perceived usefulness and perceived ease of use, must be specifically carried out on pre-service elementary school teachers according to the learning conditions. This is supported by the 21st-century learning conditions that demand the use of technology. One of the things that help teachers achieve 21st-century learning goals is their ability to use ICT as a teaching tool (Ariani, 2015). This study seeks to reveal the level of technology acceptance of pre-service elementary school teachers and analyze the relationship between the two components of TAM (perceived usefulness and perceived ease of use) of pre-service elementary school teachers. According to TAM, people will have a good attitude and desire to use the system if it is deemed useful and easy to use, eventually leading to the actual adoption and use of technology (Mutiara & Cahya, 2022). The TAM model is frequently used to predict attitudes, desires, and behavior regarding new technologies.

METHOD

This research, in its implementation, uses quantitative research methods with explanatory, descriptive research types. Explanatory, descriptive research seeks to understand, describe, and explain the relationship between variables (Creswell, 2015).

Data is collected through online surveys by distributing questionnaires in the form of Google Forms. The population in this study were all students in the Madrasah Ibtidaiyah Teacher Education Study Program, the University of Islam Malang, and the University of Islam Lamongan. At the same time, the samples in this study were 100 pre-service elementary school teachers (students who had implemented Field Experience Practice) who were taken using a proportional random sampling technique. The instrument used is a questionnaire containing two variables: perceived usefulness and perceived ease of use. The instrument was developed based on the limitations or assessment indicators from previous research conducted by Davis (1989).

Table 1. TAM Instrument Grille

Variable	Dimension	Code	Indicator	Item number
Technology	Perceived	WMQ	Work more quickly	1,2,3
Acceptance	Usefulness	JP	Job Performance	4,5,6,7
Model	(PU)	IP	Increase productivity	8,9
(TAM)		UF	Usefulness	10,11,12
	Perceived	PUS	Perceived	13,14,15

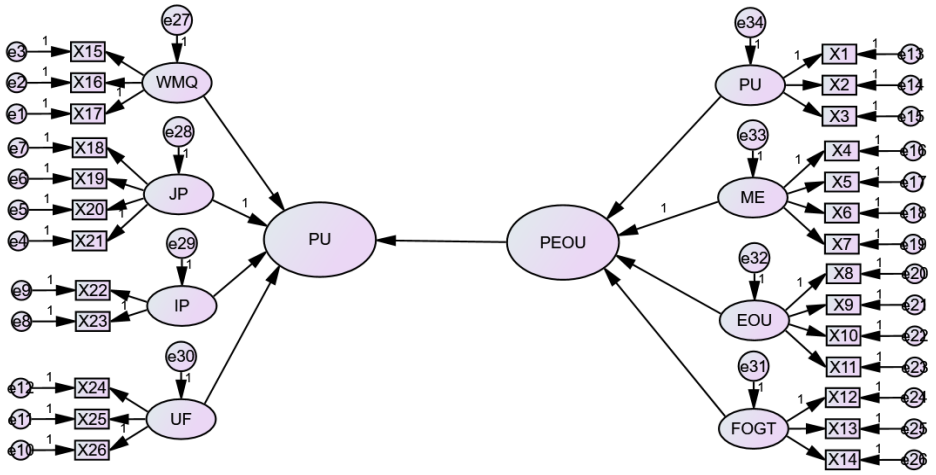
Ease of Use (PEOU)		understanding	
	ME	Mental Effort	16,17,18,19
	EOU	Ease of use	20,21,22,23
	FOGT	Flexibility of a given technology	24,25,26

The instrument is a closed questionnaire in which answers to each question have been provided with alternative answers according to the Likert scale criteria. The criteria for the Likert scale consist of: strongly agree (SS) = score 5; agree (S) = score 4; undecided (R) = score 3; disagree (TS) = score 2; strongly disagree (STS) = score 1.

