STUDENTS' INTEREST FACTORS IN USING E-BOOK AND E-LIBRARY AS LEARNING SOURCES DURING THE COVID-19 PANDEMIC

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Abstract

This study aims to determine the factors of student interest in using e-books *and* digital libraries *as learning resources during the Covid-19 pandemic. The factors of interest in using* e-books *and* e-libraries in *terms of the model* Unified Theory of Acceptance and Use of Technology *consisting of* Behavioral Intention*,* Use Behavior*,* Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition*. This research is survey research. The population in this study is the third-semester students in the 2021/2022 academic year with a total of 81 students. The sampling technique used is* proportionate stratified random sampling *with a sample size of 68 students. Collecting data in this study using a questionnaire. The method of analysis uses factor analysis. The results of the KMO and Bartlett's Tests show a value of 0.571 with the value of Bartlett's Test of Sphericity (Sig.) being 0.000 and the results of the Measure of Sampling Adequacy Test showing the value of Anti Image Matrices Correlation > 0.5, thus all variables are eligible for factor analysis. Two main factors can explain variations in student interest in using e-books and e-library learning resources, namely Performance Expectancy and Effort Expectancy. The eigenvalue component 1 (performance expectancy) of 2.209 became factor 1 and was able to explain 55.24% of the variation of interest, while the eigenvalue component of 2 (effort expectancy) of 1.186 became factor 2 and was able to explain 29.65% of the variation of interest. The total factor of performance expectancy and effort expectancy explaining student interest is 84.89%.*

Keywords: *e-books*, *e-libraries, learning sources, students' interest factors*

1. INTRODUCTION

The transformation of learning during the Covid-19 pandemic has an impact on the development *trends* of digital-based learning. “The use of digital tools for conferences and lectures during the pandemic proves that currently, available information technology can adequately replace many physical work interactions” (Schwarz et al., 2020). All levels of

education must adapt to carry out learning from home through online media (*online*). Therefore, the use of internet access is an absolute necessity in participating in learning, this can be seen from the publication of statistical data from the Central Statistics Agency on the Portrait of Indonesian Education in 2020, at the higher education level, internet users touch the figure of 95.30% which is mobile phone and computer users (Badan Pusat Statistik, 2020).

The implementation of learning from home at the university level certainly creates challenges for lecturers and students. Besides the use of media teleconference, the use of digital learning resources is also an important aspect to maximize the learning process. Many learning resources can be used by students in addition to the material obtained during virtual classes, including the use of digital books. The main advantage of e-books is that they are available online without the limitations of time and space so that students can access various supporting materials to develop knowledge and learning experiences. "According to the results of a survey conducted by Gramedia Digital 2019, as many as 85% of the total respondents using digital media chose *e-books* as the most widely used digital media compared to other media used as reading sources," (Hadiyanti, 2019). Besides the use of *e-books* that can be obtained for a fee or not, another technology that can be used as a learning resource is a digital library. Digital libraries (*e-libraries*) provide various services and information objects that support access to information objects through digital devices. *This e-library* is available at all levels of education, especially universities, and also services provided by the government (Perpustakaan Nasional). The open-access in using this *e-library service* was not fully utilized optimally. This is evident from the results of a preliminary study related to the use of *e-library* as a learning resource showing that most students use *e-library services* only when assigned and when they are working on their thesis/final project.

Based on this condition, it is necessary to analyze the factors of student interest in using digital-based learning resources, especially e-books and e-libraries. Research related to students' perceptions of using e-books and e-libraries (Case Study on Sciencedirect) has also been carried out previously and shows that aspects that affect student interest are aspects of content updating (classified as up-to-date), speed of access, availability of articles, collection coverage, and the information is relevant (Bachtiar, 2016). In addition, the use of e-books and e-libraries is also determined by the characteristics of users of information technology. Differences in the characteristics of information technology users are determined by certain perceptions, attitudes, and behaviors inherent in them which causes the behavioral aspects of information technology users to become important factors for everyone who uses information technology. Thus, a model is needed to determine the factors of interest or acceptance of students towards the use of information technology in the form of e-books and e-libraries that cover external and internal aspects of users. One of the widely used technology acceptance models is the Unified Theory Of Acceptance And Use Of Technology (UTAUT). This model is the latest technology acceptance model developed by Venkatesh (Onibala et al., 2021)). The use of this model is based on the results of studies that state the factors (variables) that have a significant positive effect on the interest and use of a system (Ainul Bashir, 2020). The UTAUT model consists of four constructs, namely: performance expectancy, effort expectancy, social influence, and facilitating conditions, behavior intention to use technology. (Venkatesh & Xu, 2012).

