Evaluation of Online Admissions Information System Utilizing the Technology Acceptance Model

Chuan De Lian^{1,*}, Nauval Dwi Yuzhak²

¹ Beijing Information Technology University, China

² Departement of Information System, Amikom Purwokerto University, Indonesia

(Received: October 20, 2023; Revised: January 15, 2024; Accepted: February 10, 2024; Available online: March 31, 2024)

Abstract

Admission of New Students covers the entire process, from registration and administrative selection to graduation announcement. This activity is an annual routine that is the first step in finding quality prospective students. Therefore, there is a need for a valuable and user-friendly online PMB website. Based on these problems, it is necessary to assess the success of implementing the PMB Online system at Amikom Purwokerto University using the Technology Acceptance Model (TAM) approach. This system development method refers to TAM, which emphasizes user perceptions of two main variables: usefulness and ease of use. Variables that describe user acceptance of the PMB Online system include Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment, Attitude Towards Using, and Intention to Use. The results of this study indicate that Perceived Ease of Use has a positive effect on Perceived Usefulness, and Perceived Usefulness has a positive effect on Attitude Towards Using and Intention to Use. Meanwhile, Perceived Enjoyment also has a positive effect on Attitude Towards Using. The results of this study are expected to identify weaknesses and improve certain aspects to optimize the implementation of PMB Online at Amikom Purwokerto University.

Keywords: PMB Online, Technology Acceptance Model, Management Information Systems.

1. Introduction

Admission of New Students is an activity that starts with admitting new students, followed by administrative selection of new students, until finally, the announcement of new student graduation. Admitting new students is a routine activity every year; this activity is the starting point of finding new quality prospective students [1]. Prospective students will look for all information related to the university they choose, either by coming directly to the college or by accessing the PMB website, allowing prospective students to register online through the PMB website. An online PMB website that can provide benefits to its users is needed. One of the applications for a new student admission information system has been carried out since 2017. The target of obtaining student registration for the 2020/2021 academic year can be seen in Figure 1.

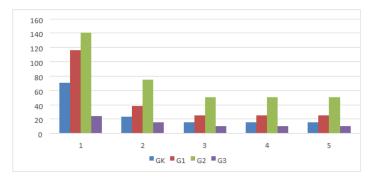


Figure 1. Student Enrollment Target Chart for Academic Year 2020/2021

^{*}Corresponding author: Chuan De Lian (chuandelxian.2@gmail.com)

[©]DOI: https://doi.org/10.47738/ijiis.v7i2.201

This is an open access article under the CC-BY license (https://creativecommons.org/licenses/by/4.0/).

[©] Authors retain all copyrights

However, until now, there has never been an assessment of the system's utility. This prompted the author to examine and measure whether users accept the new student admission system application system, which has been appropriately implemented as a medium for the effectiveness and efficiency of operational processes at Amikom Purwokerto University with a modified Technology Acceptance Model (TAM) approach. In addition, this study aims to identify the behavior of system users or users in using the New Student Admission application information system and to find out which variables most influence the ease of use of system acceptance for efforts to improve the performance of the PMB Online system.

Research conducted by [2] explored student views on the simPKL app system during fieldwork practice using TAM analysis. The prior SimPKL system, which was not widely used, was perceived moderately in terms of ease (PEoU) and utilization (PU) by 115 sampled students, falling short of satisfaction. This study will depict student perceptions of the simPKL application system in PKL implementation.

Research conducted by [3] explores the rising popularity of the Technology Acceptance Model (TAM) in understanding the human-technology relationship, focusing on Perceived Usefulness (PU) and Perceived Ease of Use (PEU). This study utilizes TAM to explore the impact of external variables on internal beliefs, attitudes, and intentions for acquiring Information Literacy (IL) skills. TAM, an information system theory, guides information seekers through stages of adopting new technology for IL. The evaluation focuses on key TAM variables for IL acquisition, including Perceived Usefulness and Perceived Ease of Use. The aim is to contextualize TAM by analyzing its application to IL among schoolteachers, providing insights for Information Communication and Technology for Development (ICT4D) studies. The study identifies resistance to information systems as a primary barrier and suggests that targeted training and real-life application can enhance information literacy.

Research by [4] explores demographic disparities in Internet usage among Americans, emphasizing that age, education, income, and race impact individual beliefs about the Internet. Tests an extended version of the Technology Acceptance Model (TAM) to elucidate these differences, revealing that perceived ease of use and usefulness outweigh access barriers in influencing Internet adoption. The study provides valuable insights for managers and policymakers seeking to address demographic-based variations in Internet utilization.

Research by [5] examines factors affecting taxpayer compliance using the TAM model, encompassing perceived usefulness and user convenience. Conducts quantitative research with a purposeful sample of 100 respondents, revealing positive influences on compliance. Findings indicate that perceived ease in E-Registration, E-Billing, and E-Filing positively impacts taxpayer compliance, alongside perceived usefulness in these electronic processes.

Based on these problems, it is necessary to assess or measure the success rate of PMB Online system implementation with the Technology Acceptance Model (TAM) approach, which takes a case study on PMB Online at Amikom Purwokerto University. It is hoped that this research will find out which aspects are still weak so that they can be improved to optimize the application of PMB Online at Amikom Purwokerto University.

2. Literature Review

2.1. Management Information System

A Management Information System (MIS) is an integrated collection of systems that provide operational and managerial information for organizational decision-making [6],[7].

2.2. Technology Acceptance Model

The TAM model elucidates crucial factors influencing user behavior in adopting information technology [8]. It helps predict individuals' attitudes and technology acceptance, offering valuable insights into the driving factors behind individual attitudes.

