



Analysis of E-learning user Acceptance using the Technology Acceptance Model (TAM) and end-User Computing Satisfaction (EUCS)

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ABSTRACT

This research aims to analyse the acceptance of E-Learning among students of Universitas Informatika dan Bisnis Indonesia by using Technology Acceptance Model (TAM) and End-User Computing Satisfaction (EUCS) approaches, which are often used by researchers to examine user acceptance and satisfaction with technology. The results of this study indicate that the influence between the variables Perceived Ease of Use, Perceived Usefulness, Attitude Toward Using, Content, Accuracy, Format, Timeliness, Ease and User Satisfaction obtained a total value of 29,140 and on the continuum line shows that it is in the Very Good category. The results in this study also prove that there are 6 (six) accepted hypotheses and 3 (three) hypotheses that are not accepted. This result can be used as a suggestion for E-Learning Universitas Informatika dan Bisnis Indonesia to evaluate shortcomings in user satisfaction, as well as maintaining existing quality.

INTRODUCTION

Information and communication technology has become one of the most important aspects of human life. No exception in the world of education where the use of information technology is a factor that can improve the quality of education. The occurrence of the coronavirus (COVID-19) pandemic in early 2020 has had a major impact on community activities, ranging from health, economy, social and education. The impact of the coronavirus in the world of education can be seen in the policies of the central and regional governments to provide policies to close all educational institutions ranging from early childhood education, primary and secondary schools to universities. This policy makes the world of education implement a distance learning system so that the process of learning activities can continue. Distance or online learning is a form of technology utilisation, where learning uses internet access to solve various tasks given by educators. Therefore, the world of education uses a distance learning system by opening an online education platform that is used by schools / universities and educators to carry out teaching and learning activities properly, which in this case an information system can provide new and innovative things so that the teaching and learning process can run better, and make it easier for users to get information about lessons and so on. The government also provides various learning applications that can be accessed and used by lecturers and students to support the implementation of online learning. In this study we examined the acceptance of e-learning for students of Universitas Informatika dan Bisnis Indonesia.

E-Learning has two types of learning, synchronous and asynchronous. Synchronous learning is learning-orientated interaction facilitated by direct, real-time and usually scheduled instruction. This kind of learning process can also be done by holding video conferences, which allow direct interaction between lecturers and students like offline lectures. Meanwhile, asynchronous can be defined as independent learning where learners can interact with each other with materials that have been provided at a time of their choosing. In this asynchronous process, if there are students who want to ask questions, then a video conference can be held which has been agreed with the educator, but at a different time. But behind the ease of E-Learning, it is not yet known how much acceptance and user satisfaction of E-Learning information systems for students of Universitas Informatika and Bisnis Indonesia. The acceptance level of E-Learning technology can be a benchmark in assessing the acceptance of information technology by users. Therefore, the method used in measuring the level of acceptance of information technology is by using TAM (Technology Acceptance Model) and EUCS (End-User Computing Satisfaction) as a measure of information system user satisfaction . TAM is a Technology Acceptance Model developed by (Davis, 1989) to propose a theory of computer technology usage behaviour. TAM is adopted from the popular theory of Theory of Reason Actioned (TRA) (Fishbein & Ajzen, 1975). TAM is a model used to measure the extent of user acceptance of a technology, especially information technology. The TAM model aims to conceptualise how users accept and use new technology. TAM formulates the two main factors that are most significant in

user acceptance of new technology, namely factors that lead to ease of use (Perceived ease of use) and benefits that can be seen (Perceived usefulness). These two variables can explain aspects of user behaviour. The conclusion is that the TAM model can explain that the user's perception will determine his attitude towards the benefits of using Information Technology.

The model used next is End User Computing Satisfaction (EUCS), which is a model for measuring the level of user satisfaction of an information system. EUCS was proposed by Doll and Torkzadeh in 1998. In measuring the level of user satisfaction, there are five factors that can present user satisfaction. The five factors are content, accuracy, format, timeliness and ease. The object of this research is all students of Universitas Informatika dan Bisnis Indonesia. Previous TAM and EUCS research has been conducted by several researchers on the application of different technologies to test the accuracy of TAM and EUCS. The research is about Satisfaction Analysis of E-Learning Usage Using Technology Acceptance Model and End User Computing Satisfaction.

LITERATURE REVIEW

Information and communication technology has become one of the most important aspects of human life. No exception in the world of education where the use of information technology is a factor that can improve the quality of education. The occurrence of the coronavirus (COVID-19) pandemic in early 2020 has had a major impact on community activities, ranging from health, economy, social and education. The impact of the coronavirus in the world of education can be seen in the policies of the central and regional governments to provide policies to close all educational institutions ranging from early childhood education, primary and secondary schools to universities. This policy makes the world of education implement a distance learning system so that the process of learning activities can continue. Distance or online learning is a form of technology utilisation, where learning uses internet access to solve various tasks given by educators.