Statistical analysis of Structural Equation Modeling (SEM) was used as a data analysis method. Structural Equation Modeling (SEM) explains the relationship between observed and latent variables, which offers a quantitative evaluation of the researcher's hypotheses (Schumacker, 2012). Data analysis was carried out with the help of SPSS 24 and AMOS 24. This study hypothesizes that there is a positive and significant relationship between perceived usefulness and perceived ease of use.

To make it easier to understand the flow of SEM analysis, it can be seen from the following framework:

Figure 1. Frame Work TAM



In evaluating the model used to see if the assumptions in the SEM have been fulfilled, it is necessary to check the model's suitability using an evaluation of the goodness of fit criteria. The goodness of fit criterion is used as a test of the suitability of the model. Model testing will produce numerical parameters that will be compared with the cut-off of the goodness of fit as follows.

Table 2. The Goodness of Fit Criteria

Goodness of Fit Indexs	Cut of Value
X^2 Chi-square	Expected to be smaller (than chi-table)
Probabilitas	≥ 0.05
CMIN/DF	≤ 2.00
RMSEA	≤ 0.08
GFI	≥ 0.90
AGFI	≥ 0.90
TLI	≥ 0.95
CFI	≥ 0.95

Source: (Waluyo, 2016)

FINDINGS AND DISCUSSION

Findings

1. Validity and Reliability

Before being used, the instrument has to pass validity and reliability tests first.

Table 3. Instrument Validity Test Results

Item	Component	Sig.(2-tailed)	Item	Componen	Sig.(2-tailed)
1	WMQ1	0,016	**14**	PUS2	0,034
2	WMQ2	0,027	**15**	PUS3	0,001
3	WMQ3	0,025	**16**	ME1	0,001
4	JP1	0,049	**17**	ME2	0,008
5	JP2	0,006	**18**	ME3	0,001
6	JP3	0,034	**19**	ME4	0,023
7	JP4	0,043	**20**	EOU1	0,035
8	IP1	0,039	**21**	EOU2	0,042
9	IP2	0,044	**22**	EOU3	0.002
10	UF1	0,000	**23**	EOU4	0,000
11	UF2	0,002	**24**	FOGT1	0,003
12	UF3	0,012	**25**	FOGT2	0,001
13	PUS1	0,014	**26**	FOGT3	0,042

Based on the table above, it can be explained that the value of each Sig. (2-tailed) < 0.05 means that these items are valid.

Table 4. Instrument Reliability Test Results

N of items	Cronbach's alpha
26	0,949

Based on table 4, Cronbach's Alpha value is 0.949 > 0.60. This means that the questionnaire instrument items are declared reliable.

2. Demographic Description of Research Subjects

Demographic characteristics of research subjects were taken based on age and subjects taught when pre-service elementary school teachers carried out practical field experience. The demographic data for pre-service elementary school teachers can be described as follows.

Table 5. Research Subjects Based on Age

No	Age	Frequency	Percentage
1.	20 years	12	12
2.	21 years	50	50
3.	22 years	34	34
4.	23 years	4	4
Total		**100**	**100**

Based on table 5, the respondents or research subjects consisted of pre-service elementary school teachers with 20 years of age as many as 12%, 21 years as many as 50%, 22 years as many as 34%, and 23 years as many as 4% of the total number of research subjects. Apart from age, further demographic characteristics are based on the category of subjects taught during the practical field experience.

Table 6. Research Subject Based on Subject Category taught during practical field experience

No	Age	Frequency	Percentage
1.	Thematic	67	67
2.	Islamic education	33	33
	Total	**100**	**100**

Based on table 6, 67% of the research subjects during practical field experience taught thematic subjects, and 33% taught Islamic education subjects.

3. Description of Frequency Distribution Analysis

Data on the results of the analysis of the distribution of respondents' answers can be presented in the following table.