2.3. Perceived Ease Of use

It refers to an individual's confidence that technology will reduce physical and mental effort, impacting usefulness, attitude, intention, and actual use. This concept posits that perceived ease of use reflects the user's perception of the effort needed to operate a system [9].

2.4. Perceived Usefullness

The perception that information system technology enhances performance is often incentivized in organizational contexts through rewards like salary increases, promotions, and bonuses [10].

3. Method

In this case, the research subject is online PMB as a medium to facilitate registration officers to follow up and comply with new student registration requirements according to applicable rules in registering as prospective new students at Amikom Purwokerto University. The several stages of research can be seen in Figure 2. as follows:

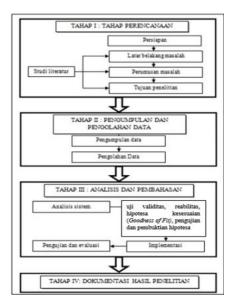


Figure 2. Flowchart of Research Stages

The explanation of each research stage in Figure 2. is as follows:

3.1. Planning Stage

The planning stage in this research consists of literature study activities, designing and writing the background, formulating problems, and determining research objectives. In this case, the planning stage is the initial stage in conducting research [11].

3.2. Data Collection Stage

Data collection is used to obtain the data needed to prepare this research. The data collection methods used are:

1) Literature Studies

The author looks for references about information technology and information systems. References are books, journals, and articles from previous research [12].

2) Interview

The interview is a data model that asks questions directly to competent parties, especially employees and students [13].

3) Observation

The observation method or direct observation is collecting data or facts to obtain the necessary information by making direct observations and recording problems in the field [7].

4) Documentation

The documentation method is data collection in the form of documents; in this study, documents related to the system and technology used [2].

3.3. System Analysis and Development

The study employs the Technology Acceptance Model (TAM) method, a theory focusing on user behavior, with perceived usefulness (PU) as the extent to which technology is believed to enhance work performance [14].

Perceived Ease of Use (PEOU) is the user's belief in the convenience provided by information systems [15], [16]. his belief shapes the user's attitude towards the system, influencing behavior and usage. It signifies the perception that using a specific system reduces the effort required for a task [17]. The technology acceptance model (TAM) process and stages can be seen in Figure 3 [18].

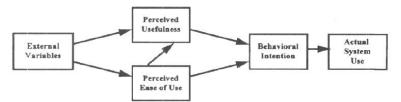


Figure 3. Technology Acceptance Model (TAM) Method Process

Referring to Figure 3, this study follows the stages outlined in the Technology Acceptance Model method [18];

1) Perceived Useful

Improving work performance through system use involves gathering needs, understanding the context of the management application, and analyzing its main features and functions to obtain relevant outputs [18]. At this stage, researchers collect information and data through observation and interviews. This stage creates a system flow; then, the sub-district gives a priority value based on overall features or functions.

2) Perceived Easy Use

System use is simplified by analyzing a management and reporting application system. Perceived ease of use, a technology benchmark, is gauged by factors such as flexibility, ease of learning, user-friendliness, and work control.

3) Behavioral intention

Behavioral intention, defined as the desire to use services consistently, predicts an individual's level of computer technology usage based on attitude and attention. Positive behavioral intention yields various benefits for companies, such as fostering consumer loyalty, a key objective in promoting brands or products.

4) Actual system use

The actual system usage stage reflects the system's real-world application [3]. Users enjoy using the system when they perceive it as user-friendly and productivity-enhancing, evidenced by its natural use. Measuring actual usage involves assessing the frequency and duration of ICT interactions, quantifying the accumulated time spent, and the frequency of technology use.

4. Results and Discussion

4.1. Data Collection Results

Respondent data collection is grouped based on demographic categories for gender, age, job level, and length of study time at Amikom University Purwokerto as follows:

1) Gender

The questionnaire was distributed to batches 12 to 17 through a Google form link, and only 104 respondents returned to the researcher. Of the 104 respondents, there were 57 male respondents (54.8%) and 47 female respondents (45.2%).

2) Ages

Of the 104 respondents, there were 11 respondents aged ≤ 25 years (10.6%), 26-30 years (19 people (18.3%), 31-35 years (18 people (17.3%), 36-40 years (26 people (25%), 41-45 years (19 people (18.3%), seven people aged 46-50 years (6.7%) and four people aged over 50 years (3.8%).

3) Job Level

Of the 104 respondents, respondents with job levels as Staff were 22 people (21.2%), Supervisors were 14 people (13.5%), Managers were 44 people (42.3%), Directors were nine people (8.7%), Owners were eight people (7.7%) and others were seven people (6.7%).

4) Length of study time

Based on the total number of 104 respondents, respondents who have taken the test at Amikom University Purwokertok less than one year are 32 people (30.8%), between 1-2 years are 59 people (56.7%), and more than two years are 13 people (12.5%).

