

---

## USABILITY ANALYSIS OF INLISLITE WEBSITE IN ELEMENTARY SCHOOL LIBRARY IN PENAJAM DISTRICT USING HEURISTIC EVALUATION METHOD

**Andi Mentari Awalia, Elvin Leander Hadisaputro, Nuorma Wahyuni**  
STMIK Borneo Internasional, Balikpapan, Indonesia  
andi\_mentari.17@stmik-borneo.ac.id, elvin.leander@stmik-borneo.ac.id,  
nuorma.wahyuni@stmik-borneo.ac.id

---

### ABSTRACT

#### KEYWORDS

*Website Usability Analysis, Heuristic Evaluation Method, Cronbach Alpha's, Actual System, Website Inslite*

#### ARTICLE INFO

Accepted:  
**April, 26<sup>th</sup> 2022**  
Revised:  
**May, 7<sup>th</sup> 2022**  
Approved:  
**May, 12<sup>nd</sup> 2022**

The purpose of this study was to see to what extent the quality of the system has functioned properly so that a system is able to achieve a certain goal so that the resulting output is effective, efficient, and achieves user satisfaction at the Elementary School Library in Penajam District Using the Heuristic Evaluation Method. The type of data used consists of primary data and secondary data. The research population includes all librarians from 40 schools, namely by distributing questionnaires to all elementary school librarian employees in the North Penajam Paser sub-district with a total of 90 people. The results showed that the level of Inlislite Website Usability Analysis actually had a positive and significant effect on users of the Elementary School Library Inslite website in Penajam District. In this case, the analysis of the test was carried out using the Cronbach Alpha's method with a total of 26 questionnaire items for the X variable and 5 for the Y variable with the Cronbach Alpha value  $0.928 > 0.60$  for the X variable and for the Y variable the Cronbach Alpha value was  $0.617 > 0.60$ . it means that the questionnaire is reliable or consistent for use in influential research in Inlislite Website users at Elementary School Libraries.

---

#### INTRODUCTION

The use of information systems and information technology is currently growing rapidly and is very useful to facilitate the delivery of information in companies and agencies (Tallon, Queiroz, Coltman, & Sharma, 2019). The use of information systems can meet the needs and make this information technology continue to advance in various agencies and get faster and maximum results if the use is appropriate (Bossert, 2021). Along with the development of information systems and information technology today, especially in Indonesia, supporting facilities are needed in libraries throughout Indonesia to improve performance more efficiently in operational speed (Ranggadara & Prastiawan, 2018).

The school library aims to enhance, support, enhance and pursue educational programs that meet the needs of each student and enable each student to optimize their potential (Renzulli, 2021). In addition to storing library materials, school library organizations help students and teachers cope with the task of teaching and learning by introducing school libraries (Chen & Tsai, 2012). Librarians are encouraged to start implementing library automation for

digital library implementation (Ahammad, 2014). With the system, the resulting information can be used to facilitate the implementation of work within the agency.

Inlislite is a form of National Library initiative to provide supporting facilities to assist the development of libraries throughout Indonesia as a digital library tool to manage a complete collection of textbooks and multimedia, forming an Electronic Catalog based on MARC (Machine - Readable Cataloging), which is a standard for catalog data communication. The world of libraries and information (Rubin, 2017). In addition to realize the national program that has been ratified by the National Library of Indonesia, national ownership data is collected in the National General Catalog to assist in the formation of the Regional General Catalog organized by the Provincial Government Public Libraries and their partners (Máchová & Lněnička, 2017).

The Inlislite website has been used by one of the libraries, namely an elementary school in Penajam District since 2017. Prior to the use of the Inlislite website, all processes of borrowing and inputting books at elementary schools in Penajam District were still done manually. The use of the Inlislite website in the Penajam District elementary school is expected to increase the level of efficiency, performance and also make it easier to find information about books that teachers and students want to borrow.