Table 7. TAM Frequency Distribution Analysis Results

Question Items	Respondent Answer Score										Mean
	1		2		3		4		5		
	f	%	f	%	f	%	f	%	f	%	
X1	0	0	3	3.0	21	21.0	55	55.0	21	21.0	3.94
X2	0	0	8	8.0	17	17.0	58	58.0	17	17.0	3.84
X3	0	0	4	4.0	13	13.0	60	60.0	23	23.0	4.02
X4	0	0	5	5.0	13	13.0	66	66.0	16	16.0	3.93
X5	0	0	12	12.0	32	32.0	44	44.0	12	12.0	3.56
X6	0	0	8	8.0	34	34.0	50	50.0	8	8.0	3.58
X7	0	0	2	2.0	13	13.0	63	63.0	22	22.0	4.05
X8	0	0	4	4.0	18	18.0	64	64.0	14	14.0	3.88
X9	0	0	3	3.0	27	27.0	60	60.0	10	10.0	3.77
X10	0	0	4	4.0	6	6.0	64	64.0	26	26.0	4.12
X11	0	0	4	4.0	12	12.0	55	55.0	29	29.0	4.09
X12	0	0	4	4.0	14	14.0	53	53.0	29	29.0	4.07
X13	0	0	6	6.0	14	14.0	53	53.0	27	27.0	4.01
X14	0	0	4	4.0	9	9.0	50	50.0	37	37.0	4.20
X15	0	0	4	4.0	9	9.0	50	50.0	37	37.0	4.20
X16	0	0	4	4.0	13	13.0	52	52.0	31	31.0	4.10
X17	0	0	4	4.0	10	10.0	67	67.0	19	19.0	4.01
X18	0	0	4	4.0	15	15.0	59	59.0	22	22.0	3.99
X19	0	0	4	4.0	17	17.0	63	63.0	16	16.0	3.91
X20	0	0	3	3.0	10	10.0	56	56.0	31	31.0	4.15
X21	0	0	5	5.0	15	15.0	58	58.0	22	22.0	3.97
X22	0	0	4	4.0	16	16.0	57	57.0	23	23.0	3.99
X23	0	0	4	4.0	15	15.0	52	52.0	29	29.0	4.06
X24	0	0	3	3.0	9	9.0	49	49.0	39	39.0	4.24
X25	0	0	2	2.0	11	11.0	47	47.0	40	40.0	4.25
X26	0	0	2	2.0	11	11.0	30	30.0	57	57.0	4.42
Mean											4.02

The data obtained is in the form of scores based on a Likert scale with a scale range of 1 – 5. Each respondent's answer choices have the following scores.

Table 8. Score according to Likert scale interval class

No	Value	Criteria Value	Criteria Answer
1.	1,00 - 1,80	Very less	Very less
2.	1,81 - 2,60	Less	Less
3.	2,61 - 3,40	Moderate	Moderate
4.	3,41 - 4,20	High	High
5.	4,21 – 5,00	Very high	Very high

Source: (Sugiyono, 2017)

Based on the data in table 7 shows that the overall mean value is 4.02. Based on this mean value, the level of technology acceptance for pre-service elementary school teachers is in the high category. This means that pre-service elementary school teachers feel the ease of using ICT and make a lot of use of ICT in learning as long as they carry out practical field experience.

4. Structural *Equation Model* (SEM) Analysis

Structural Equation Model (SEM) analysis was used to analyze data and test the research model. Two tests were used in this analysis: the model fit test and the causality significance test through the regression coefficient test. The test results are presented in the following steps.