4.2. Statistical Analysis Results

Based on the number of 104 respondents, it is found that the most considerable mean value is the Attitude Towards Using variable, namely 4.40. While Perceived Usefulness obtained the smallest mean value of 4.04, the average respondent increasingly disagreed with the statement given. Meanwhile, the mean PEOU was 4.21; PE obtained a mean value of 4.11, and Intention to Use obtained a mean value of 4.30, so the average respondent agreed with the statement. The results of the variable analysis can be seen in Table 1 as follows:

Variables	Total	Mean	Median value	Mode value	Standard Deviation
Perceived Ease of Use	104	4,20	4,17	4	0,58
Perceived Usefulness	104	4,03	4,00	4	0,66
Perceived Enjoyment	104	4,11	4,00	4	0.76
Attitude Towards Using	104	4,40	4,33	4	0,53
Intention to Use	104	4,30	4,30	4	0,56

Table 1. Variable Analysis Results

Based on Table 1, it can be seen that the median value, Perceived Usefulness and Perceived Enjoyment variables obtained a median value of 4.00, so half of the data distribution was in score 4, and Attitude Towards Using obtained the highest median value of 4.33 half of the data distribution was in score 4-5. Meanwhile, for each variable, the mode value is 4, so the respondents agree with the statement given.

The results of the indicator analysis of the variables used using SPSS can be seen in Table 2 as follows:

	Ν	Minimum	Maximum	Mean	Std. Deviation
PEOU1	104	2	5	4,34	0,677
PEOU2	104	2	5	4,22	0,638
PEOU3	104	1	5	4,08	0,832
PEOU4	104	1	5	4,19	0,848
PEOU5	104	2	5	4,12	0,741
PEOU6	104	2	5	4,32	0,596
PU1	104	2	5	3,95	0,829
PU2	104	1	5	4,15	0,785
PU3	104	1	5	3,87	0,986
PU4	104	1	5	4,02	0,812
PU5	104	1	5	3,99	0,887
PU6	104	2	5	4,28	0,630
PE1	104	1	5	4,14	0,852
PE2	104	1	5	4,05	0,874
PE3	104	1	5	4,14	0,769
ATU1	104	3	5	4,31	0,592
ATU2	104	2	5	4,44	0,636
ATU3	104	2	5	4,47	0,590
ITU1	104	2	5	4,34	0,633
ITU2	104	2	5	4,26	0,654
ITU3	104	2	5	4,26	0,654
ITU4	104	3	5	4,36	0,652
Valid N (listwise)	104				

 Table 2. Indicator Analysis Results

Based on Table 2 above, all indicators have a maximum value of 5 and a minimum value of 1 to 3, where only two indicators, namely ATU1 and ITU4, have a minimum value of 3, meaning that respondents are hesitant about the ATU1 and ITU4 statements.

4.3. Questionnaire Analysis Results

4.3.1. Analysis of Outliers

Outliers can be identified with a standard score of ± 2.5 [14]. Univariate found there are five outliers. Respondents who are outliers are no. 46, 67, 80, 87 and 90. The Z-score result of respondent no. 46 shows an ATU value of -3.26. The Z-score result of respondent no. 67 shows an ATU value of -2.63. The Z-score results of respondent no. Eighty show the value of PEOU -4.36, PU -4.05, PE - 3.63, ITU -2.72. The Z-score result of respondent no. 87 shows the value of PE -2.75. The Z-score result of respondent no. 90 shows PU -2.55. These values are outliers because they are above - 2.5.

Meanwhile, multivariate analysis was examined with Mahalanobis Distance (D2), which measures the multivariate assessment of each observation of a set of variables where the usable significance level is 0.005 or 0.001 [19]. With a p-value <0.005, 4 outliers were found. The Mahalanobis value of respondent no. 46 is 20.45 with a probability of 0.00043, respondent no. 80 is 24.67 with a probability of 0.00006, respondent no. 87 is 24.06 with a probability of 0.00007, and respondent no. 98 is 21.93 with a probability of 0.00020. These values are outliers because they are outside the range of other values, and the probability is below 0.005. In this study, three outliers, namely respondent nos. 46, 80, and 87 were removed because they were univariate and multivariate proven to be outliers.

4.3.2. Structural Equation Model

The data processing results with SmartPLS 3.0, where several evaluations of the inner model are carried out, including model fit, RSquare, and path coefficient.

4.3.3. Convergent Validity

Indicators of existing constructs are divided into a high proportion of variance in general, called convergent validity [19], as follows:

1) Factor Loadings

An indicator is valid if the factor loadings on the outer loading have a value> 0.70 [19]. The results of the calculation of factor loading can be seen in Table 3 below:

Indicator	Factor Loadings
PEOU1	0,769
PEOU2	0,787
PEOU3	0,760
PEOU4	0,768
PEOU5	0,786
PEOU6	0,803
PU1	0,813
PU2	0,804
PU3	0,712
PU4	0,798
PU5	0,844
PU6	0,806
PE1	0,900
PE2	0,944
PE3	0,912
ATU1	0,854
ATU2	0,915
ATU3	0,873
ITU1	0,881
ITU2	0,868

Table 3. Factor Loadings Calculation Results

ITU3	0,906
ITU4	0,845

Based on Table 3 above, information about factor loadings> 0.70 is obtained, so it is declared valid.2) Average Variance Extracted (AVE)

This value should show more than 0.5 to suggest adequate convergent validity [19]. The results of the calculation of the average variance extracted (AVE) of each latent variable can be seen in Table 4 below:

Table 4. Average Variance Extracted (AVE) Calculation Results			
Latent Variable	AVE Value		
PEOU	0,607		
PU	0,635		
PE	0,844		
ATU	0,777		
ITU	0,766		

Based on Table 4 above, it shows information that each latent variable has a value> 0.5, so it is declared valid.

4.3.4. Composite Reliability

This value for reliability estimation must be more than 0.7 [19]. The results of the composite reliability calculation can be seen in Table 5 below:

Table 5. Cor	Table 5. Composite Reliability Calculation Results				
Latent Variables	Composite Reliability	Description			
PEOU	0,902	Reliable			
PU	0,913	Reliable			
PE	0,942	Reliable			
ATU	0,912	Reliable			
ITU	0,929	Reliable			

Based on table 5 above, it shows information that each latent variable has a value> 0.7, so it is declared reliable.