Based on the results of interviews by four librarians, it was stated that the use of Inlislite was not fully maximized (Tri Estu Wulandari, Riswanti, Sowiyah, & Elvira Putri Erlinda, 2020). The statement given by the librarian started from the implementation of this library information system used (Khan & Ayesha, 2021). The use of library information systems has started to cause several obstacles, namely, there are times when an error occurs when inputting data such as the process of uploading electronic books, uploading data and storing data takes a long time, there is a discrepancy in data accuracy, computer network access is disconnected, so it cannot perform operations on the system, and data access is still limited.

Usability is defined as the ability of the system to meet the convenience and needs of users (Gupta, Ahlawat, & Sagar, 2014). Each information technology has a different interface that can be a liaison between users of the technology itself (Sittig & Singh, 2015). In general terms usability is an attribute of quality that is used to evaluate how easy an interface is to use, usability to measure the quality of the user experience when interacting with an interface including websites, software applications, mobile technology, or other equipment that is operated (Assila & Ezzedine, 2016) by users to achieve certain goals effectively, efficiently and users become satisfied in the context of use

Based on the background that has been described, a usability evaluation can be carried out using the heuristic evaluation method. By using the heuristic evaluation method approach, it will be easier to evaluate because the heuristic evaluation method is more focused and structured. The heuristic evaluation process allows an independent evaluator to carry out an evaluation and can assess a system from any heuristics that indicate usability problems. The purpose of heuristic evaluation is to improve the design effectively.

Research conducted by Evita Sekar Arum in 2018 entitled "Development of User Interface Design on the Isoplus City Run Website" on aesthetic and minimalist design variables, namely incomplete information and evaluation results to respondents using the heuristics evaluation method, of the ten variables the average value obtained is 1.2 of The severity rating range 1 to 5, a value of 1 is no problem, which means that the results of the design development that have been carried out have a problem level in the category of no

problems in usability. The final result is a recommendation in the form of a user interface design according to the needs of the isoplus city run in supporting activities.

Furthermore, the research conducted by Siti Vika Ngainul Fitri in 2019 with the title "User Interface Analysis of the Banyuwangi Online Deed Website Using the Heuristic Evaluation Method". In this study, the evaluation was carried out using the Heuristic Evaluation method with Severity Ratings which was used to determine the improvement of a system in accordance with the problems found. From the results of the application of the Heuristic Evaluation method with 10 principles that have been used in this study, there are 7 principles of Heuristic Evaluation that did not find usability problems and did not require improvement, namely the principles of Visibility of System Status, Match Between System and The Real World, User Control and Freedom, Consistency and Standards, Recognition Rather Than Recall, Flexibility and Efficiency of Use, Aesthetic and Minimalist Design. Then, three principles were found that usability problems and resulted in recommendations for improvement, namely the principle of Error Prevention, Help User Recognize Dialogue and Recovers from Errors, and Help and Documentation.

The purpose of the evaluation is to see to what extent the quality of the system has functioned so that a system is able to achieve a certain goal so that the resulting output is effective, efficient, and achieves user satisfaction.

## RESEARCH METHOD

The data collection method was used to obtain the data needed during the study, the method used was a questionnaire (Albuquerque, Ramos, Lucena, & Alencar, 2014). The questionnaire was used as a tool to determine the user's usability and convenience based on the principles of heuristic evaluation. Questionnaire is a technique of collecting data by distributing questions and statements to informants.

The object of this research is the Inlislite website at 40 elementary schools in Penajam District and the data were obtained from Inlislite website users at the 40 schools. The research location was Penajam District. This research was conducted for 4 months from April to July 2021 (Nashrulloh, Sulaiman, & Budiarto, 2021).

In this study, the population was librarians from 40 schools with 2 - 3 librarians in each school and a total of 90 people. The population is less than 100 people, then the entire population was used as a sample, namely 90 people.

Data collection was carried out after the questionnaires had been distributed to 90 respondents who had received feedback and tested their validity for further data analysis. Data analysis is the process of testing data from the results of the questionnaire using several types of tests. Tests were carried out using the SPSS application.

