The Effect of Trust in Intention to Use Digital Library: Based on TAM

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ABSTRACT

As technology develops, it causes changes in various fields, including the use of digital libraries as learning media. So research is designed on Trust and Intention to use which is used as a reference for users of digital library applications at Putra Bangsa University who use these applications for educational needs. Collecting data using a questionnaire method and collected as many as 100 respondents and using proportional random sampling technique. After that, the validity and reliability tests were carried out using SPSS 23. In this study, the Technology Acceptance Model (TAM) theory was used by adding the Trust variable with the aim of knowing what factors had a significant effect on the use of digital application systems.

Keywords: Technology Acceptance Model (TAM); Trust, Intention to use; Digital Library

1. Introduction

Digital developments supported by information and information technology are a challenge for libraries today. College libraries must adapt to the needs of users who are the academic community of universities. If the library cannot keep up with the rapid pace of technological development, it is certain that the library will be left behind and it is not impossible that it will affect the quality of its user services. This triggers guidance from users so that libraries as information providers can adapt to technological developments, both from collections and services to users.

According to the theory of five laws of library science by Ranganathan, one of them is a library is a growing organization. Therefore, the advancement of information and communication technology-based libraries with library development is a library demand in meeting the needs of the times.[1]

To support the information needs of Putra Bangsa University users, the library currently provides a digital library platform which is expected to help fulfill information in achieving the Tri Dharma of Higher Education. Digital libraries are expected to facilitate users in obtaining information in the form of electronic media without the constraints of time and space. Users are no longer physically tied to library service hours where users have to visit the library to get information. Therefore, digital libraries can facilitate and solve the problem of limited access.

2. Literature Review

2.1 Digital Library

Digital library in IFLA (The International Federation of Library Associations and Institutions) (2018) is defined as follows: "a digital library is an online collection of digital objects, of assured quality, that are created or collected and managed according to internationally accepted principles for collection development and made accessible in a coherent and sustainable manner, supported by services necessary to allow users to retrieve and exploit the resources." That a digital library is a library that has an online collection containing quality digital objects, developed and managed in accordance with international principles.[1]

Digital library is an innovative library service by utilizing information technology. Every digital library development is accompanied by major technological changes to adapt to technological developments in society. Digital library is an effort/initiative of a library in preserving information resources.[2]

Based on these two opinions, a digital library is a library that provides its services online and contains digital library collections that can be accessed by all people continuously by utilizing information technology. Digital library is not a single entity because it requires information technology in its construction. It is the technology that connects the collections held in the library database. The existing link is transparent to the user so that the user can not only open the bibliographic record of a library material but can also view and read the library material. For example, the book can be viewed and read virtually.[3]

2.2 TAM

The Technology Acceptance Model (TAM) was first introduced by Davis. TAM is a model system that is used to analyze and understand the factors that influence the acceptance of the use of technology.This method is one of the most popular research models in predicting the use and acceptance of a system and information technology by its users. TAM aims to explain user acceptance systems and explain user behavior to use technology. There are 5 different constructs including external variables, namely Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Using, Behavioral Intention to Use, and Actual System Use.[4]

2.3 Intention to Use

It is a user's tendency to use a given technology. The level of use of a technology or on can be predicted from the attitude of his attention to the technology, for example the desire to add support, motivation to keep using, and the desire to motivate other users.

