

LECTURERS' PERCEPTION AND PREFERENCE FOR E-LEARNING IN UNIVERSITY OF DUTA BANGSA SURAKARTA DURING COVID-19 PANDEMIC

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ABSTRACT

E-learning System in faculty of Compur Science University of Duta Bangsa Surakarta are used as a media support the campus learning process. This study aims to determine the relationship between content (content), the level of accuracy of the system (accuracy), format, easy of use, timeliness, organizational support, user attitudes towards the e-learning system and perceived attitude of top management on the level of satisfaction of using the e-learning system in faculty of Computer Science, University of Duta Bangsa Surakarta. This research is a descriptive study used technology acceptance model (TAM) with modified End User Computing Satisfaction (EUCS) approach method. The results of testing and data processing from respondents were normally distributed, with the Kolmogorov-Smirnov test. The results of testing the data related to the 16 questionnaire questions also show that the data is valid and reliable. User satisfaction with the implementation of learning through the e-learning system during the Covid-19 pandemic is quite high, above 75% strongly agree, even from 8 items, 7 items on average are above 80% strongly agree. From the results of data processing the average is 4.11, which means the acceptance strongly agrees with the e-learning system 82.2%. Content occupies the highest satisfaction score of 89.2% and the lowest level of satisfaction is organizational support, the lecturer satisfaction rate is 76.4%.

Key words : e-learning systems, user satisfaction, technology acceptance model, end user computing satisfaction.

INTRODUCTION

The Covid-19 pandemic has had an effect and forced all aspects of life with a new habit. Information technology plays an important role during a pandemic, life activities that were originally offline must be adapted to online. Learning in the Covid-19 pandemic era has also adapted from direct learning to online learning. The development of information technology is very rapid, as is its application in learning. E-learning is one of the implementations of information technology in learning. The development of e-learning from the emergence of web and mobile applications, learning management systems (LMS) and synchronous learning plays a very important role in learning in the Covid-19 pandemic era. In this pandemic era, online learning is the choice for both asynchronous learning and synchronous learning. Colleges, schools and educational institutions provide online learning. The implementation of online learning should be set according to the needs of teachers and learners (Muthuprasad et.al, 2021), (Hastuti et. al, 2019), (Jumardi, 2020), (Khan et.al, 2021).

The learning with elearning will involve three main components, namely learners, teachers and learning content. in learning in universities, lecturers as teachers play an important role in the use and implementation of learning through e-learning. Lecturers act as moderators in the implementation of learning through elearning. Another role of lecturers is in the preparation and filling of the material taught in elearning. The role of the lecturer must

also be balanced with the ease and completeness of the e-learning used. The competence and character of the lecturers related to the mastery of the material and the use of e-learning will be interrelated in the smooth learning with online learning. Elearning has both advantages and disadvantages. Learning in the pandemic era, the use of e-learning is a must. The ability to manage learning through e-learning from a lecturer will be very influential in learning (Angela et.al, 2018), (Adeyemi et.al, 2020), (Liao et. al, 2020).

The user perceptions of the use of e-learning in learning in the pandemic era are important for reference in the development of post-pandemic sustainable learning. User perceptions including lecturers in implementing learning through e-learning can be viewed from various aspects such as content, accuracy, format, easy of use, timeline, organizational support, user attitude towards and perceived attitude of top management. Lecturers' perceptions in these 8 aspects can be used as a reference for analysis and evaluation of the implementation of online learning during the pandemic (Rahmawati et al, 2019), (Muthuprasad et.al, 2021), (Hastuti et. al, 2019).

This study aims to produce a model of analysis and testing of lecturers' perceptions in the implementation of e-learning during the Covid-19 pandemic at Duta Bangsa University Surakarta by using the Technology Acceptance Model (TAM) with variables in End User Computing Satisfaction (EUCS) which includes content, accuracy, format, convenience and time. The results of the evaluation of the level of satisfaction with the implementation of e-learning will be used to improve and enhance e-learning in terms of the quality of information technology, learning content, responsiveness of students and lecturers as well as e-learning management by the campus.