4.3.5. Discriminant Validity

Discriminant validity is called discriminant validity, namely whether an existing construct is genuinely different from other constructs in terms of whether the construct is correlated with other constructs and how the construct can represent the variable it measures [19].

1) Cross Loading

The indicator cross-loading value must exceed the value of all other constructs with a cross-loading of more than 0.7 [19]. The results of the calculation of the cross-loading value can be seen in Table 6 below:

	Table 6. Results of Cross Loading Calculation				
	PEOU	PU	PE	ATU	ITU
PEOU1	0,769	0,538	0,545	0,571	0,478
PEOU2	0,787	0,489	0,572	0,493	0,525
PEOU3	0,760	0,589	0,589	0,466	0,497
PEOU4	0,768	0,499	0,594	0,417	0,416
PEOU5	0,786	0,608	0,526	0,442	0,456
PEOU6	0,803	0,628	0,531	0,515	0,550
PU1	0,604	0,813	0,627	0,498	0,569
PU2	0,662	0,804	0,655	0,649	0,658
PU3	0,434	0,712	0,498	0,397	0,492
PU4	0,587	0,798	0,522	0,432	0,516
PU5	0,563	0,844	0,501	0,505	0,547
PU6	0,562	0,806	0,511	0,593	0,713
PE1	0,635	0,613	0,900	0,626	0,586
PE2	0,648	0,650	0,944	0,561	0,517
PE3	0,686	0,656	0,912	0,639	0,606
ATU1	0,576	0,597	0,623	0,854	0,623

ATU2	0,522	0,571	0,623	0,915	0,668
ATU3	0,553	0,562	0,510	0,873	0,633
ITU1	0,544	0,642	0,564	0,648	0,881
ITU2	0,546	0,642	0,520	0,623	0,868
ITU3	0,590	0,700	0,594	0,691	0,906
ITU4	0,512	0,604	0,499	0,580	0,845

Based on Table 6 above, the information shows that the cross-loading value of all constructs is> 0.7.

2) Fornell-Larcker Criterion

The latent construct value must exceed the correlation value with other latent constructs, so it can be said that the indicator variance is better [20]. The results of the calculation of the Fornell Larcker criterion can be seen in Table 7 below:

	r	Fable 7. Fornell-Lap	rcker Criterion calc	ulation results	
	ATU	ITU	PE	PEOU	PU
ATU	0,881				
ITU	0,728	0,875			
PE	0,666	0,623	0,919		
PEOU	0,624	0,627	0,716	0,779	
PU	0,654	0,740	0,697	0,720	0,797

Based on Table 7 above, it is obtained that the value of all constructs is higher than the correlation of other constructs.

4.3.6. Model Fit

According to [19], the model fit is performed after proposing the research model to show how good the specified model is. The closer the values of these two matrices are to each other, namely the estimated covariance matrix and the observed covariance matrix, the better the model can be. The following is a model fit evaluation for this study:

1) Standardized Root Mean Residual (SRMR)

SRMR helps compare the fit between models [19]. SRMR is used to measure forecast fit to obtain empirical evidence for the proposed theory [21]. A lower SRMR value indicates a better model. The cut-off value for SRMR is <0.; if >0., one, then there is a model mismatch [19]. This study has a saturated model SRMR value of 0.069 and an estimated model of 0.079. Because the value is below 0.1, there is a fit between the models. These results also indicate that the proposed model is suitable.

2) Normed Fit Index (NFI)

NFI is a ratio that compares the χ^2 value for the specified model with the null model (uncorrelated variables). The range of NFI values is between 0 and 1, and a perfect model is said to have an NFI value equal to 1 [19]. The normed fit index (NFI) value can be seen in the results of the fit model calculation in Table 8 below:

Table 8. Model Fit Calculation Results				
	Saturated Model	Estimated Model		
SRMR	0,069	0,079		
NFI	0,736	0,739		

Based on Table 8 above, the information shows that the NFI saturated model value is 0.736, and the estimated model is 0.739. Because the value is almost close to 1, there is a fit in the model. Therefore, this model is fit for research.

4.3.7. R-Square

R-Square is used to measure the variance explained in each endogenous construct, where this value gives the share of variance explained in the dependent construct. Therefore, it can measure the model's explanatory power [19], [21]. R-Square values range from 0 to 1, where research expects high R-Square values to indicate greater explanatory power [19], [21]. The results of the R-Square calculation can be seen in 9 as follows:

Ī	R-Square	R-Square Adjusted
		1 0

ATU	0,525	0,510
ITU	0,653	0,640
PU	0,519	0,513

Based on Table 9 above, it can be concluded that the R-Square value for the ATU variable is 0.525, the variable is ITU 0.653, and the PU variable is 0.519. The results of the inner model calculation can be seen in Figure 4 as follows:

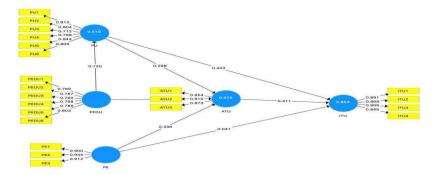


Figure 4. Inner Model Calculation Results

Based on Figure 4 above, it can be concluded that the inner path value is 0.653 for Intention to Use, explaining 65.3% of the changes caused by the constructs PU, PEOU, PE, and ATU. Similarly, PU, PEOU, and PE together explain 52.5% of the variance in ATU. Meanwhile, PEOU, ATU, and ITU explain 51.9% of the variance in PU.