2.4 Trust

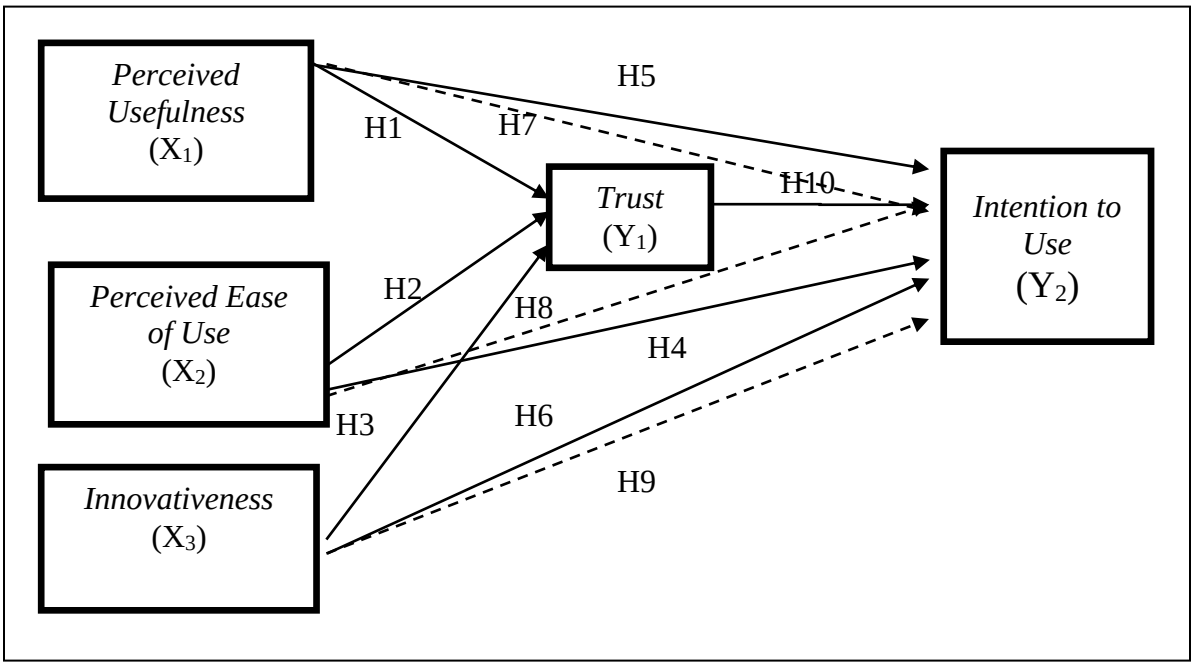
Trust which is trust is the basis of mutual trust between several parties when conducting a business transaction. Trust in business cannot be built in the blink of an eye and tested, but must be built from the first so that it can be accounted for. Trust has become the main factor in the success of a transaction that can be built and provide good and equal satisfaction with what consumers expect.[5]

3. Research Methodology

3.1 Formulas Hypothesis

Researchers using the Extended TAM model shown in Figure 1 can know the relationships between variables so that they can form hypotheses that will be elaborated.

Figure 1. Empirical Model Image



H1: *Perceived Usefulness* effect on Trust
H2: *Perceived Ease of Use* effect on Trust
H3: *Innovativeness* effect on Trust
H4: *Perceived Ease of Use* affect the Intention to Use
H5: *Perceived Usefulness* affect the Intention to Use
H6: *Innovativeness* affect the Intention to Use
H7: *Perceived Usefulness* affect Intention to Use through Trust
H8: *Perceived Ease of Use* affect Intention to Use through Trust
H9: *Innovativeness* affect Intention to Use through Trust
H10: *Trust* affect the Intention to Use

3.2 Research Instruments

The process of collecting data was carried out by distributing questionnaires to respondents containing

questions. The answers obtained from the questionnaire will be measured using a Likert scale. The Likert scale is a scale that can be used to measure a person's attitudes, opinions, and perceptions about a particular object or phenomenon.

The population in this study were all members of the library for the 2020/2021 academic year at Putra Bangsa University, Kebumen, 1492 people. The sampling technique in this study is proportional random sampling.

To determine the number of samples that represent the population in this study, the Slovin formula according to Sugiyono is used as follows:

$$\mathbf{n} = \frac{N}{1+N(e)^2} \quad (1)$$

Information :
n = sample size
N = population size
e = Percentage of allowance for accuracy of sampling error that can still be tolerated (critical value)

In this study, the population of customers with the desired error limit is 10%.
Based on the above formula, the number of samples taken in this study are:

$$n = \frac{}{1 + (1492 \times (0,1)^2} \quad (2)$$

n = 93.7 researchers adjusted to 100 respondents

To find out the results of the questionnaire, several tests will be carried out, including Normality Test, Validity Test and Reliability Test, in the testing process the researcher will use SPSS software.