a. The first stage

Figure 2. First Phase SEM Full Model Analysis

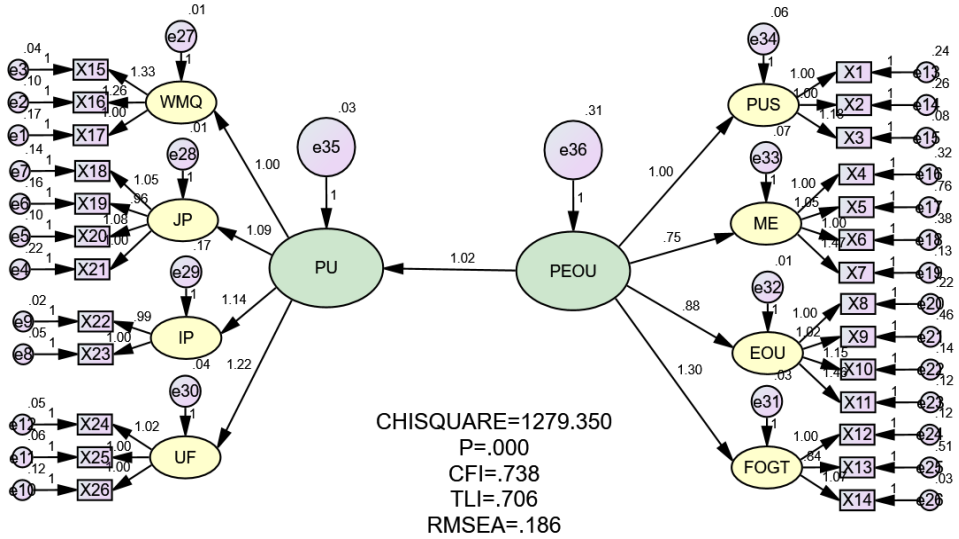


Table 8. Results of the First Stage Full Model Assessment of Normality

Variable	Min	Max	Skew	c.r.	Kurtosis
X14	1.000	5.000	-1.222	.987	2.046
X13	1.000	5.000	-1.153	.707	1.388
X12	1.000	5.000	-.972	.969	1.413
X11	1.000	5.000	-1.053	.301	1.767
X10	2.000	5.000	-.911	.718	1.883
X9	1.000	5.000	-1.254	.119	2.281
X8	2.000	5.000	-.600	.450	.820
X7	1.000	5.000	-1.514	.179	3.766
X6	1.000	5.000	-.500	2.042	.309
X5	1.000	5.000	-.610	2.492	-.068
X4	1.000	5.000	-1.134	.629	2.355
X3	1.000	5.000	-1.033	.216	2.000
X2	2.000	5.000	-.656	2.677	.254
X1	1.000	5.000	-.733	.992	1.153
X24	1.000	5.000	-1.250	.104	2.331
X25	1.000	5.000	-1.172	.783	2.131
X26	1.000	5.000	-1.498	.116	2.332
X22	1.000	5.000	-.909	2.709	1.478
X23	1.000	5.000	-.933	.810	1.252
X18	1.000	5.000	-.957	.909	1.723
X19	1.000	5.000	-.971	.963	1.984
X20	1.000	5.000	-1.146	.679	2.406
X21	1.000	5.000	-.946	.861	1.441
X15	1.000	5.000	-1.222	.987	2.046
X16	1.000	5.000	-1.017	2.151	1.483
X17	1.000	5.000	-1.229	.018	3.092

Based on the results of the first stage of the normality test, some indicators meet the normality range requirements, and some do not. The normality range requirements are the univariate c.r value -2.58 ≤ c.r ≤ 2.58. Twenty-four items are normally distributed, and two items are abnormal.

Table 9. Results of the First Phase Full Model Indicator Significance Test

			Estimate	S.E.	C.R.	P	Label
PU	<---	PEOU	1.018	.129	7.915	.001	par_19
WMQ	<---	PU	1.000				
JP	<---	PU	1.088	.114	9.537	.021	par_20
IP	<---	PU	1.142	.117	9.759	.003	par_21
UF	<---	PU	1.216	.112	10.813	.024	par_22
PUS	<---	PEOU	1.000				
ME	<---	PEOU	.749	.140	5.361	.001	par_23
EOU	<---	PEOU	.875	.125	7.024	.001	par_24
FOGT	<---	PEOU	1.298	.147	8.800	.004	par_25
X17	<---	WMQ	1.000				
X16	<---	WMQ	1.264	.105	11.993	.041	par_1
X15	<---	WMQ	1.330	.101	13.226	.023	par_2
X21	<---	JP	1.000				
X20	<---	JP	1.077	.094	11.432	.002	par_3
X19	<---	JP	.965	.094	10.285	.001	par_4
X18	<---	JP	1.046	.097	10.835	.042	par_5
X23	<---	IP	1.000				
X22	<---	IP	.988	.038	25.895	.001	par_6
X26	<---	UF	1.000				
X25	<---	UF	1.001	.059	17.090	.001	par_7
X24	<---	UF	1.023	.059	17.461	.002	par_8
X1	<---	PUS	1.000				
X2	<---	PUS	1.001	.121	8.246	.022	par_9
X3	<---	PUS	1.183	.114	10.356	.013	par_10
X4	<---	ME	1.000				
X5	<---	ME	1.047	.240	4.360	.003	par_11