METHODOLOGY

The research stage is a process that will be carried out in conducting research in a structured manner using a method. The method used also goes through several stages such as literature study, describing problems, creating models and questionnaires, and analyzing existing data. The following research steps are described with a flowchart scheme as shown in Figure 1.

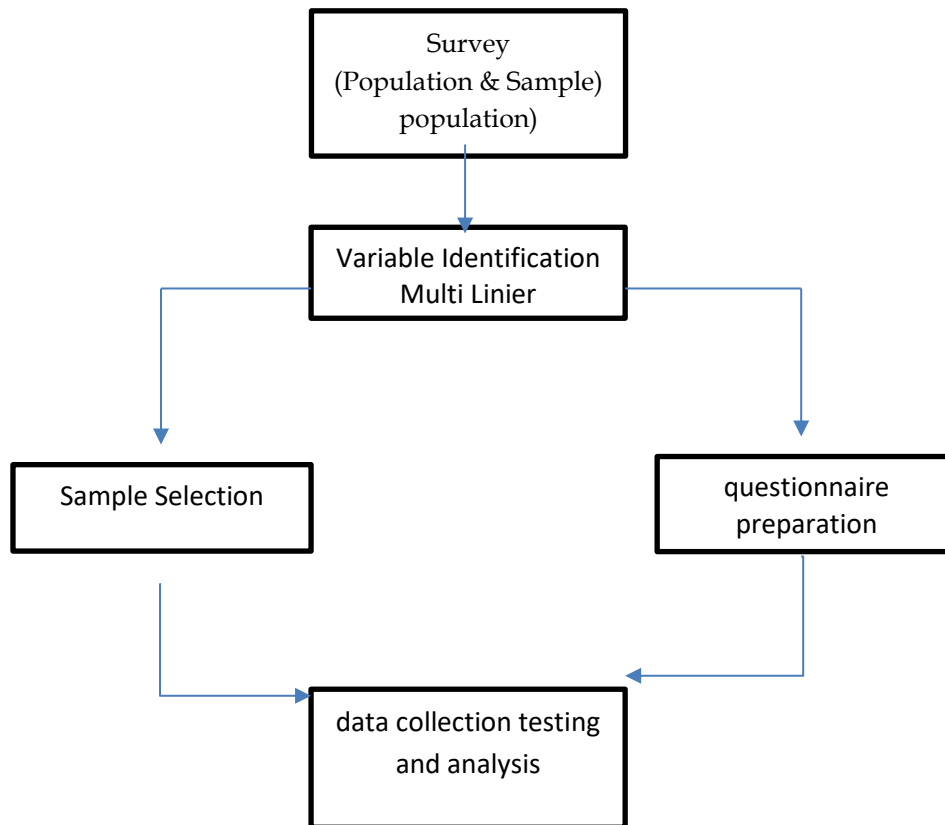


Figure 1. Research Methodology

1. Population & Sample.

Population is a collection of data that identifies phenomena [18]. A population with a certain number is called a finite population while a population that has an infinite number is called an infinite population [19]. It can be concluded that population is everything contained in the object of research, which is useful as a source of data in a study. Based on the description above, the population in this study are students of Universitas Informatika and Bisnis Indonesia who use E-Learning. According to sudre *et al.* [20] the sample is part of the number and characteristics of the population. Thus, the sample is not a population, but an estimate of the population. A sample must be planned as well as possible so that each element in the population can have the same opportunity because it will be selected as a sample whose chance value is not equal to zero. In determining the sample, Steve *et al* [21] suggests that the appropriate sample size in research is between 30 and 500. In this study, the sample size was selected through the population of E-Learning users of Universitas Informatika dan Bisnis Indonesia.

2. Variable Identification

The variables used in this study are as follows, Perceived Ease of Use, Perceived Usefulness, Attitude Toward Using, Content, Accuracy, Format, Timeliness, Ease and User Satisfaction. From these variables, indicators can be described in measuring each variable and can be seen as in the following table 1.