3.3 Data Analysis Tool

- Validity test
- Reliability test
- Classic assumption test
    a) Multivollinearity test
    b) Normality test
    c) Heteroscedaticity test
- Hypothesis tst, t
- Coefficient of determination test
- The sobel test

4. Results

- Validity test
    - Perceived Usefulness

Tabel 1.

NO	Statement items	r table	r count	Status

1	Item 1	0.1966	0.661	Valid
2	Item 2	0.1966	0.673	Valid
3	Item 3	0.1966	0.738	Valid
4	Item 4	0.1966	0.699	Valid
5	Item 5	0.1966	0.653	Valid

- Perceived Ease of Use

Tabel 2.

No	Statement items	r table	r count	Status
1	Item 1	0.1966	0.709	Valid
2	Item 2	0.1966	0.665	Valid
3	Item 3	0.1966	0.724	Valid
4	Item 4	0.1966	0.725	Valid
5	Item 5	0.1966	0.753	Valid

- Trust

Tabel 3.

No	Statement items	r table	r count	Status
1	Item 1	0.1966	0.809	Valid
2	Item 2	0.1966	0.716	Valid
3	Item 3	0.1966	0.796	Valid

- Innovativeness

Tabel 4.

No	Statement items	r table	r count	Status
1	Item 1	0.1966	0.797	Valid
2	Item 2	0.1966	0.675	Valid
3	Item 3	0.1966	0.773	Valid
4	Item 3	0.1966	0.818	Valid

- Intention to Use

Tabel 5.

No	Statement items	r table	r count	Status
1	Item 1	0.1966	0.809	Valid
2	Item 2	0.1966	0.716	Valid
3	Item 3	0.1966	0.796	Valid

Based on the validity test, it can be seen that the calculated r value is greater than r table at degrees of freedom < 0.05 so that the four items of the TAM variable statement on the questionnaire are valid.

- Reliability Test

Tabel 6.

Variable	*Alpha Value*	Critical Value	Information

Perceived Usefulness (X1)	0.715	0.6	Reliable
Perceived Ease of Use (X2)	0.761	0.6	Reliable
Innovativeness (X3)	0.766	0.6	Reliable
Trust (Y1)	0.666	0.6	Reliable
Intention to Use (Y2)	0.666	0.6	Reliable

The results of the reliability test were carried out using the Cronbach alpha statistical test tool with the provisions of the Cronbach alpha value > 0.60, so the reliability results showed that overall the measuring instrument could be said to be reliable (reliable).

- Multicollinearity Test

I . structure

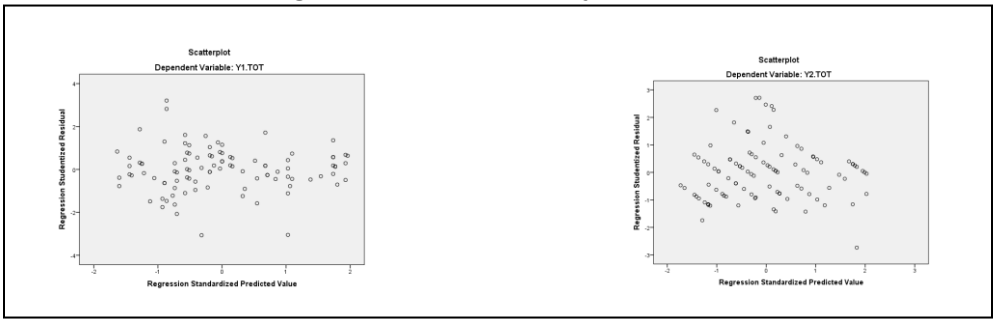
Independent Variable	*Colleniarnirity Statistics* *Toleranc e*	VIF
Perceived Usefulness (X1)	0.345	2,895
Perceived Ease of Use (X2)	0.344	2,908
Innovativene ss (X3)	0.415	2,408