X6	<---	ME	.995	.187	5.336	.001	par_12
X7	<---	ME	1.473	.228	6.465	.023	par_13
X8	<---	EOU	1.000				
X9	<---	EOU	1.022	.174	5.877	.031	par_14
X10	<---	EOU	1.154	.141	8.163	.002	par_15
X11	<---	EOU	1.461	.165	8.852	.012	par_16
X12	<---	FOGT	1.000				
X13	<---	FOGT	.838	.106	7.869	.001	par_17
X14	<---	FOGT	1.074	.059	18.245	.002	par_18

The results of the first stage of the Full Model significance test show that each dimension has a probability value of <0.05. This shows that in the first model analysis, there is a relationship between PU and PEOU.

Table 10. First Phase SEM Full Model Test Results

Criteria	Cut of value	Results	Evaluation
X^2 Chi-square	< 251.5559	1279.350	poor
Probabilitas	≥ 0.05	0.000	poor
CMIN/DF	≤ 2.00	4.412	poor
RMSEA	≤ 0.08	0.186	poor
GFI	≥ 0.90	0.544	moderat
AGFI	≥ 0.90	0.449	moderat
TLI	≥ 0.95	0.706	moderat
CFI	≥ 0.95	0.738	moderat

The table above shows that all the goodness of fit criteria cannot be met by the model made because they still need to be in the good/fit category. So based on the analysis of the first stage, it is necessary to do a full model analysis of the second stage.