Table.1 Variable Identification

Variabel	Sumber	Indikator	No Item
<i>Perceived Ease of Use</i>	[22]	PEOU1 Mudah dipelajari	1
		PEOU2 Mudah diakses	2
		PEOU3 Menambah	3
		PEOU4 Mudah	4
		PEOU5 Ramah pengguna	5
<i>Perceived Usefulness</i>	[23] [24]	PU1 Meningkatkan	6
		PU2 Lebih efektif	7
		PU3 Lebih efisien	8
		PU4 Memberikan	9
		PU5 Bermanfaat	10
<i>Attitude Toward Using</i>	[25]	ATU1 Perasaan senang	11
		ATU2 Keinginan untuk	12
		ATU3 Menguntungkan	13
		ATU4 Menyenangkan	14
		ATU5 Sikap positif	15
<i>Content</i>	[26]	CT1 Sesuai kebutuhan	16
		CT2 Informasi yang	17
		CT3 Berkualitas baik	18
		CT4 Informasi terkini	19
		CT5 Informasi akurat	20
<i>Accuracy</i>	[26]	AC1 Informasi akurat	21
		AC2 Informasi	22
		AC3 Bekerja sesuai	23
		AC4 Sumber yang	24
		AC5 Ketrangan setiap	25
<i>Format</i>	[26]	FT1 Output sangat	26
		FT2 Informasi yang	27
		FT3 Tampilan huruf	28
		FT4 Struktur menu	29
		FT5 Konsistensi	30
<i>Timeliness</i>	[27]	TL1 Menampilkan	31
		TL2 Mudah	32
		TL3 Mudah saat	33
		TL4 Mudah mencari	34
		TL5 Mudah	35
<i>Ease</i>	[27]	ES1 Ramah pengguna	36
		ES2 Mudah	37
		ES 3 Tampilan mudah	38
		ES 4 Mudah mencari	39
		ES 5 Mudah	40
<i>User Satisfaction</i>	[27]	US1 Bergantung pada	41
		US2 Efektif dalam	42
		US3 Penggunaan	43
		US4 Pengguna senang	44
		US5 Pengguna puas	45

3. Validity And Reability Testing

Validity testing is used to measure whether a questionnaire is valid or not. An instrument that is valid or valid has high validity. Conversely, a less valid instrument means it has low validity. If the instrument is said to be valid, it means that it shows that the measuring instrument used to obtain the data is also valid, so that it is valid in this case it means that the instrument can be used to measure what should be measured in a study. For testing the validity of the construction is done by factor analysis, namely by correlating between the instrument item scores with the Pearson Product Moment formula as follows (1).

$$\rho_{X,Y} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}} \quad (1)$$

Where $\rho_{X,Y}$ represents the Pearson Product Moment correlation coefficient between two variables X and Y. The Pearson correlation coefficient is typically expressed in the range from -1 to 1, where 1 indicates a perfect positive linear relationship, 0 indicates no correlation, and -1 indicates a perfect negative linear relationship between the two variables. n is the number of data pairs used to compute the correlation coefficient. x_i and y_i These are the values of variables X and Y in the i -th data pair. \bar{x}, \bar{y} : **Means(averages) of all x and y values, respectively.**

The means can be calculated by summing all values and dividing by the number of data points. \sum denotes the summation operation. $(x_i - \bar{x})(y_i - \bar{y})$ This part represents the product of the differences between each x value and its mean \bar{x} and each y value and its mean \bar{y} in each data pair. $\sum_{i=1}^n (x_i - \bar{x})^2, \sum_{i=1}^n (y_i - \bar{y})^2$ These are the sum of squares of the differences between each x value and its mean \bar{x} and each y value and its mean \bar{y} across all data pairs. $\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}$ This part calculates the square root of the product of the two sums of squares mentioned above.

Reability testing is a tool to measure a questionnaire which is an indicator of a variable or construct. The reliability test can be used to measure the consistency of the measurement results of the questionnaire [28]. Reliability (reliability) comes from the word "reliable" which means trustworthy. Reliability is actually a tool for measuring a questionnaire which is an indicator of a variable or construct. A questionnaire can be said to be reliable if a person's/respondent's answer to a statement is consistent or stable over time. Reliability refers to an understanding that an instrument can be trusted enough to be used as a data collection tool because the instrument is good. Reliability points to the level of reliability of something [29].

4. Multi Linier Regression

Regression analysis consists of simple regression and multiple regression. Multiple Regression Analysis is the development of simple regression analysis. Its purpose is to predict the value of the dependent variable (Y) if the independent variable is at least two or more [30]. Multiple regression analysis is an analytical tool for forecasting the value of the effect of two or more independent variables on the variable. The number of independent variables studied is more than one, so it is said to be multiple regression. The relationship between these variables can be characterized through a mathematical model called a regression model.

RESEARCH RESULT AND DISCUSSION

The results of this study are part of the results of a study conducted based on information or data that has been collected as a result of the methodology applied. Which in this study is data processed through respondents through questionnaires as the data source.