Based on the analysis of the situation, this study was conducted to analyze the factors that influence student interest in using learning resources in e-book and e-library terms of the technology acceptance model, namely the Unified Theory Of Acceptance And Use Of Technology (UTAUT). The variables measured are behavioral intention and use behavior is

directly influenced by performance expectancy, effort expectancy, social factors (social influence), and facilitating conditions.

2. LITERATURE REVIEW

2.1 E-book

The e-book is the renewal of conventional books into books that can be accessed online through digital devices without compromising their usefulness (Anwar Us & Mahdayeni, 2019). A digital book is an electronic version of a text that can be read on a desktop or laptop screen, or on a digital device online or offline (Muhammad et al., 2017). The use of e-books is an alternative to solving educational problems through the application of technology by utilizing learning resources that are designed, developed, and utilized in learning to stimulate the learning process in students independently (Sofyan Tahta Ragawanto, 2013).

E-books offer several advantages over conventional books, such as being able to be purchased, downloaded, and read directly without having to go to a bookstore or library (Mahelingga, 2020). E-books as learning resources can be used by educators as an alternative source of learning. This learning resource can mainly be used to overcome the constraints of the limited time available for face-to-face meetings. By utilizing independent learning resources, students can learn anywhere, anytime according to their abilities and needs. In addition, the advantage of e-books is that they like the convenience of electronic books because they are available online without the limitations of time and space. With e-books, it will be easy to download and have independent learning resources (Suryani & Khoiriyah, 2018). Thus it can be concluded that digital books or e-books are a reading source or reference in the form of a book that can be accessed online with digital devices via internet access.

2.2 E-library

A Digital library is a learning resource in digital form that is useful as a support system that provides learning materials. This service is expected to facilitate the search for information in objective collections of information such as documents, images, databases in digital format quickly, precisely, and accurately (Bachtiar, 2016).

Association of Research Libraries (ARL), defines digital libraries as follows: a) Digital libraries are not a single entity, b) Digital libraries require technology to be able to connect to various resources, c) The relationship between various digital libraries and information services for users is transparent, d) Universal access to digital libraries and information services is a goal. e) Digital library collections are not limited to document representation; the collection extends to digital artifacts that cannot be represented or distributed in a printed format (Kustandi & Situmorang, 2013). Some of the advantages of e-library include long-distance service, where e-library visitors can enjoy services anytime and anywhere. Furthermore, easy access to information related to the availability of books or other reference information. Then other advantages are cheap or cost-effective, digital libraries do not require a lot of money and make it easier to publish works globally. The following is an example of a digital library (e-library). The ITB STIKOM Bali e-library can be seen in the following figure 2.1.

Figure 2.1 E-Library Of ITB STIKOM Bali

2.3 Unified Theory of Acceptance and Use of Technology

In this study, students' interest in using e-books and e-libraries was viewed from the Unified Theory of Acceptance and Use of Technology (UTAUT). The UTAUT model integrates several comprehensive models for the theory of acceptance of the use of technology. The UTAUT model is not only used to predict intention to adopt technology but also allows researchers to analyze contingencies and moderators between variables (Dzulhaida & Giri, 2017)). The use of this model is based on the results of studies that declare variables user acceptance (user acceptance) which assessed a significant positive effect on the interest and use of a system (Ainul Bashir, 2020).

The UTAUT model developed by Venkatesh (2003) combined the successful features of leading technology acceptance theories into a single theory. The UTAUT model has developed from previously consisting of four constructs, namely: performance expectancy, effort expectancy, social influence, and facilitating conditions on behavior intention for acceptance. technology (use technology). Thus the predictors used to analyze interest in the use and behavior of technology use are as follows.