Structure II

Independent Variable	*Collinearity Statistics* *Toleranc e*	VIF
Perceived Usefulness (X1)	0.237	4,224
Perceived Ease of Use (X2)	0.252	3,969
Innovativene ss (X3)	0.322	3,107
Trust (Y1)	0.524	2,348

Based on the test results above, the entire tolerance value is 0.10 and VIF 10 so that the regression model can be used because there is no multicollinearity between the independent variables.
Heteroscedasticity Test

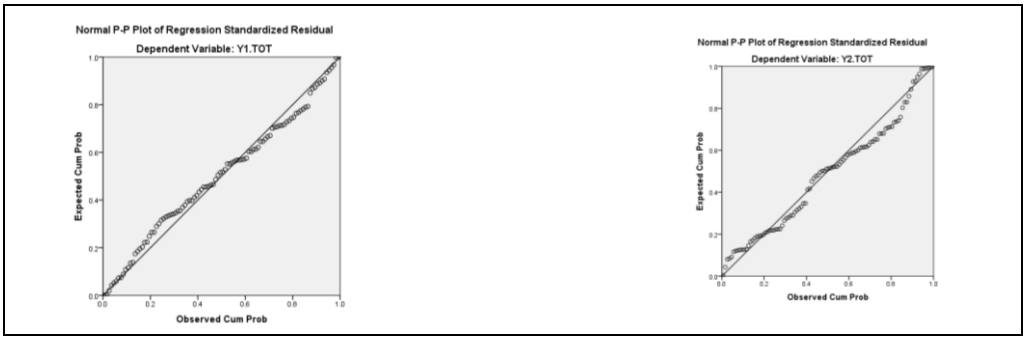
Figure 2. Heteroscedasticity Test



Based on the above, from the SPSS output, it can be seen that there is no clear pattern, and the points on the graph spread above and below the number 0 (zero) on the Y axis, so there is no heteroscedasticity so that the regression model can be used.

Normality test

Figure 3. Normality test



Based on the above results from the SPSS output (Normal PP Plot of Regression Standardized Residual) it can be seen that the data spreads around the diagonal line and follows the direction of the diagonal line, so the regression model meets the assumption of normality.

Partial Hypothesis Test (t test)

Tabel 7. Coefficient

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.238	1,910		3.266	.002		
	X1	.724	.164	.476	4.407	.000	.284	3,520
	X2	.603	171	.380	3,520	.001	.284	3,520
	X3	,746	,130	,430	2,967	,000	,415	2,408

a. Dependent Variable: Y1

- The value of t count is 4.407> t table 1.98447. Judging from the significant value*Perceived Usefulness*(X1) has a value of 0.000 < 0.05. So it can be concluded that Perceived Usefulness (X1) is proven to have a positive and significant effect on Trust (Y1).
- The calculated t value is 3,520 > ttable 1,98447. Judging from the significant value of Perceived Ease of Use (X2), it has a value of 0.001 <0.05. So it can be concluded that Perceived Usefulness (X2) is proven to have a positive and significant effect on Trust (Y1).
- The calculated t value is 2,967 > t table 1,98447. Judging from the significant value of Innovativeness (X3), it has a value of 0.001 <0.05. So it can be concluded that Innovativeness (X3) is proven to have a positive and significant effect on Trust (Y1).

Coefficient of Determination Test (R2)
Output Result of Coefficient of Determination of Structure I

Table 8. of Partial Test Results (t Test) Structural II

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-.120	1.074		-.112	.911		
X1.TOT	.204	.096	.279	2.122	.036	.237	4.224
X2.TOT	.209	.097	.275	2.157	.034	.252	3.969
X3.TOT	.207	.095	.276	2.145	.035	.236	4.012
Y1.TOT	.135	.054	.280	2.485	.015	.322	3.107

Dependent Variable: Y2.TOT

- X1 to Y2

The value of tcount is 2.122 > ttable 1.98447. Judging from the significant value*Perceived Usefulness* (X1)has a value of 0.036 < 0.05. So it can be concluded that Perceived Usefulness (X1) proven to have a positive and significant effect on Intention to Use (Y2).