## RESULTS AND DISCUSSION

### Test result

#### 1. Validity Test

Validity testing is done by comparing the product moment correlation value or R table with R count where R count must be greater than R table. So the value of R table for a significance level of 5% or 0.05 with the number of samples tested as many as 20 ( $df = N-2$ ) is 0.4438. The results of the validity test on each variable are shown in the following table:

Table 1 Validity Test Results for Variables X and Y

No	Questions and Statements	R Table	R Count	Information
<b>H1</b> <i>Visibility of System Status</i>				
H1.1	There is feedback when filling in a field (Example: login failed).	0,4438	0,948	Valid
H1.2	The website responds to what the user does (chooses or clicks on menus etc).	0,4438	0,735	Valid
H1.3	The information displayed on the dashboard menu is in accordance with the user's information needs.	0,4438	0,922	Valid
<b>H2</b> <i>Match Between System and The Real World</i>				
H2.1	The features on the website are in accordance with the needs of the librarian when searching for book entries.	0,4438	0,898	Valid
H2.2	The information on the website is quite informative for librarians and is in accordance with everyday language.	0,4438	0,689	Valid
<b>H3</b> <i>User Control and Freedom</i>				
H3.1	The website gives the librarian the freedom to search for data.	0,4438	0,912	Valid
H3.2	A back button is provided on the display screen if the user wants to return to the previous page or cancel an action.	0,4438	0,936	Valid
H3.3	The website will display the appropriate action taken by the user in less than 5 seconds.	0,4438	0,713	Valid
H3.4	Users can access the required information in less than 10 clicks.	0,4438	0,896	Valid
<b>H4</b> <i>Consistency and Standards</i>				
H4.1	The website has a structured and consistent layout.	0,4438	0,934	Valid
H4.2	The menu display is consistent on the screen.	0,4438	0,913	Valid
H4.3	All colors on the website are consistent.	0,4438	0,796	Valid
<b>H5</b> <i>Error Prevention</i>				
H5.1	There is a warning when the user makes an error in data entry.	0,4438	0,791	Valid
<b>H6</b> <i>Recognition Rather Than Recall</i>				
H6.1	Users can diagnose and solve problems during the book borrowing process.	0,4438	0,860	Valid
H6.2	Users can understand the menus on the website.	0,4438	0,752	Valid
H6.3	Users can remember the menu and appearance on the website.	0,4438	0,829	Valid
<b>H7</b> <i>Flexibility and Efficiency of Use</i>				
H7.1	The menus and information on the website are well grouped.	0,4438	0,883	Valid

H7.2	The website responds according to the expected time.	0,4438	0,553	Valid
H7.3	The optional input fields are clearly marked.	0,4438	0,796	Valid
<b>H8</b>	<b><i>Aesthetic and Minimalist Design</i></b>			
H8.1	The appearance on the website is interesting to see	0,4438	0,843	Valid
H8.2	Menu search is easy to use especially for novice librarians	0,4438	0,630	Valid
H8.4	Are the options minimalistic enough and fit the user's needs?	0,4438	0,598	Valid
<b>H9</b>	<b><i>Help User Recognize, Diagnose, and Recover from Errors</i></b>			
H9.1	There is a notification when experiencing an error (eg when entering the wrong username and password) whether the system informs the user in a language that is easy to understand and the user understands.	0,4438	0,805	Valid
H9.2	Any suggestions on what to do if something goes wrong in the process of borrowing a book?	0,4438	0,871	Valid
H9.3	There is a link back to home, when something goes wrong	0,4438	0,888	Valid
<b>H10</b>	<b><i>Help and Documentation</i></b>			
H10.1	There is a help menu which can help the user better.	0,4438	0,386	Tidak Valid
H10.2	There is a guide to simplify the registration process for users	0,4438	0,510	Valid
	<b><i>Usability</i></b>			
1	The website is easy for users to learn	0,4438	0,892	Valid
2	The website is efficient and in accordance with the intended use	0,4438	0,849	Valid
3	The menu layout is easy for the user to remember (example: during the process of inputting which menu books are clicked)	0,4438	0,807	Valid
4	The website has a low error rate	0,4438	0,867	Valid
5	Users are quite satisfied and will use the website continuously	0,4438	0,833	Valid