a) Performance Expectancy

Performance Expectancy is defined as the extent to which an individual believes that using the system will help him to achieve gains in the performance of work and is the strongest predictor of intention. Performance expectations are related to perceived usefulness in TAM, to the extent that individuals believe the system will help them do their jobs better (Dzulhaida & Giri, 2017), (Firdaos, 2016)

b) Effort Expectancy

Effort Expectancy is the level of ease associated with using the system. Business expectations relate to (perceived ease of use) from TAM, how to relieve an individual by using the system (Dzulhaida & Giri, 2017), (Sukma et al., 2019)

c) Social Influence

Social Influence Aaccording to Ventesh and Davis, social influence has an impact on individual behavior. The more influence that an environment gives to prospective information technology users to use new information technology, the greater the interest that arises from the personal potential of these users in using information technology because of the strong influence of the surrounding environment (Venkatesh & Xu, 2012), (Dzulhaida & Giri, 2017), (Sukma et al., 2019)

d) Facilitating Conditions

Facilitating Conditions are variables that have a direct influence on the use of the system and are also defined as “the degree to which a person believes that the organizational and technical infrastructure can support the use of the system”. In general, users with

lower levels of facilitating conditions will have lower intentions to use a technology (Dzulhaida & Giri, 2017), (Sukma et al., 2019)

Based on the literature study, it can be concluded that the factors of student interest in the use of e-books and e-libraries are limited using the Unified Theory Of Acceptance And Use Of Technology (UTAUT) model. The variables measuring behavioral intention are performance expectancy, effort expectancy, social influence, and facilitating conditions. In this study, supporting factors such as age, gender, and experience were not considered.

3. RESEARCH METHODS/METHODOLOGY

This research is survey research. The population in this study is the third-semester students of ITB STIKOM Bali Jimbaran Campus for the 2021/2022 academic year with a total of 81 students. The sampling technique used was Proportionate Stratified Random Sampling with a total of 68 students. The data collection method in this study used a questionnaire, while the analysis method used factor analysis. The factors of interest in using e-books and e-libraries consist of performance expectancy, effort expectancy, social influence, and facilitating conditions.

4. RESULTS AND DISCUSSION

Testing the validity of the items on the questionnaire was tested using the correlation product-moment. The results of the validity test show that the correlation between each indicator to the total construct score of each variable performance expectancy, effort expectancy, social influence, and facilitating condition shows significant results, namely the value of sig. < 0.05, and the Pearson correlation coefficient product-moment (r) > 0.3 so that it can be said that the statement items on the questionnaire meet the criteria for good data quality, which are valid. In addition, the results of the reliability test showed the value of Cronbach's alpha for all variables above 0.60, so it can be concluded that the questionnaire is reliable and feasible to be used as a measuring tool. Then, the normality test for the distribution of data shows that the significance value for Kolmogorov-Smirnov each data is greater than the probability value of 0.05. Thus, it can be concluded that the data distribution of each variable is normally distributed.

Assumption test in factor analysis includes Bartlett test of sphericity and Measure of Sampling Adequacy and Kaiser-Meyer-Olkin (KMO). The output of KMO and Bartlett's Test using SPSS can be seen in table 4.1 below:

Tabel 4.1 KMO dan Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.571
Bartlett's Test of Sphericity	Approx. Chi-Square	98.008
	df	6
	Sig.	.000

The results of the KMO and Bartlett's Test showed the KMO MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) value was 0.571. If the KMO MSA value is greater than 0.50 then the factor analysis technique can be continued. Based on the output, it is known that the KMO value is 0.571 > 0.50 and the Bartlett's Test of Sphericity (Sig.) value is 0.000 < 0.05, so the factor analysis in this study can be continued because it has fulfilled the assumption test.

To find out which variables can be further processed and which ones are excluded, see the Anti-image matrix table.

Measure of Sampling Adequacy is a test used to measure homogeneity between variables and filter between variables so that only variables that meet the requirements can be processed further. Where the MSA value is 0.5 – 1.0. With the following criteria:

MSA = 1 the variable can be predicted without error by other variables.

MSA = 0.5 the variable is predictable and can be analyzed further.

MSA < 0.05 = the variable was not predictable and was not analyzed further and excluded from other variables.

Based on the results of the AntiImage Matrices Correlation value, it is known that all Anti Image Matrices Correlation values are > 0.5, thus all variables are eligible for factor analysis.

The output of Measure of Sampling Adequacy using SPSS can be seen in table 4.2:

Tabel 4.2 Measure of Sampling Adequacy

Anti-image Matrices

		Performance Expectancy	Effort Expectancy	Social Influence	Facilitating Condition
Anti-image Covariance	Performance Expectancy	.385	-.293	-.031	-.010
	Effort Expectancy	-.293	.383	-.010	-.040
	Social Influence	-.031	-.010	.614	-.357
	Facilitating Condition	-.010	-.040	-.357	.609
Anti-image Correlation	Performance Expectancy	.556[a]	-.763	-.063	-.020
	Effort Expectancy	-.763	.557[a]	-.021	-.082
	Social Influence	-.063	-.021	.590[a]	-.584
	Facilitating Condition	-.020	-.082	-.584	.594[a]

a. Measures of Sampling Adequacy (MSA)

The factoring process using *Principal Components Analysis (PCA)* shows the value of the variables to the formed factors. Based on the results of the analysis, it is known that the extraction value for all variables is greater than 0.50. Thus it can be concluded that all variables can be used to explain factors. Furthermore, an analysis related to more specific extraction is carried out using the method *Principal Components Analysis (PCA)* with the condition that the eigenvalue> 1 is used in the formation of the factor.