4.3.8. Path Coefficient

As evident from bootstrapping results, the path coefficient in PLS signifies the expected variation in the dependent construct due to variations in the independent constructs. The β value of each hypothesized model path represents the extent of the effect on the endogenous latent construct, with significance verified through the statistical T-test [21]. The path coefficient results can be seen in Figure 5 as follows:

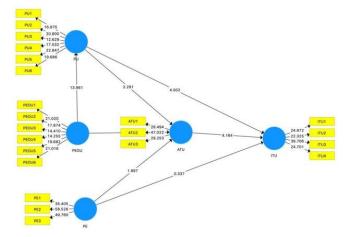


Figure 5. Path Coefficient T Values

Based on Figure. 5 above, out of 7 paths, two paths are insignificant, and five others are substantial.

4.3.9. Hypothesis Testing

By using SmartPLS 3.0, where the model is examined by performing the PLS algorithm. Path analysis is carried out to estimate the relationship in the structural equation system in the path diagram [19]. The results of hypothesis testing can be seen in Table 10 as follows:

Path	Original Samples	Μ	STDEV	T Statistics	P Values	Description
$PEOU \rightarrow PU$	0,720	0,725	0,052	13,961	0,000	Accepted
$PU \rightarrow ATU$	0,298	0,317	0,130	2,291	0,022	Accepted
$PEOU \rightarrow ATU$	0,168	0,176	0,118	1,421	0,156	Rejected

$ATU \rightarrow ITU$	0,411	0,421	0,099	4,164	0,000	Accepted
$PU \rightarrow ITU$	0,443	0,432	0,098	4,502	0,000	Accepted
$PE \rightarrow ITU$	0,041	0,045	0,122	0,337	0,736	Rejected
$PE \rightarrow ATU$	0,338	0,317	0,169	1,997	0,046	Accepted

Based on Table 10 above, five paths have a significant effect, and two paths have no significant impact.

The explanation of the hypothesis testing results in Table 10 is as follows:

Hypothesis 1: It can be seen that PEOU on PU has a t value of 13.961> 1.980 (t table value) and a p-value of 0.000, where, using a significance level of 0.05, the value is below 0.05 (0.000 <0.05). Thus, PEOU affects PU's use of PMB Online.

Hypothesis 2: It can be seen that PU on ATU has a t value of 2.291> 1.980 (t table value) and a p-value of 0.022, where, using a significance level of 0.05, the value is below 0.05 (0.022 <0.05). Thus, PU affects the ATU of using PMB Online. In addition, the β value found is 0.298. Therefore, H02 is rejected, and H2 is accepted.

Hypothesis 3: It can be seen that PEOU on ATU has a t value of 1.421 > 1.980 (t table value) and a p-value of 0.156, where using a significance level of 0.05, this value is more significant than 0.05 (0.156> 0.05). Thus, PEOU does not affect the ATU's use of PMB Online. In addition, the β value found was 0.168. Hence, the proposed hypothesis fails to be accepted.

Hypothesis 4: It can be seen that ATU on ITU has a t value of 4.164> 1.980 (t table value) and a p-value of 0.000, where, using a significance level of 0.05, it is found that this value is smaller than 0.05 (0.000 < 0.05). Thus, ATU affects the ITU of using PMB Online. In addition, the β value found was 0.411. Therefore, H04 is rejected, and H4 is accepted.

Hypothesis 5: It can be seen that PU on ITU has a t value of 4.502 > 1.980 (t table value) and a p-value of 0.000, where, using a significance level of 0.05, it is found that this value is smaller than 0.05 (0.000 < 0.05). Thus, PU affects the ITU of using PMB Online. In addition, the β value found was 0.443. Hence, H05 is rejected, and H5 is accepted.

Hypothesis 6: It can be seen that PE on ITU has a t value of 0.337 < 1.980 (t table value) and a p-value of 0.736, where, using a significance level of 0.05, it is found that this value is more significant than 0.05 (0.736 > 0.05). Thus, PE does not affect the ITU of using PMB Online. In addition, the β value found was 0.041. Hence, the proposed hypothesis fails to be accepted.

Hypothesis 7: It can be seen that PE on ATU has a t value of 1.997 > 1.980 (t table value) and a p-value of 0.046, where, using a significance level of 0.05, it is found that this value is smaller than 0.05 (0.046 < 0.05). Thus, PE affects the ATU of using PMB Online. In addition, the β value found was 0.338. Therefore, H07 is rejected, and H7 is accepted.

4.3.10.Discussion of Hypothesis Testing

Discussion of Hypothesis Testing 1: Supported by several previous studies, namely [14]. Making the PMB Online system easy to use by all levels of users will make them more interested in using [10]. Students who find the Online Pmb system easy to use can have a good attitude towards the usability of the system [14]. Teaching and learning materials, such as the use of multimedia, will provide usability in the teaching and learning process [22].

The average value of the PEOU variable is 4.21, so using the Pmb Online system is easy enough for respondents to understand. Thus, this makes it possible for them to complete tasks more quickly and helps their learning effectiveness as a student. PMB Online is a virtual place to upload materials and assignments and an interactive environment for knowledge sharing and discussion [10]. The PMB Online system empowers students to access test materials, submit assignments, check learning evaluations, participate in online quizzes, receive notifications for deadlines, and engage in discussions with peers and lecturers through internet-based forums. This flexibility eliminates geographical and time constraints, enabling access from any location [23].