1. Validity Test Results

The research questionnaire was organized into 9 (nine) groups according to the number of variables, with a total of 45 items. All questionnaire questions are on a Likert scale. An instrument is said to be valid if the research instrument is able to measure the variables of *Perceived Ease of Use, Perceived Usefulness, Attitude Toward Using, Content, Accuracy, Format, Timelines, Ease, User Satisfaction* on the use of E-Learning technology in conducting the lecture process at Universitas Informatika dan Bisnis Indonesia. Validity testing in this research is done if $r \text{ count} > r \text{ table}$ then the instrument is valid and vice versa if $r \text{ count} < r \text{ table}$ then the instrument is invalid. The number of initial samples used in this validity and reliability test is 20 samples. From the test data and calculations with SPSS, the data obtained are as in the following table 2.

Table 2. Validity & Reliability Testing Results

Table	2	R tabel	Nilai	Keterangan
<i>Perceived Ease of Use (PEOU)</i>				
PEOU 1		0,195	0,409	Valid
PEOU 2		0,195	0,400	Valid
PEOU 3		0,195	0,387	Valid
PEOU 4		0,195	0,314	Valid
PEOU 5		0,195	0,390	Valid
<i>Perceived Usefulness (PU)</i>				
PU 1		0,195	0,295	Valid
PU 2		0,195	0,346	Valid
PU 3		0,195	0,401	Valid
PU 4		0,195	0,395	Valid
PU 5		0,195	0,292	Valid
<i>Attitude Toward Using (ATU)</i>				
ATU 1		0,195	0,429	Valid

ATU 2	0,195	0,392	Valid
ATU 3	0,195	0,408	Valid
ATU 4	0,195	0,379	Valid
ATU 5	0,195	0,426	Valid
Content (CT)			
CT 1	0,195	0,453	Valid
CT 2	0,195	0,493	Valid
CT 3	0,195	0,275	Valid
CT 4	0,195	0,460	Valid
CT 5	0,195	0,466	Valid
Accuracy (AC)			
AC 1	0,195	0,497	Valid
AC 2	0,195	0,507	Valid
AC 3	0,195	0,295	Valid
AC 4	0,195	0,449	Valid
AC 5	0,195	0,498	Valid
Format (FT)			
FT 1	0,195	0,545	Valid
FT 2	0,195	0,386	Valid
FT 3	0,195	0,402	Valid
FT 4	0,195	0,430	Valid
FT 5	0,195	0,408	Valid
Timeliness (TL)			
TL 1	0,195	0,381	Valid
TL 2	0,195	0,278	Valid
TL 3	0,195	0,275	Valid
TL 4	0,195	0,452	Valid
TL 5	0,195	0,504	Valid
Ease (ES)			
ES 1	0,195	0,465	Valid
ES 2	0,195	0,394	Valid
ES 3	0,195	0,196	Valid
ES 4	0,195	0,427	Valid
ES 5	0,195	0,472	Valid
User Satisfaction (US)			
US 1	0,195	0,541	Valid
US 2	0,195	0,266	Valid
US 3	0,195	0,482	Valid
US 4	0,195	0,444	Valid
US 5	0,195	0,432	Valid

Based on the table above, it can be seen that the correlation value of each statement item is greater than r table = 0.195. Based on this description, the results of this test identify that all statement items submitted on 9 variables produce valid status and are suitable for use as measuring instruments for research and can be analyzed at the next stage.

2. Reliability Test Results

The reliability test is carried out on items that have been declared valid. A variable is said to be reliable or reliable if the answers to questions or statements are always consistent. The reliability test was carried out using Cronbach Alpha. The results of the reliability analysis can be seen in the output of the SPSS program and shown the amount of alpha value (α). Decision making on the reliability of answers to a variable is determined with the assumption that if the Cronbach alpha value > 0.70 then the question items on the variable under study are reliable. The table 3 below is the result of the reliability test of the variables in this study.

Table 3. Reliability Testing Results

Variabel	AI	Alph	Keter
<i>Perceived Ease of</i>	0,8	0,70	Relia
<i>Perceived</i>	0,8	0,70	Relia
<i>Attitude Toward</i>	0,8	0,70	Relia
<i>Content</i>	0,8	0,70	Relia
<i>Accuracy</i>	0,8	0,70	Relia
<i>Format</i>	0,8	0,70	Relia
<i>Timeliness</i>	0,8	0,70	Relia
<i>Ease</i>	0,8	0,70	Relia
<i>User Satisfaction</i>	0,8	0,70	Relia

3. Descriptive Analysis

Characteristics of Respondents based on Study Program can be seen in table 4. From the results of the questionnaire that has been distributed, it can be seen that 13 respondents (8.8%) came from the Informatics Engineering study program, 50 respondents (33.3%) came from the Information Systems study program, 29 respondents (19.3%) came from the Management study program, 21 respondents (14%) came from the Accounting study program, 15 respondents (10%) came from the Communication Science study program, 11 respondents (7.3%) came from the Visual Communication Design study program, and 11 respondents (7.3%) came from the Psychology study program.