Tabel 4.3 Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.209	55.236	55.236	2.209	55.236	55.236	1.778	44.457	44.457
2	1.186	29.655	84.891	1.186	29.655	84.891	1.617	40.433	84.891
3	.387	9.671	94.562						
4	.218	5.438	100.000						

Extraction Method: Principal Component Analysis.

Total Variance Explained shows the value of each analyzed variable. The results of the analysis show that 4 variables correlate. There are two kinds of analysis to explain a variance, namely initial eigenvalue and extraction sums of squared loading. In the initial variant, the eigenvalues indicate the formed factor. If all the factors are added up, it shows the number of variables (2.209 + 1.186 + 0.387 = 4). Furthermore, by paying attention to the extraction sums of squared loading, it can be seen from 4 variables, only 2 variables have eigenvalues > 1, namely component 1 = 2.209 and component 2 = 1.186. Thus there are only 2 factors formed. The eigenvalue component 1 of 2.209 became factor 1 and was able to explain 55.24% of the variation, the eigenvalue of component 2 of 1.186 became factor 2 and was able to explain 29.65% of the variation. If factor 1 and factor 2 are added together, it can explain 84.89% of the variation (the total value of Components 3, and 4 is not calculated because the Eigenvalues of Components 3, 4, and 5 < 1 then do not become a factor). Apart from the total variance table, there is also a graph that explains the basis of the calculation in determining the number of factors, seen in the scree plot graph. The form of the Scree Plot graph that corresponds to Table 4.3 can be seen in Figure 1 Scree Plot as follows.

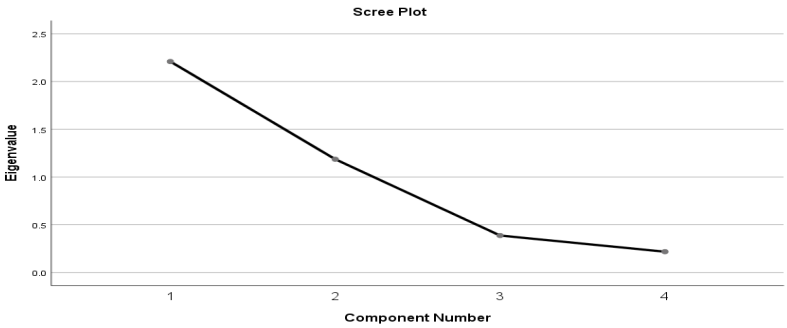

Figure 4.1 Scree Plot

In Figure 1 the scree plot can show the number of factors formed, taking into account the component point values that have an eigenvalue >1. From the scree plot image above, 2 component points have an eigenvalue >1, it can be interpreted that there are 2 factors formed. The extracted variables will be rotated because usually the placement of the variables is not correct or some variables do not match the factors. The rotation process is carried out on variables that pass the MSA test. Based on the results of the analysis, two main factors can explain the variation in student interest in using learning resources in the form of e-books and e-libraries, namely Performance Expectancy and Effort Expectancy. The eigenvalue component 1 (*Performance Expectancy*) of 2.209 becomes factor 1 and can explain 55.24% of the variation, while the eigenvalue component of 2 (*Effort Expectancy*) of 1.186 becomes factor 2 and can explain 29.65% of the variation. The total factor of Performance Expectancy and Effort Expectancy explaining student interest is 84.89%.

CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that two main factors can explain the variation in student interest in using learning resources in the form of e-books and e-libraries, namely performance expectancy and effort expectancy. The eigenvalue component 1 (*Performance Expectancy*) of 2.209 becomes factor 1 and can explain 55.24% of the variation, while the eigenvalue component of 2 (*Effort Expectancy*) of 1.186

becomes factor 2 and can explain 29.65% of the variation. The total factor of Performance Expectancy and Effort Expectancy explaining student interest is 84.891% with the category of interest in using learning resources *e-books* and *e-library* in the high category.

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