METHOD

Technology Acceptance Model

The Technology Acceptance Model (TAM) is a model that is built to analyze and understand the factors that influence the acceptance of the use of information technology which was first introduced by Fred Davis in 1986 (Adeyemi et al, 2020), (Liao, et al, 2018)). TAM is the result of the development of Theory of Reasoned Action (TRA), which was first developed by Ajzen and Fishbein (1980). TAM aims to explain and estimate user acceptance of an information system. TAM provides a theoretical basis for knowing the factors that influence the acceptance of technology in an organization (Liao, et al, 2018). TAM explains the causal relationship between belief (in the benefits of an information system and its ease of use) and the behavior, goals / needs, and actual use of users of an information system (Rahmawati et al, 2019), (Helia et al, 2018).

The TAM model is adopted from the TRA model. TAM adds two main constructs to the TRA model, namely perceived usefulness and perceived ease of use. These two constructs have a direct influence on behavior intention (Adeyemi et al, 2020). The TAM model can be seen in Figure 1.

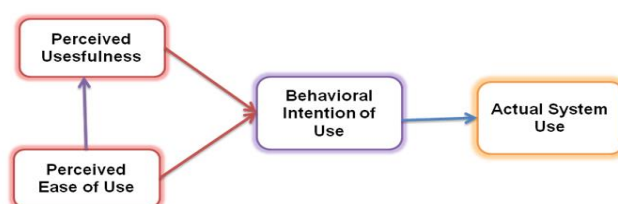


Figure 1. Model of TAM

One of the factors that can influence it is the user's perception of the usefulness and ease of use of information technology (IT) as a reasonable action in the context of technology users, so that someone's reason for seeing the benefits and ease of use of IT makes the person's actions / behavior a benchmark in acceptance. a technology.]

End-User Computing Satisfaction (EUCS)

Measurement of satisfaction has had a long history in the discipline of information systems. In the scope of end-user computing, a number of studies have been conducted to capture the overall evaluation in which the end user has considered the user of an information system (eg satisfaction) and also the factors that shape this satisfaction (Pedrosa, et al, 2020).

End User Computing Satisfaction (EUCS) is a method for measuring the satisfaction level of users of an application system by comparing the expectations and reality of an information system. Definition of End User Computing Satisfaction of an information system is the overall evaluation of users of information systems based on their experience in using the system. The EUCS evaluation model was developed by Doll and Torkzadeh. Evaluation using this model emphasizes end user satisfaction with technological aspects, by assessing the content, accuracy, format, time and ease of use of the system. This model has been tested by other researchers to test its reliability and the results show no significant difference even though this instrument is translated in different languages (Rahmawati et al, 2019), (Hastuti et.al, 2019).

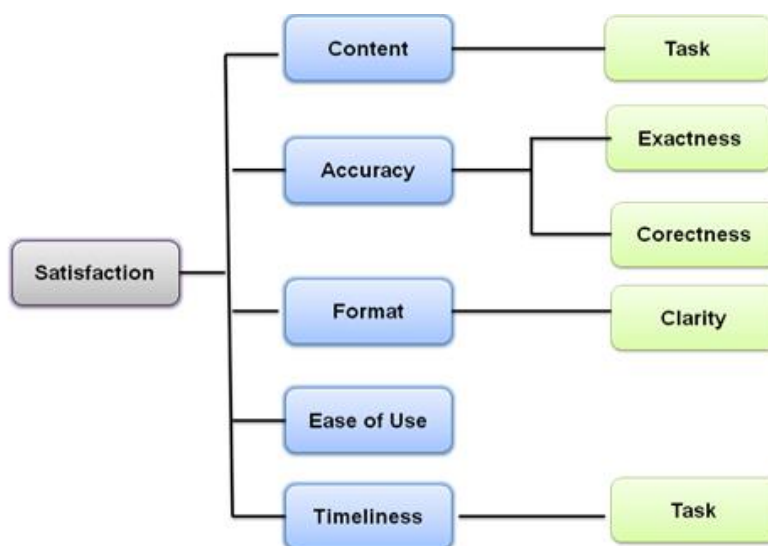


Figure 2. Model of EUCS

Elearning

E-learning usually refers to learning methods that use electronic learning content. Web-based learning is one example of e-learning. In general, what is commonly called e-learning is web-based learning. With the widespread use of the internet, e-learning has now become a new, portable and flexible method for students to acquire essential knowledge. Currently e-learning is emerging as a new paradigm of modern education (Muthuprasad et.al, 2021), (Suryaman et.al, 2020).