Based on table 1, it is known that from variable X as many as 27 statement items and questions, 1 of which is declared invalid, invalid items will be deleted or not used and 26 items are declared valid and on variable Y as many as 5 statement items are declared valid, because they have a value greater than  $R_{table}$  with a significance level of 5%, which is more than 0.4438.

## 2. Reliability Test

The results of the reliability test can be seen in table 3.2 and table 3.3 with the number of questionnaire items 26 for variable X and 5 for variable Y with a Cronbach Alpha value of 0.928 > 0.60 for variable X and for variable Y the Cronbach Alpha value of 0.617 > 0.60, then from that it can be concluded that the questionnaire is reliable or consistent for use in research.

Table 2 Reliability Test Results for Variable Y

Cronbach's Alpha	N of Items
,930	26

Table 3 Reliability Test Results for Variable Y

Cronbach's Alpha	N of Items
,617	5

Based on the table above, it can be concluded that the number of questionnaire items is 26 for the X variable and 5 for the Y variable with a Cronbach Alpha value of  $0.928 > 0.60$  for the X variable and for the Y variable the Cronbach Alpha value is  $0.617 > 0.60$ , therefore it can be concluded that the questionnaire reliable or consistent for use in research.

### 3. Normality Test

The results of the normality test used the One-Sample Kolmogorov Smirnov Test, with the basis for making decisions. It is known that the significance value is  $0.200 > 0.05$ , so it can be concluded that the residual value is normally distributed, presented in the table as follows.

Table 4 Normality Test Results

		<i>Unstandardized Residual</i>
N		90
Normal Parameters <sup>a,b</sup>	<i>Mean</i>	,0000000
	Std. Deviation	3,40356575
Most Extreme Differences	Absolute	,075
	Positive	,075
	Negative	-,046
Test Statistic		,075
Asymp. Sig. (2-tailed)		,200 <sup>c,d</sup>

### 4. Analysis Based on Heuristic Evaluation

Based on the results of the analysis calculation based on Heuristic Evaluation as follows:

- a. The visibility of system status parameter in statements H1.2 and H1.3 needs improvement because the website sometimes does not respond and has to be clicked 2-4 times on the selected menu and the information on the menu still confuses some users, but overall with an average value The average category interval of 135 states that there is no need for improvement unless time is available or only cosmetic problems.
- b. In the match between and the real world parameter with an average value of 157 category intervals, it is stated that there is a need for improvements with low priority because the dashboard menu on the website is still not informative for users because there is no grouping of types of books such as encyclopedias, story books, textbooks and others. other.