Discussion of Hypothesis Testing 2: Supported by previous research, namely [4], [22], [24], [25]. Perceived usefulness has been shown to be helpful in providing reasonable information at the right time and place to support and improve student life at university [23].

The results showed that the mean for the PU6 indicator was 4.2, which was more significant than the mean value of the other PU indicators, meaning that respondents agreed with the statement if they felt using the Online PMB system was advantageous. Students who use the PMB Online system because technology allows them to access subject matter quickly [23]. So, Perceived Usefulness affects users' attitudes toward using technology; if users find the technology useful, then users can develop a positive attitude toward the technology [26]. Perceived usefulness increases the positivity towards use, affecting behavioral attitudes to use [4].

Discussion of Hypothesis Testing 3: When viewed, the results differ [20], [27]. However, it supports research [25]. The mean of the PEOU variable is 4.20, meaning that respondents agree with the statement given if they find it easy. The TAM concept also integrates the ease of technology and the attitude of actors [26]. Contrary to expectations, this study finds that convenience, specifically perceived ease of use, is not a decisive factor in user attitudes toward learning in PMB Online. The relationship between ease of use and user attitudes differs from contexts like online shopping, where an easy online shopping experience does not necessarily lead to increased online shopping, as noted by [11]. Today, the Internet is present in almost everything humans use, and the Internet can be present anywhere. The use of the Internet in everyday life has also given students tremendous convenience that can be used to improve their academic learning [23]. However, the convenience aspect only affects using technology. If its relevance is drawn to the condition of the Master of Management test at Binus University in the Blended Program, it can be explained that users feel the perspective of ease in operating Binusmaya as a means of PMB Online on campus; this is explained through descriptive statistical results with an average value of 4.20.

Based on the Likert scale concept, the mode value is 4, which shows that the majority of students who are respondents agree on the ease of using Binusmaya as a means of PMB Online at Binus University. This perspective does not have implications for user attitudes; this may be because users have often used PMB Online to understand how to operate it, and they consider that this is normal so that it does not affect aspects of positive attitudes and behavior.

Discussion of Hypothesis Testing 4: Backed by research [18], organizations have developed diverse online PMB systems, incorporating text, graphics, audio, video, and other elements [28]. This variety can elicit positive reactions that influence the intention to use the system [6]. PMB Online has been supported by technological sophistication, where teaching and learning activities, including the provision of test materials, are made with multimedia support; for example, test materials are presented in various forms of presentations through the use of powerpoint to foster interaction between students and lecturers conducted online discussion forums, classes conducted online also allow lecturers and students to interact directly in cyberspace and can be accessed by students online [2].

Discussion of Hypothesis Testing 5: Supported by previous research, namely [14]. Perceived Usefulness represents users' responses to assessing the extrinsic features of technology, such as the results and assistance of technology to achieve tasks. Thus, extrinsic features strongly influence technology, which can also be attributed to student experience or the nature of the technology it self [15]. Perceived Usefulness influences intention because students are willing to adopt the Pmb Online system while focusing on its benefits [14]. Then, suppose users find certain technologies valuable technologies. In that case, they develop positive intentions to use them, which means the intention developed may be a form of effort to obtain benefits from a technology used [24].

Discussion of Hypothesis Testing 6: Not supported by research [22]. However, it is supported by [29], [30] that Perceived Enjoyment does not affect the Intention to Use. From descriptive statistics, the variable's mean value is 4.11 because these respondents are Master of Management - Blended Learning program students who inevitably use the PMB Online system in learning activities.

However, pleasure seems not to be the determining factor of students' behavioral intentions, seen explicitly in learning. Students consider education very important to them, and recently, education has been directed to create curiosity in students' minds [22]. A person can achieve success in life through education. The community generally sees education as a foundation that can bring prosperity from an economic and social perspective. It can have a significant impact on humans to get the opportunity to continue their quality of life because economic and social status depends on the education obtained by the individual to improve their quality of life. Therefore, education is essential to determine individual behavior, attitudes, and reactions [28].

Multimedia offers a variety of unique benefits in the field of education, where the learning process is more flexible [26], using the Online MBA system is more beneficial for students' learning goals. When viewed for its relevance to the conditions of the Master of Management test at Binus University in the Blended Program, it can be explained that the majority of students who are respondents accept the enjoyment aspect of using Binusmaya as an Online MBA at Binus University, the Perceived Enjoyment variable is 4.11 which means that based on the Likert scale concept it is in the interval of agreeing and strongly agreeing. In addition, the mode value also shows a value of 4, which means that the majority of students who are respondents agree on the enjoyment aspect. The absence of influence from Perceived Enjoyment on Intention to Use is because the Enjoyment or convenience aspect is not a determining factor for students to use PMB Online, but indeed the obligation of users as students to take tests through PMB Online. Then in addition, it is also because the students who are respondents are all Masters level students, so they feel that they feel familiar with the use of PMB Online regardless of the perceived convenience perspective.

Discussion of Hypothesis Testing 7: Supported by previous research, namely [11], [31]. As stated by [25] perceived enjoyment refers to the pleasure and satisfaction derived from a behavior, influencing user attitudes as an intrinsic motivational factor. The descriptive statistics revealed a mean of 4.11 for the Perceived Enjoyment variable, indicating that, on average, respondents agreed with the statement. Online Pmb systems offer unique educational benefits, namely flexibility, where the learning process is more flexible [14]. Students can learn fully automated and interactively, and they will find it more enjoyable. They can access and download test materials anytime and anywhere [23]. This will lead to an attitudinal relationship, where if students find Pmb Online enjoyable, it tends to have a favorable perception [30].