Table 4. Characteristics of Respondents based on Study Program

Program Studi	Freku	Prsent
Teknik Informatika	13	8.8%
Sistem Informasi	50	33.3%
Manajemen	29	19.3%
Akuntansi	21	14%
Ilmu Komunikasi	15	10%
Desain Komunikasi Visual	11	7.3%
Psikologi	11	7.3%
Total	150	100%

4. Analysis of Respondents' Responses to E-Learning

To find out what responses are received from respondents regarding E-Learning applications, data analysis is carried out from the results of distributing questionnaires that have been distributed to respondents who use E-Learning and obtained 150 people. The statements contained in the questionnaire consist of 45 statements. The following are the results of questionnaire processing regarding the acceptance of E-Learning based on respondents' responses presented in the form of a frequency table on each statement as follows:

A. E-Learning Acceptance Refers to the Perceived Ease of Use Variable

Based on data processing, it can be seen that respondents provide statements about the use of E-Learning applications that refer to Perceived Ease of Use with each indicator which will be explained based on the processing results as follows: The indicator of easy to understand in use shows an Agree statement is in the highest position, which is 64.7%, while other indicators show low numbers. This shows that the easy to understand indicator has been applied to E-Learning. Flexible indicator shows Agree statement is in the highest position, which is 48%, while other indicators show low numbers. This shows that flexible indicator has been applied to E-Learning. Accelerate work indicator shows Agree statement is in the highest position, which is 59.3%, while other indicators show low numbers. This shows that the indicator of speeding up work has been applied to E-Learning. The user friendly indicator shows that the Agree statement is in the highest position, which is 53.3%, while other indicators show a low number. This shows that user friendly indicator has been applied to E-Learning. The indicator of making lecture interaction easier shows that Agree statement is in the highest position, which is 54%, while other indicators show low numbers. This shows that the indicator of facilitating lecture interaction has been applied to E-Learning.

B. E-Learning Acceptance Refers to the Perceived Usefulness Variable

Based on the results of data processing, it can be seen that respondents provide statements about the use of E-Learning applications that refer to Perceived Usefulness with each indicator which will be explained based on the processing results as Indicators supporting lectures show that the Agree statement is in the highest position, which is 65.3%, while other indicators show low numbers. This shows that the indicator of supporting lectures has been applied to E-Learning. The indicator of increasing efficiency shows that Agree statement is in the highest position, which is 53.3%, while other indicators show low numbers. This shows that the indicator of increasing efficiency has been applied to E-Learning. The indicator of increasing effectiveness shows that Agree statement is in the highest position, which is 51.3%, while other indicators show a low number. This shows that the indicator of increasing effectiveness has been applied to E-Learning. The indicator of making work/task easier shows that Agree statement is in the highest position, which is 52.7%, while other indicators

show low numbers. This shows that the indicator of making work/task easier has been applied to E-Learning. Indicator of usefulness in providing information shows that Agree statement is in the highest position, which is 57.3%, while other indicators show low numbers. This shows that the indicator of usefulness in providing information has been applied to E-Learning.

C. E-Learning Acceptance Refers to the Variable Attitude Toward Using

Based on the results of data processing, it can be seen that respondents provide statements about the use of E-Learning applications that refer to Attitude Toward Using with each indicator which will be explained based on the processing results as The indicator of making users happy shows that the Agree statement is in the highest position, which is 63.3%, while other indicators show low numbers. This shows that the indicator of making users happy has been applied to E-Learning. User desire indicator shows Agree statement is at the highest position, which is 49.3%, while other indicators show low numbers. This indicates that the user desire indicator has been applied to E-Learning. Good idea indicator shows Agree statement is in the highest position, which is 58.7%, while other indicators show low numbers. This shows that good idea indicator has been applied to E-Learning. The indicator of maintaining a positive attitude shows that Agree statement is in the highest position, which is 58%, while other indicators show a low number. This shows that the indicator of maintaining a positive attitude has been applied to E-Learning. The indicator of positive impact shows that Agree statement is in the highest position, which is 60.7%, while other indicators show low numbers. This shows that the positive impact indicator has been applied to E-Learning.