- c. In the user control and freedom parameter in the H3.3 statement with the highest value among the 4 statements because the website sometimes responds according to the action of more than 5 seconds but overall with an average value of 116 category intervals stating that there is no need for repairs or cosmetic problems only.
- d. The consistency and standards parameter with an average value of 128 category interval states that there is no need for improvement unless there is time or cosmetic problems only because the appearance of the website is quite consistent.
- e. The error prevention parameter with an average value of 103 category interval states that there is no need for improvement unless there is time or cosmetic problems only, because when inputting or filling out book data in the input box, the input data can still be saved even though the inputted data does not match, for example: the year of publication box is filled with the place of publication. Therefore, the librarian must be really careful at the time of inputting.
- f. The recognition rather than recall parameter with an average value of 158 category interval states that there is a need for improvement with low priority because users are still confused about what to do when there is a problem with borrowing books and because of the large number of menus, it is difficult for users to remember the menus on the website.
- g. In the flexibility and efficiency of use parameters with an average value of 143 category intervals, it is stated that there is no need for improvement unless there is time or cosmetic problems only because according to respondents the problem is only slow loading.
- h. In the aesthetic and minimalist design parameters with an average value of 199, it states that the improvement is of low priority because according to respondents the menu on the website is less minimalist because of the many confusing menus for novice librarians.
- i. In the help user recognize, diagnose and recover from errors with an average value of 113 category intervals, it states that there is no need for repairs unless there is time or cosmetic problems only because there is no suggestion what to do if an error occurs when borrowing a book, for example: the barcode does not legible. However, the language on the website already uses everyday language, namely Indonesian and there is a back button if an error occurs.
- j. The help and documentation parameter with an average value of 249 category interval states that there is a need for improvement because on the website there is no help menu and guide available to help users when experiencing problems and the registration process.
- k. The usability parameter with an average value of 218 category interval states that there is a need for repairs with high priority because the website is not efficient enough when used, there are still many users who cannot remember all the menus on the website, the website often has errors during the book lending process and some users do not. quite satisfied when using the website.

## 5. Heteroscedasticity Test

The results of the Heteroscedasticity Test are presented in table 3.5, as follows.

Table 5 Heteroscedasticity Test Results

Model	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	t	Sig.
	B	Std. Error	Beta		
(Constant)	3,047	,878		3,472	,001
H1	,182	,157	,239	1,153	,252
H2	-,114	,176	-,103	-,648	,519
H3	-,104	,138	-,178	-,757	,451
H4	-,134	,154	-,191	-,870	,387
H5	-,074	,228	-,048	-,324	,747
H6	-,036	,133	-,044	-,271	,787
H7	-,052	,138	-,067	-,378	,706
H8	,014	,126	,017	,114	,910
H9	,092	,147	,135	,625	,534
H10	,138	,214	,080	,648	,519

Based on table 5, the following results are obtained:

- In the visibility of system status variable, there is no heteroscedasticity problem because the significance value is  $0.252 > 0.05$ .
- In the match between system and the real world variable, there is no heteroscedasticity problem because the significance value is  $0.519 > 0.05$ .
- In the user control and freedom variables, there is no heteroscedasticity problem because the significance value is  $0.451 > 0.05$ .
- In the consistency and standard status variables, there was no heteroscedasticity problem because the significance value was  $0.387 > 0.05$ .
- In the error prevention variable, there is no heteroscedasticity problem because the significance value is  $0.747 > 0.05$ .
- In the recognition rather than recall variable, there is no heteroscedasticity problem because the significance value is  $0.787 > 0.05$ .
- In the flexibility and efficiency of use variable, there is no heteroscedasticity problem because the significance value is  $0.706 > 0.05$ .
- In the aesthetic and minimalist design variables, there is no heteroscedasticity problem because the significance value is  $0.910 > 0.05$ .
- In the help user variable, recognize, diagnose and recover from errors there is no heteroscedasticity problem because the significance value is  $0.534 > 0.05$ .



- j. In the help and documentation variable, there is no heteroscedasticity problem because the significance value is  $0.519 > 0.05$ .

#### 6. Multicollinearity Test

The results of the Multicollinearity Test are presented in table 3.6, as follows.

Table 6 Multicollinearity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	8,857	1,531		5,785	,000		
H1	,584	,275	,380	2,127	,037	,275	3,640
H2	,108	,308	,048	,352	,725	,466	2,144
H3	-,033	,240	-,028	-,139	,890	,213	4,704
H4	,076	,269	,054	,284	,777	,243	4,109
H5	,451	,397	,146	1,136	,260	,529	1,889
H6	-,074	,232	-,045	-,320	,750	,450	2,222
H7	,023	,240	,014	,094	,925	,377	2,652
H8	-,093	,220	-,053	-,424	,673	,553	1,809
H9	,140	,257	,102	,546	,587	,252	3,973
H10	-,010	,373	-,003	-,028	,978	,775	1,290