METHODS

Research Flow

This research involves several steps in the unit of the research framework. The flow of this research can be seen in figure 3. This research flow shows the step by step that is passed during the research process.

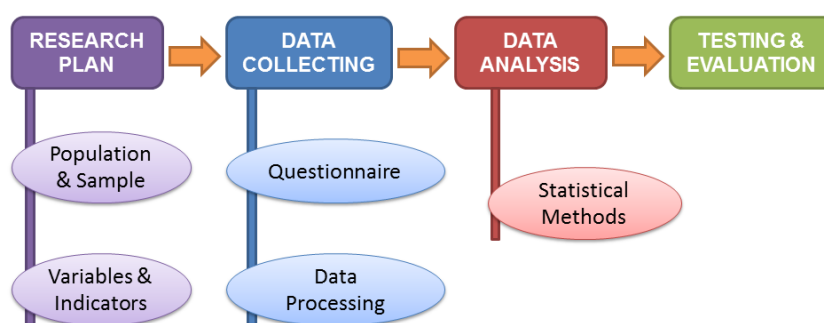


Figure 3. Research Flow

The type of research used in this study is descriptive research. The first step of research was research plan, included determining sample & population and variables & indicator. The next step was data collecting, included made questionnaire and data processing. Data analysis used statistical methods and the final step was testing and evaluation. The population of this study were students of the Faculty of Computer Science, Universitas Duta Bangsa Surakarta as users of e-learning system. In selecting the sample, this study used a combination of convenient sampling and random sampling techniques. The source of the data in this study consisted of two parts, namely primary data and secondary data.

Research Questionnaire

making the research questionnaire, first determined the variables and dimensions of the research variables that will be used. In this study the variables / constructs used in the questionnaire were based on the variables contained in the EUCS (End User Computing Satisfaction) method. The variables variable dimensions to be studied are as follows table 1 :

Table 1. Research Questionnaire

Research Variable	Dimension Variable	Item
Content	1. E-learning provides adequate, useful and needed material.	1
	2. E-learning provides useful modules and practical examples.	2
Accuracy	1. E-learning provides accurate and satisfying material.	3
	2. Elearning provides information according to user access rights.	4

Format	1. E-learning has an attractive appearance, easy to understand and compatible.	5
	2. Elearning has a useful and satisfying format.	6
Ease of use	1. E-learning has an easy-to-use menu.	7
	2. E-learning can simplify and improve the quality of learning.	8
Timeliness	1. E-learning can be accessed by users quickly.	9
	2. E-learning provides the latest material.	10
Organizational Support	1. I am satisfied with the speed of response of the organization in handling complaints	11
	2. Organizations are effective in dealing with problems that occur in e-learning	12
User Attitude Towards Elearning System	1. E-learning is used by users according to the rules.	13
	2. Users can provide input for improvement and progress in learning.	14
Perceived Attitude of Top Management	1. Duta Bangsa University provides training using	15
	2. Duta Bangsa University Surakarta provides e-learning socialization	16

DISCUSSION

Based on the results of questionnaires distributed directly to respondents, 30 respondents were collected. After tracing the data, it was found that 5 questionnaires had invalid data so that the remaining 25 respondents were left for data processing. The general description of the respondents who participated was male 12 people (48%) of the remaining 13 female respondents (52%).

Distribution Lecturers' Gender

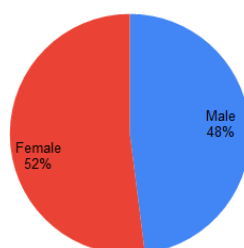


Figure 1. Distrubution Lecturers' Gender

In this study, descriptive statistical tests were emphasized on the number of samples (N), the minimum answer value (min), the maximum answer value (max), the average value (mean) and standard deviation (Std. deviation). The five things include content, format accuracy, timeliness, ease of use. User satisfaction is also determined by the user's attitude towards the information system (user attitude-towards information system), organizational support and perceived attitude of top management.