D. E-Learning Acceptance Refers to Content Variables

Based on the results of data processing, it can be seen that respondents give statements about the use of E-Learning applications that refer to Content with each indicator which will be explained based on the processing results as Indicators in accordance with the needs show that Agree statement is in the highest position, which is 60%, while other indicators show low numbers. This shows that the indicator in accordance with the needs has been applied to E-Learning. Indicators are presented diversely shows that Agree statement is in the highest position, which is 55.3%, while other indicators show low numbers. This shows that the indicator presented diversely has been applied to E-Learning. The indicator of usefulness for lectures shows that Agree statement is in the highest position, which is 59.3%, while other indicators show low numbers. This shows that the indicator of usefulness for lectures has been applied to E-Learning. Good quality indicator shows Agree statement is in the highest position, which is 47.3%, while other indicators show low numbers. This shows that good quality indicator has been applied to E-Learning. Clearly presented indicator shows Agree statement is in the highest position, which

is 50.7%, while other indicators show low numbers. This shows that the indicator presented clearly has been applied to E-Learning.

E. E-Learning Acceptance Refers to Accuracy Variable

Based on the results of data processing, it can be seen that respondents give statements about the use of E-Learning applications that refer to Accuracy with each indicator which will be explained based on the processing results as The accurate information indicator shows that the Agree statement is in the highest position, which is 56.7%, while other indicators show low numbers. This shows that accurate information indicators have been applied to E-Learning. Reliable information indicator shows Agree statement is in the highest position, which is 54.7%, while other indicators show low numbers. This shows that reliable information indicator has been applied to E-Learning. The appropriate output indicator shows that Agree statement is in the highest position, which is 60%, while other indicators show low numbers. This indicates that the appropriate output indicator has been applied to E-Learning. Standardized indicator shows Agree statement is in the highest position, which is 58%, while other indicators show low numbers. This indicates that appropriate output indicator has been applied to E-Learning. e. The overall indicator of accurate information shows that Agree statement is in the highest position, which is 56.6%, while other indicators show low numbers. This shows that the overall indicator of accurate information has been applied to E-Learning.

F. E-Learning Acceptance Refers to the Format Variable

Based on the results of data processing, it can be seen that respondents provide statements about the use of E-Learning applications that refer to the Format with each indicator which will be explained based on the processing results as Interesting indicators show that Agree statements are in the highest position, which is 58.7%, while other indicators show low numbers. This shows that interesting indicators have been applied to E-Learning. Easy to use indicator shows Agree statement is in the highest position, which is 55.3%, while other indicators show low numbers. This shows that easy to use indicator has been applied to E-Learning. Good information indicator shows Agree statement is in the highest position, which is 56.7%, while other indicators show low numbers. This shows that good information indicator has been applied to E-Learning. Good design and color indicator shows Agree statement is in the highest position, which is 57.3%, while other indicators show low numbers. This indicates that good design and color indicators have been applied to E-Learning. The overall interesting indicator shows that Agree statement is in the highest position, which is 58%, while other indicators show low numbers. This shows that the overall interesting indicator has been applied to E-Learning.

G. E-Learning Acceptance Refers to the Timeliness Variable

Based on the results of data processing, it can be seen that respondents give statements about the use of E-Learning applications that refer to Timeliness with each indicator which will be explained based on the processing results as Indicator of fast and precise information shows that Agree statement is in the highest position, which is 64%, while other indicators show low numbers. This shows that the indicator of fast and precise information has been applied to E-Learning. The indicator of current information shows that Agree statement is in the highest position, which is 57.3%, while other indicators show low numbers. This shows that the latest information indicator has been applied to E-Learning. Easy to download indicator shows Agree statement is in the highest position, which is 56%, while other indicators show low numbers. This shows that the easy to download indicator has been applied to E-Learning. The indicator of notification quickly shows that the Agree statement is in the highest position, which is 51.3%, while other indicators show a low number. This shows that quick notification indicator has been applied to E-Learning. Appropriate feedback indicator shows that Agree statement is in the highest position, which is 52%, while other indicators show low numbers. This indicates that the feedback indicator has been appropriately applied to E-Learning.

H. E-Learning Acceptance Refers to the Ease Variable

Based on the results of data processing, It can be seen that respondents give statements about the use of E-Learning applications that refer to Ease with each indicator which will be explained based on the processing results as Indicator of easy to understand feature shows Agree statement is in the highest position, which is 64.7%, while other indicators show low numbers. This shows that the easy to understand feature indicator has been applied to E-Learning. User friendly indicator shows that Agree statement is in the highest position, which is 58.7%, while other indicators show low numbers. This shows that the user friendly indicator has been applied to E-Learning. Flexible indicator shows Agree statement is in the highest position, which is 57.3%, while other indicators show low numbers. This shows that flexible indicator has been applied to E-Learning. Attractive format indicator shows Agree statement is in the highest position, which is 47.3%, while other indicators show low numbers. This indicates that the attractive format indicator has been applied to E-Learning. The indicator of easing the lecture process shows that Agree statement is in the highest position, which is 54.7%, while other indicators show low numbers. This shows that the indicator of easing the lecture process has been applied to E-Learning.