b. Second Stage

Figure 3. Second Phase SEM Full Model Analysis

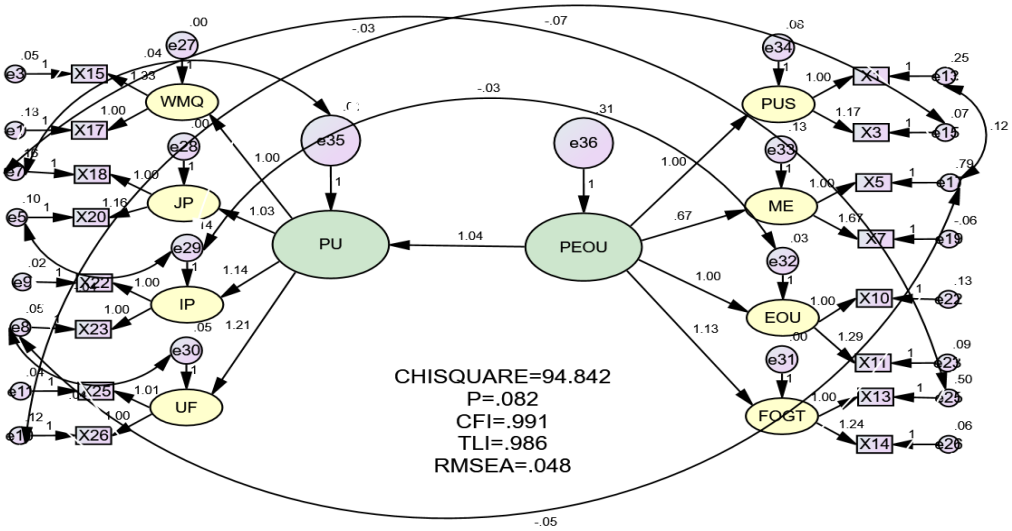


Table 11. Results of the Second Stage of Full Model Assessment of Normality

Variable	Min	Max	Skew	c.r.	Kurtosis
X14	1.000	5.000	-1.222	.987	2.046
X13	1.000	5.000	-1.153	.707	1.388
X11	1.000	5.000	-1.053	.301	1.767
X10	2.000	5.000	-.911	.718	1.883
X7	1.000	5.000	-1.514	.179	3.766
X5	1.000	5.000	-.610	2.492	-.068
X3	1.000	5.000	-1.033	.216	2.000
X1	1.000	5.000	-.733	.992	1.153
X25	1.000	5.000	-1.172	.783	2.131
X26	1.000	5.000	-1.498	.116	2.332
X22	1.000	5.000	-.909	.709	1.478
X23	1.000	5.000	-.933	.810	1.252
X18	1.000	5.000	-.957	.909	1.723
X20	1.000	5.000	-1.146	.679	2.406
X15	1.000	5.000	-1.222	.987	2.046
X17	1.000	5.000	-1.229	1.018	3.092

The normality test results for each indicator show that all values are within the normality range of -2.58 ≤ c.r ≤ 2.58. This shows that the data set for each indicator as a whole is normally distributed.

Table 12. Results of the Significance Test of the Second Stage Full Model Indicator

			Estimate	S.E.	C.R.	P	Label
PU	<---	PEOU	1.044	.136	7.678	.012	par_9
WMQ	<---	PU	1.000				
JP	<---	PU	1.029	.102	10.042	.001	par_10
IP	<---	PU	1.140	.111	10.251	.003	par_11
UF	<---	PU	1.205	.112	10.742	.001	par_12
PUS	<---	PEOU	1.000				
ME	<---	PEOU	.666	.176	3.788	.024	par_13
EOU	<---	PEOU	.996	.128	7.806	.001	par_14
FOGT	<---	PEOU	1.130	.205	5.520	.001	par_15
X17	<---	WMQ	1.000				
X15	<---	WMQ	1.329	.103	12.917	.002	par_1
X20	<---	JP	1.158	.096	12.017	.013	par_2
X18	<---	JP	1.000				
X23	<---	IP	1.000				
X22	<---	IP	1.002	.038	26.327	.001	par_3
X26	<---	UF	1.000				
X25	<---	UF	1.015	.057	17.844	.021	par_4
X1	<---	PUS	1.000				
X3	<---	PUS	1.171	.118	9.965	.001	par_5
X5	<---	ME	1.000				
X7	<---	ME	1.665	.404	4.123	.002	par_6
X10	<---	EOU	1.000				
X11	<---	EOU	1.291	.100	12.950	.001	par_7
X13	<---	FOGT	1.000				
X14	<---	FOGT	1.238	.149	8.321	.034	par_8

The results of the second stage of the Full Model significance test show that each dimension has a probability value of <0.05. This shows that in the second model analysis, there is a relationship between PU and PEOU. The next step is an assessment based on goodness of fit criteria, which produces the information below.

Table 13. Second Phase SEM Full Model Test Results

Criteria	Cut of value	Results	Evaluation
X^2 Chi-square	< 98.270180	94.842	Fit
Probabilitas	≥ 0.05	0.082	Fit
CMIN/DF	≤ 2.00	1.232	Fit
RMSEA	≤ 0.08	0.048	Fit
GFI	≥ 0.90	0.905	Fit
AGFI	≥ 0.90	0.831	Moderat
TLI	≥ 0.95	0.986	Fit
CFI	≥ 0.95	0.991	Fit

Based on table 13 data, it shows that the goodness of fit criteria has been met. It can be seen that the goodness of fit value for the chi-square table is 94.842 < 98.27018, CMIN/DF 1.232 with a probability of 0.082, RMSEA 0.048, GFI 0.905, TLI 0.986, and CFI 0.991. The size of the feasibility model is included in the "good/fit" category. This means that the second stage of the full SEM analysis model is the full-fit model of this study.

5. Hypothesis testing

Furthermore, the Probability (P) value < 0.05 is compared to testing the hypothesis. The hypothesis can be accepted if the results of the data analysis meet these criteria. The findings from the hypothesis analysis are as follows.