- X2 to Y2

The value of tcount is 2.157 > ttable 1.98447. Judging from the significant value*Perceived Ease of Use* (X2) has a value of 0.034 <0.05. Then it can be concluded that*Perceived Ease of Use* (X2) proven to have a positive and significant effect on Intention to Use (Y2).

- X3 to Y2

The value of tcount is 2.145 > ttable 1.98447. Judging from the significant value*Innovativeness* (X3) has a value of 0.035 < 0.05. Then it can be concluded that*Innovativeness* (X3) proven to have a positive and significant effect on Intention to Use (Y2).

- Y1 to Y2

The value of tcount is 2.485 > ttable 1.98447. Judging from the value of trust(y1) has a value of 0.015 < 0.05. So it can be concluded that Trust (Y1) is proven to have a positive and significant effect on Intention to Use (Y2).

- Coefficient of Determination Test (R2)

Output Result of Coefficient of Determination of Structure I

Tabel 9.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,968a	,937	,935	,42020	2,186
a. Predictors: (Constant), X3, X1, X2					
b. Dependent Variable: Y1					

Based on the output above, it can be seen that the Adjusted R Square value of 0.935 or can be interpreted as 93.5% Trust (Y1) is influenced by Perceived Usefulness (X1), Perceived Ease of Use (X2), and Innovativeness (X3), while the rest is influenced by variables others not included in this study.

Output Result of Structure Determination Coefficient II

Tabel 10.

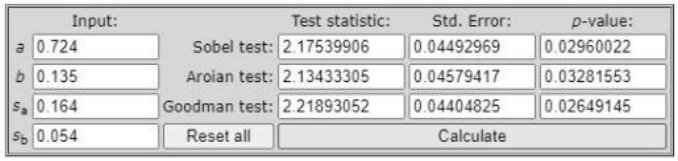
Model Summaryc

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,711a	,505	,489	,846	.b

Based on the output above, it can be seen that the Adjusted R Square value of 0.505 or can be interpreted as 50.5% Intention to Use (Y2) is influenced by Perceived Usefulness (X1), Perceived Ease of Use (X2), Innovativeness (X3) and Trust (Y1) while the remaining 40.5% is influenced by other variables that are not in this study.

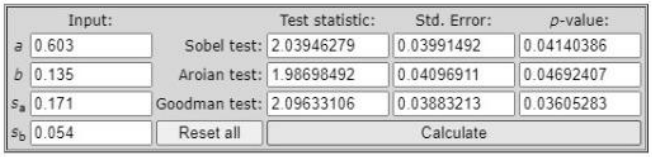
- Sobel Test

Figure 4. Sobel test



The results of the Sobel test of equation I showed p-value (0.0296) or significant <0.05. This shows that the variable *Media Advertising Content* (X1) has an effect on interest in college (Y2) through University Image (Y1) as an intervening variable. This means that the University Image variable (Y1) functions as an intervening variable in equation I.

Figure 5. Sobel test



The results of the Sobel test of equation II show the p-value (0.0414) or significant <0.05. This shows that the Event Marketing variable (X2) has an effect on college interest (Y2) through University Image (Y1) as an intervening variable. This means that the University Image variable (Y1) functions as an intervening variable in equation II.

5. Conclusion

- The results showed that *Perceived Usefulness* effect on Trust.
- The results showed that the Perceived Ease of Use effect on Trust
- The results showed that Innovativeness effect on Trust
- The results showed that the Perceived Ease of Use affect the Intention to Use
- The results showed that *Perceived Usefulness* affect the Intention to Use
- The results showed that Innovativeness affect the Intention to Use
- The results showed that *Perceived Usefulness* affect Intention to Use through Trust
- The results showed that *Perceived Ease of Use* affect Intention to Use through Trust
- The results showed that Innovativeness affect Intention to Use through Trust
- The results showed that Trust affect the Intention to Use

Suggestions that researchers can put forward from the results of this study are as follows:

- Further research can be developed with other variables that can be used for research purposes to analyze the influence and acceptance of other technologies.
- Further research can be developed by enlarging the scope of research such as examining the analysis of technology acceptance.

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