I. Acceptance of E-Learning Referring to the User Satisfaction Variable

Based on the results of data processing, It can be seen that respondents provide statements about the use of E-Learning applications that refer to User Satisfaction with each indicator which will be explained based on the processing results as The indicator of fulfilling needs shows that the statement of Agree is in the highest position, which is 63.3%, while other indicators show low numbers. This shows that the indicator of fulfilling needs has been applied to E-Learning. Efficient indicator shows that Agree statement is in the highest position, which is 59.3%, while other indicators show low numbers. This shows that efficient indicators have been applied to E-Learning. Effective indicator shows that Agree statement is in the highest position, which is 55.3%, while other indicators show low numbers. This indicates that effective indicators have been applied to E-Learning. Attractive format indicator shows Agree statement is in the highest position, which is 56.7%, while other indicators show low numbers. This shows that the interesting format indicator has been applied to E-Learning. The indicator of making lectures easier shows that Agree statement is in the highest position, which is 52%, while other indicators show low numbers. This shows that the indicator of facilitating lectures has been applied to E-Learning.

J. Normality Testing

The normality test aims to determine whether the value in the data distribution on a variable is normally distributed or not. Normality testing in this study uses the Normal Probability Plot. The normality test using the Normal Probability Plot (P-Plot) displays the results in the form of a histogram graph. The following is the basis for knowing whether a data can be said to be normal using P-Plot. If the data spreads around the diagonal line, and follows the direction of the histogram line or graph, then the data distribution can be said to be normally distributed. Conversely, if the data spreads far from the line, and does not follow the direction of the histogram line or graph, then the data distribution is said to be not normally distributed. Normality testing is very important to do as a first step in conducting various tests so that errors do not occur if normality is met. Because a good regression model is to have normally distributed residuals. The normality test can be seen in Figure 2.