Table 14. Research Hypothesis Test Results

			P	Estimate
PU	<---	PEOU	.022	.980

Based on table 14, it can be seen that the P value is 0.022, which means less than 0.05 with an estimate of 0.980. This means the research hypothesis is accepted, and a positive and significant relationship exists between perceived usefulness (PU) and perceived ease of use (PEOU).

Discussion

ICT is important in developing 21st-century teacher skills, such as creativity, problem-solving, and technological literacy. In this context, the intended use of ICT should be determined based on the quality of teachers' and students' ICT use rather than the timing, frequency, or diversity of technologies. Technology integration improves the quality of education by helping teachers do their jobs and by helping students to learn more effectively (Goktas et al., 2009).

In the future, Madrasah Ibtidaiyah Teacher Education students at the University of Islam Malang and the University of Islam Lamongan will become elementary school teachers. As pre-service elementary school teachers, they are also required to be able to integrate ICT into the learning they do. Student pre-service teachers are students who are prepared to become professional teachers in their field.

Data analysis of the frequency distribution of the acceptance rate of technology for pre-service elementary school teachers shows that the overall mean value is 4.02. Based on this mean value, the level of technology acceptance for pre-service elementary school teachers is in the high category. This means that pre-service elementary school teachers feel the ease of using ICT and make a lot of use of ICT in learning as long as they carry out practical field experience. The use of ICT in learning can improve the preparation and presentation of material in class (Goriss-Hunter et al., 2022).

Furthermore, from the hypothesis test results, the Probability (P) value is 0.022 <0.05 with an estimate of 0.980. This means that the research hypothesis is accepted, that there is a positive and significant relationship between perceived usefulness (PU) and perceived ease of use (PEOU).

This finding reinforces the results of previous research conducted by Wong (2015); Mutiara & Cahya (2022), that perceived ease of use greatly influences the perceived usefulness of prospective teachers; people will have a good attitude and desire to use the system if it is considered useful and easy to use, which will ultimately lead to the actual adoption and use of technology. This was also confirmed by other researchers who revealed that perceived ease of use shows a positive attitude toward perceived usefulness (Azmi et al., 2021); (Han & Sa, 2022). This means that technology users or pre-service elementary teachers think that a system that is easy to use will be more useful.

Pre-service elementary teachers feel the ease of using ICT and make much use of ICT in learning while they are carrying out practical field experience. Technology integration improves the quality of education by helping teachers do their jobs and by helping students to learn more

effectively (Goktas et al., 2009), helping students gain a deeper understanding of the material they are learning through activities and collaborative learning that is based on the challenges of the world real (Chai et al., 2013). Integration of ICT in classroom learning can also improve the quality of student learning (Blanchard et al., 2016), as well as positively affect motivation and student learning outcomes than traditional learning (Lin et al., 2017). ICT integration in classroom learning can also help students do homework more easily than just using traditional methods (Nawzad et al., 2018).

However, this research is inversely proportional to the research of Kennedy & Fox (2013), which found that prospective teachers stop using certain technologies if there are no immediate personal benefits. Their reasons may be a need for more attention to perceived ease of use and not yet facing the real challenges of teaching in a workplace environment.

CONCLUSION

The results of research using the Structural Equation Model (SEM) show that the level of technology acceptance for pre-service elementary teachers is in the high category. The size of the feasibility model is included in the "good/fit" category. Furthermore, the analysis results also show that perceived usefulness (PU) positively and significantly correlates with perceived ease of use (PEOU). Pre-service elementary teachers feel the ease of using ICT and make much use of ICT in learning while they are carrying out practical field experience.

This study has limitations on the variables studied, namely the TAM variable, which only perceived usefulness and perceived ease of use. The attitude toward using and behavioral intention need further investigation. In addition, the subjects in this study were pre-service elementary teachers. Attitudes and intentions may differ from pre-service elementary teachers, so future researchers can conduct research focused on pre-service elementary teachers.

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