5. Conclusion

Based on the results and discussion, Perceived Ease of Use positively affects the Perceived Usefulness of users using the PMB Online system. Perceived Usefulness positively affects Attitudes Toward Using on users in using the PMB Online system. Attitude Towards Using positively affects Intention to Use on users in using the PMB Online system. Perceived Usefulness has a positive effect on positively affecting the use of these line systems. Perceived Enjoyment positively affects attitudes towards Using on users using the PMB Online system. It is hoped that this research will find out which aspects are still weak so that they can be improved to optimize the application of PMB Online at Amikom Purwokerto University. This study has limitations; although the results show several significant positive relationships between factors that influence acceptance of PMB Online, several shortcomings need to be considered, such as general limitations, external factors, measurement limitations, and negative aspects. Therefore, it is suggested that future research can use the shortcomings in this study as a basis for further research or methodological improvements.

6. Declarations

6.1. Author Contributions

Conceptualization: CDL and NDY; Methodology: NDY; Software: CDL; Validation: CDL, NDY; Formal Analysis: CDL, NDY; Investigation: CDL; Resources: NDY; Data Curation: NDY; Writing Original Draft Preparation: CDL, NDY; Writing Review and Editing: NDY, NDY; Visualization: CDL. All authors have read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

6.3. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

6.4. Institutional Review Board Statement

Not applicable.

6.5. Informed Consent Statement

Not applicable.

6.6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

References

- [1] A. H. Mujianto, B. Soedijono, And H. Henderi, "Pengukuran Tingkat Kesuksesan Penerapan Website Penerimaan Mahasiswa Baru (PMB) Online Di Perguruan Tinggi Swasta Dengan Pendekatan Human Organization Technology (Hot) Fit Model," *Register: Jurnal Ilmiah Teknologi Sistem Informasi*, Vol. 3, No. 1, Pp. 24–33, 2017, Doi: 10.26594/Register.V3i1.712.
- [2] P. Hendikawati And N. Hidayati, "Persepsi Mahasiswa Terhadap Sistem Aplikasi Simpkl Pada Implementasi Kegiatan Praktek Kerja Lapangan Menggunakan Analisis Tam," *Jurnal Tam (Technology Acceptance Model)*, Vol. 10, No. 2, Pp. 74– 82, 2019, [Online]. Available: Https://Core.Ac.Uk/Download/Pdf/276535249.Pdf
- [3] O. Durodolu, "Technology Acceptance Model As A Predictor Of Using Information System' To Acquire Information Literacy Skills," *Library Philosophy And Practice*, Vol. 2016, No. 1, 2016.
- [4] S. Alharbi And S. Drew, "Using The Technology Acceptance Model In Understanding Academics' Behavioural Intention To Use Learning Management Systems," *International Journal Of Advanced Computer Science And Applications*, Vol. 5, No. 1, Pp. 143–155, 2014, Doi: 10.14569/Ijacsa.2014.050120.
- [5] S. Muliyani, "Pengaruh Penggunaan E-Registration, E-Billing, Dan E-Filing Dalam Pendekatan Technology Acceptance Model (Tam)," *Jurnal Ilmu Dan Riset Akuntansi*, Vol. 10, No. 5, Pp. 1–20, 2021.
- [6] L. Purwianti And K. Tio, "Faktor-Faktor Yang Mempengaruhi Behavioural Intention," *Jurnal Manajemen Maranatha*, Vol. 17, No. 1, P. 15, 2017, Doi: 10.28932/Jmm.V17i1.415.
- [7] T. Irawati, E. Rimawati, And N. A. Pramesti, "Penggunaan Metode Technology Acceptance Model (Tam) Dalam Analisis Sistem Informasi Alista (Application Of Logistic And Supply Telkom Akses)," Accounting Information Systems And Information Technology Business Enterprise, Vol. 4, No. 2, Pp. 106–120, 2020, Doi: 10.34010/Aisthebest.V4i02.2257.
- [8] S. Tambun And I. Muhtiar, "Pengaruh Pengetahuan Perpajakan Dan Penerapan E-System Terhadap Kepatuhan Wajib Pajak Yang Di Moderasi Oleh Technology Acceptance Model," *Media Akuntansi Perpajakan*, Vol. 4, No. 1, Pp. 1–15, 2019, [Online]. Available: Http://Journal.Uta45jakarta.Ac.Id/Index.Php/Map
- [9] E. Adewole-Odeshi, "Attitude Of Students Towards E-Learning In South-West Nigerian Universities: An Application Of Technology Acceptance Model," *Library Philosophy And Practice*, Vol. 1, No. 1, Pp. 1–19, 2014.
- [10] W. M. Al-Rahmi *Et Al.*, "Integrating Technology Acceptance Model With Innovation Diffusion Theory: An Empirical Investigation On Students' Intention To Use E-Learning Systems," *Ieee Access*, Vol. 7, Pp. 26797–26809, 2019, Doi: 10.1109/Access.2019.2899368.
- [11] J. Admas, H. T. A. Khan, R. Raeside, And D. White, *Research Methods For Graduate Business And Social Science Students*. Response Books, 2007.
- [12] S. H. Alshammari, M. B. Ali, And M. S. Rosli, "The Influences Of Technical Support, Self Efficacy And Instructional Design On The Usage And Acceptance Of Lms: A Comprehensive Review," *Turkish Online Journal Of Educational Technology*, Vol. 15, No. 2, Pp. 116–125, 2016.
- [13] I. Ajzen And T. J. Madden, "Prediction Of Goal-Directed Behavior: Attitudes, Intentions, And Perceived Behavioral Control," J Exp Soc Psychol, Vol. 22, No. 5, Pp. 453–474, 1986, Doi: 10.1016/0022-1031(86)90045-4.
- [14] A. Al-Adwan, A. Al-Adwan, And J. Smedley, "Exploring Students Acceptance Of E-Learning Using Technology Acceptance Model In Jordania Universities," *International Journal Of Education And Development Using Information And Communication Technology (Ijedict*, Vol. 9, No. 2, Pp. 4–18, 2013.
- [15] A. Al-Azawei, "Investigating The Effect Of Learning Styles In A Blended E-Learning System: An Extension Of The Technology Acceptance Model (Tam)," *Australasian Journal Of Educational Technology*, Vol. 33, No. 2, Pp. 1–23, 2017, Doi: 10.14742/Ajet.2741.