Table 2. Descriptive Statistics of Respondents

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
C1	25	3	5	4.44	0.583
C2	25	3	5	4.48	0.586
A3	25	3	5	4.16	0.624
A4	25	3	5	4.04	0.611
F5	25	3	5	4.16	0.688
F6	25	3	5	4.16	0.746
EU7	25	3	5	4.16	0.624
EU8	25	3	5	4.12	0.726
T9	25	2	5	4.16	0.746
T10	25	1	5	3.96	0.935
OS11	25	2	5	3.88	0.971
OS12	25	2	5	3.76	0.831
UA13	25	2	5	4.12	0.781
UA14	25	4	5	4.60	0.500
PA15	25	1	5	4.08	0.954
PA16	25	1	5	4.12	0.971
Valid N (listwise)	25				

The results in table 2. show the average of each instrument varies between 3.76 to 4.60. The highest average value was obtained by indicators UA14 (4.60), C2 (4.48) and C1 (4.44). These results also show the usage behavior of the respondents. Where most of the respondents gave opinions that users can provide input for improvement and progress in learning, E-learning provides useful modules and practical examples and E-learning provides sufficient, useful and needed material.

Based on the normality test above, the processed data is valid so that it can be used for research. The result looks like table 3, below.

Table 3. Respondents Kolmogorov-Smirnov Normality Test

	N	Test Statistic	Asymp. Sig. (2-tailed)
C1	25	0.312	0.000
C2	25	0.333	0.000
A3	25	0.321	0.000
A4	25	0.326	0.000
F5	25	0.272	0.000
F6	25	0.230	0.001
EU7	25	0.321	0.000
EU8	25	0.246	0.000
T9	25	0.295	0.000

T10	25	0.277	0.000
OS11	25	0.269	0.000
OS12	25	0.220	0.003
UA13	25	0.279	0.000
UA14	25	0.388	0.000
PA15	25	0.267	0.000
PA16	25	0.251	0.000

The results of the validity test for respondents are as shown in table 4, below:

Table 4. Validity Test Results for Respondents

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
C1	25	100.0%	0	0.0%	25	100.0%
C2	25	100.0%	0	0.0%	25	100.0%
A3	25	100.0%	0	0.0%	25	100.0%
A4	25	100.0%	0	0.0%	25	100.0%
F5	25	100.0%	0	0.0%	25	100.0%
F6	25	100.0%	0	0.0%	25	100.0%
EU7	25	100.0%	0	0.0%	25	100.0%
EU8	25	100.0%	0	0.0%	25	100.0%
T9	25	100.0%	0	0.0%	25	100.0%
T10	25	100.0%	0	0.0%	25	100.0%
OS11	25	100.0%	0	0.0%	25	100.0%
OS12	25	100.0%	0	0.0%	25	100.0%
UA13	25	100.0%	0	0.0%	25	100.0%
UA14	25	100.0%	0	0.0%	25	100.0%
PA15	25	100.0%	0	0.0%	25	100.0%
PA16	25	100.0%	0	0.0%	25	100.0%

From the table above, 25 respondents' data are 100% valid. With this validity test the data can be used for further analysis. The results of the reliability test are shown in table 5 below:

Table 5. Respondents' Reliability Test Results

Case Processing Summary		Reliability Statistics	
N	%	Cronbach's Alpha	N of Items

Cases	Valid	25	100.0	0.914	16
	Excluded ^a	0	0.0		
	Total	25	100.0		

From the results of the reliability test in table 5 with a Cronbach Alpha value of 0.914 for 16 items, the research data is reliable.

From the results of the TAM analysis of this study, it was found that all items consisting of content, format, accuracy, timeliness, ease of use, user attitude towards e-learning, organizational support, and perceived attitude of top management. From the results of data processing per item obtained for student respondents an average of 4.15, which means the acceptance strongly agrees with the e-learning System 83.0%.

CONCLUSION

The results of testing and data processing from student respondents were normally distributed, with the Kolmogorov-Smirnov test. The results of testing the data related to the 16 questionnaire questions also show that the data is valid and reliable. User satisfaction with the implementation of learning through the e-learning system during the Covid-19 pandemic is quite high, above 75% strongly agree, even from 8 items, 7 items on average are above 80% strongly agree. From the results of data processing the average is 4.15, which means that the acceptance strongly agrees with the e-learning System 83.2%. Content occupies the highest satisfaction score of 89.2% while the lowest level of satisfaction is organizational support, the lecturer satisfaction rate is 76.4%.

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