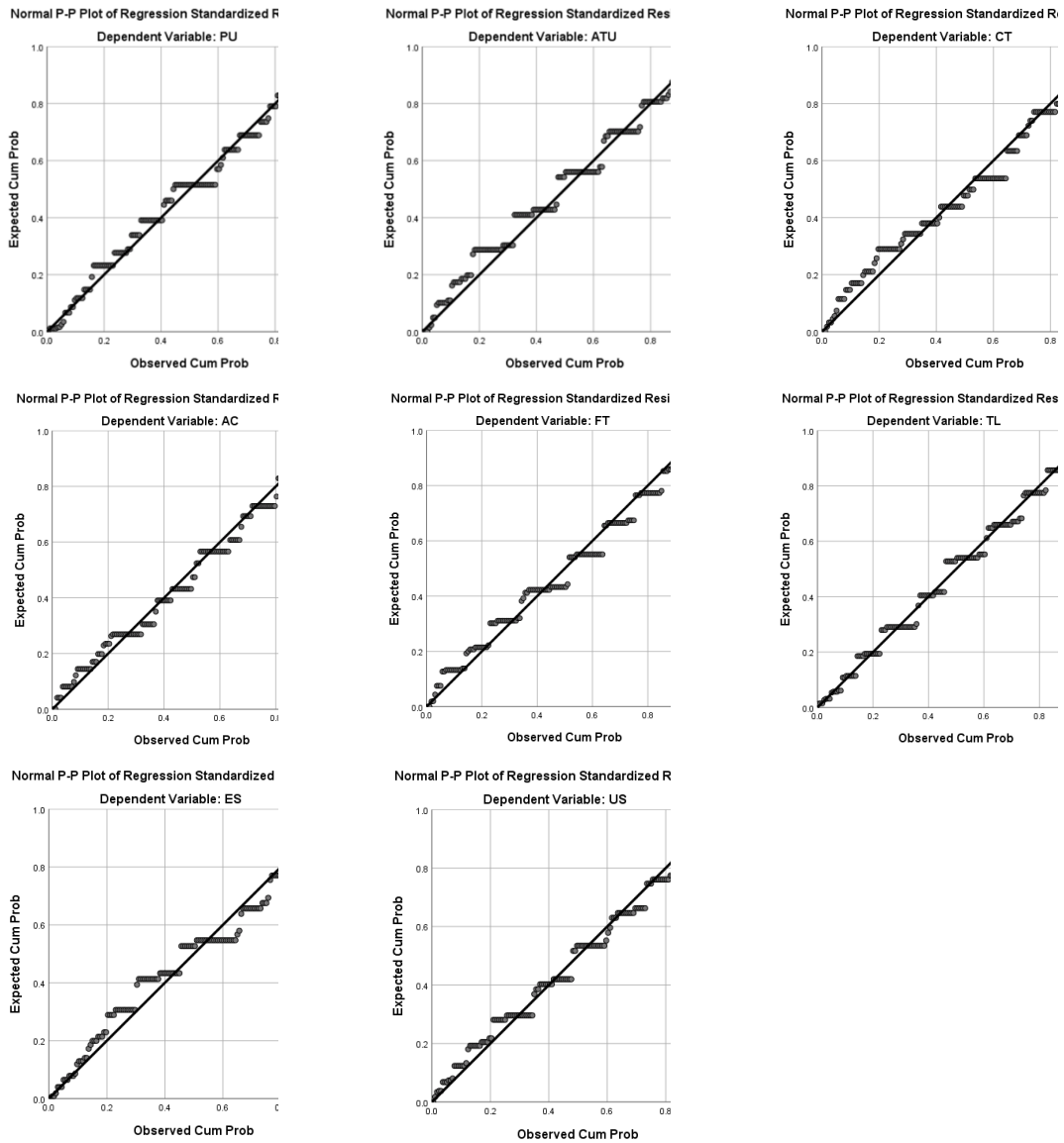


Figure 2 Normality Testing Results

K. Determination Coefficient Test

The coefficient of determination test is used to measure the suitability of multiple regression on data. If the adjusted R is higher, the better the regression model will appear. According to , the coefficient of determination serves to determine the extent to which all independent variables can explain the dependent variable. If the coefficient of determination is getting bigger, then the influence of the independent variable on the dependent is getting stronger. In this study, the coefficient of determination test used IBM SPSS 26 and the following are the results can be seen in table 5.

Table 5. Determination Coefficient Test

Variable	Adjusted R Square
Perceived Usefulness	.336
Attitude Toward Using	.504
User Satisfaction	.184

Based on table 5, it is known that the coefficient of determination (Adjusted R²) of the Perceived Ease of Use variable is 0.336. This means that 33.6% of the variation in the Perceived Usefulness variable can be explained by the Perceived Ease of Use variable. While for the rest, namely (100%-33.6% = 66.4%) is explained by other factors that are outside the model. Standard Error Estimate (SEE) of 1.325. While the coefficient of determination (Adjusted R²) Perceived Ease of Use, Perceived Usefulness, Content, Accuracy, Format, Timeliness, Ease. is 0.504. This means that 50.4% of the variation in the Attitude Toward Using variable can be explained by the Perceived Ease of Use, Perceived Usefulness, Content, Accuracy, Format, Timeliness, Ease variables. While for the rest, namely (100%-50.4% = 49.6%) is explained by other factors that are outside the model. Standard Error Estimate (SEE) of 1.175. The smaller the SEE value. Then it is known that the coefficient of determination (Adjusted R²) of User Satisfaction is 0.184. This means that 18.4% of the variation in the User Satisfaction variable can be explained by the Attitude Toward Using variable. As for the rest, namely (100%-18.4% = 81.6%) is explained by other factors that are outside the model. Standard Error Estimate (SEE) of 1.608.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of research that has been conducted regarding the acceptance of E-Learning Universitas Informatika dan Bisnis Indonesia using the Technology Acceptance Model (TAM) and End-User Computing Satisfaction (EUCS) methods, we conclude that the Perceived Ease of use variable has a significant effect partially on Perceived Usefulness in the use of E-Learning Indonesian University of Informatics and Business. Perceived Usefulness variable has a partially significant effect on Attitude Toward Using on the use of E-Learning at the University of Informatics and Business Indonesia. The Perceived Ease of use variable has no significant effect partially on Attitude Toward using in the use of E-Learning at the University of Informatics and Business Indonesia. Content variable has a partially significant effect on Attitude Toward using in the use of E-Learning at the University of Informatics and Business Indonesia. Accuracy variable has a partially significant effect on Attitude Toward using in the use of E-Learning at the University of Informatics and Business Indonesia. Format variable has no significant effect partially on Attitude Toward using on the use of E-Learning of Indonesian University of Informatics and Business. Timeliness variable has a partially significant effect on Attitude Toward using on the use of E-Learning of Indonesian University of Informatics and Business. Ease variable has no significant effect partially on Attitude Toward using in the use of E-Learning at Indonesian University of Informatics and Business.. The Attitude Toward using variable has a partially significant effect on user Satisfaction in the use of E-Learning at the University of Informatics and Business Indonesia.

ADVANCED RESEARCH

Still doing further research to find out more about E-learning User Acceptance Analysis using the Technology Acceptance Model (TAM) and end-User Computing Satisfaction (EUCS)

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