- [16] T. Almarabeh, "Students' Perceptions Of E-Learning At The University Of Jordan," International Journal Of Emerging Technologies In Learning, Vol. 9, No. 3, Pp. 31–35, 2014, Doi: 10.3991/Ijet.V9i3.3347.
- [17] C.-T. Chang, J. Hajiyev, And C. R. Su, "Examining The Students' Behavioral Intention To Use E-Learning In Azerbaijan? The General Extended Technology Acceptance Model For E-Learning Approach," *Comput Educ*, Vol. 111, Pp. 128–143, 2017, Doi: 10.1016/J.Compedu.2017.04.010.
- [18] H. Chen, W. Rong, X. Ma, Y. Qu, And Z. Xiong, "An Extended Technology Acceptance Model For Mobile Social Gaming Service Popularity Analysis," *Mobile Information Systems*, Vol. 2017, 2017, Doi: 10.1155/2017/3906953.
- [19] S. S. Al-Gahtani, "Empirical Investigation Of E-Learning Acceptance And Assimilation: A Structural Equation Model," *Applied Computing And Informatics*, Vol. 12, No. 1, Pp. 27–50, 2016, Doi: 10.1016/J.Aci.2014.09.001.
- [20] S. Bagon, M. Gacnik, And A. I. Starcic, "Information Communication Technology Use Among Students In Inclusive Classrooms," *International Journal Of Emerging Technologies In Learning*, Vol. 13, No. 6, Pp. 56–72, 2018, Doi: 10.3991/Ijet.V13i06.8051.
- [21] M. L. Yahaya, Z. A. Murtala, And H. N. Onukwube, "Partial Least Squares (Pls-Sem): A Note For Beginners," *International Journal Of Environmental Studies And Safety Research*, Vol. 4, No. 2019, Pp. 1–30, 2019, [Online]. Available: Www.Casirmediapublishing.Com
- [22] F. Weng, R. J. Yang, H. J. Ho, And H. M. Su, "A Tam-Based Study Of The Attitude Towards Use Intention Of Multimedia Among School Teachers," *Applied System Innovation*, Vol. 1, No. 3, Pp. 1–9, 2018, Doi: 10.3390/Asi1030036.
- [23] H. L. Alsheikh And S. Singh, "Female Students' Attitude Towards E-Learning In Saudi Higher Education," International Journal Of Humanities And Social Science Invention, Vol. 7, No. 12, Pp. 2319 – 7722, 2018, [Online]. Available: Www.Ijhssi.Org
- [24] L. P. Chin And Z. A. Ahmad, "Perceived Enjoyment And Malaysian Consumers' Intention To Use A Single Platform E-Payment," Shs Web Of Conferences, Vol. 18, P. 01009, 2015, Doi: 10.1051/Shsconf/20151801009.
- [25] C. M. Chao, "Factors Determining The Behavioral Intention To Use Mobile Learning: An Application And Extension Of The Utaut Model," *Front Psychol*, Vol. 10, No. July, Pp. 1–14, 2019, Doi: 10.3389/Fpsyg.2019.01652.
- [26] H. Almarabeh, E. F. Amer, And A. Sulieman, "The Effectiveness Of Multimedia Learning Tools In Education," International Journal Of Advanced Research In Computer Science And Software Engineering, Vol. 5, No. 12, Pp. 761–764, 2015.
- [27] I. Ajzen, "The Theory Of Planned Behavior," Health Commun, Vol. 34, No. 11, Pp. 1369–1376, 2019.
- [28] Q. Wang, H. L. Woo, C. L. Quek, Y. Yang, And M. Liu, "Using The Facebook Group As A Learning Management System: An Exploratory Study," *British Journal Of Educational Technology*, Vol. 43, No. 3, Pp. 428–438, 2012.
- [29] H. M. S. Ahmed, "Hybrid E-Learning Acceptance Model: Learner Perceptions," Decision Sciences Journal Of Innovative Education, Vol. 8, No. 2, Pp. 313–346, 2010, Doi: 10.1111/J.1540-4609.2010.00259.X.
- [30] A. Balog And C. Pribeanu, "The Role Of Perceived Enjoyment In The Students' Acceptance Of An Augmented Reality Teaching Platform: A Structural Equation Modelling Approach," *Studies In Informatics And Control*, Vol. 19, No. 3, Pp. 319–330, 2010, Doi: 10.24846/V19i3y201011.
- [31] G. Cheng And J. Chau, "Exploring The Relationships Between Learning Styles, Online Participation, Learning Achievement And Course Satisfaction: An Empirical Study Of A Blended Learning Course," *British Journal Of Educational Technology*, Vol. 47, No. 2, Pp. 257–278, 2016, Doi: 10.1111/Bjet.12243.