Based on table 6 can be seen the following results:

- In the visibility of system status variable, there is no multicollinearity because the VIF value is  $3.640 < 10.00$  and the tolerance value is  $0.275 > 0.10$ .
- In the match between system and the real world variable, there is no multicollinearity because the VIF value is  $2.144 < 10.00$  and the tolerance value is  $0.466 > 0.10$ .
- In the user control and freedom variables, there is no multicollinearity because the VIF value is  $4.704 < 10.00$  and the tolerance value is  $0.213 > 0.10$ .
- In the consistency and standard status variables, there was no multicollinearity because the VIF value was  $4.109 < 10.00$  and the tolerance value was  $0.243 > 0.10$ .
- In the error prevention variable, there is no multicollinearity because the VIF value is  $1.889 < 10.00$  and the tolerance value is  $0.529 > 0.10$ .
- In the recognition rather than recall variable, there is no multicollinearity because the VIF value is  $2.222 < 10.00$  and the tolerance value is  $0.450 > 0.10$ .
- In the flexibility and efficiency of use variables, there is no multicollinearity because the VIF value is  $2.652 < 10.00$  and the tolerance value is  $0.377 > 0.10$ .
- In the aesthetic and minimalist design variables, there is no multicollinearity because the VIF value is  $1.809 < 10.00$  and the tolerance value is  $0.553 > 0.10$ .
- In the help user variable, recognize, diagnose and recover from errors there is no multicollinearity because the VIF value is  $3.973 < 10.00$  and the tolerance value is  $0.252 > 0.10$ .
- In the help and documentation variable there is no multicollinearity because the VIF value is  $1.290 < 10.00$  and the tolerance value is  $0.775 > 0.10$ .

#### 7. F test

The results of the F test are presented in table 7, as follows.

Table 7 F Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	430,464	10	43,046	3,504	,001 <sup>b</sup>
Residual	970,425	79	12,284		
Total	1400,889	89			

a. Dependent Variable: U

b. Predictors: (Constant), H10, H2, H5, H8, H7, H6, H1, H9, H4, H3

Based on table 7 above on the variable visibility of system status, match between system and the real world, user control and freedom, consistency and standard, error prevention, recognition rather than recall, flexibility and efficiency of use, aesthetic and minimalist design, help user, recognize, diagnose and recover from errors, help and documentaion, there is an effect on the usability variable simultaneously because the significance value is  $0.001 < 0.05$  and fcount  $3.504 > ftable 1.97$ .

## 8. T-test

The results of the F test are presented in table 8, as follows.

Table 8 T. Test Results

Model	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	8,857	1,531		5,785	,000
H1	,584	,275	,380	2,127	,037
H2	,108	,308	,048	,352	,725
H3	-,033	,240	-,028	-,139	,890
H4	,076	,269	,054	,284	,777
H5	,451	,397	,146	1,136	,260
H6	-,074	,232	-,045	-,320	,750
H7	,023	,240	,014	,094	,925
H8	-,093	,220	-,053	-,424	,673
H9	,140	,257	,102	,546	,587
H10	-,010	,373	-,003	-,028	,978

a. Dependent Variable: U

Based on table 8 it can be seen that the results of the T test are as follows:

- The visibility of system status variable has an effect on the usability variable partially because the significance value is  $0.037 < 0.05$  and the tcount is  $2.127 > ttable 1.99045$ .

- b. In the match between system and the real world variable, there is no partial effect on the usability variable because the significance value is  $0.725 > 0.05$  and the tcount is  $0.352 < t_{table} 1.99045$ .
- c. In the user control and freedom variables there is no effect on the usability variable partially because the significance value is  $0.890 > 0.05$  and the tcount is  $-0.139 < t_{table} 1.99045$ .
- d. In the consistency and standard variables there is no effect on the usability variable partially because the significance value is  $0.777 > 0.05$  and the t count is  $0.284 < t_{table} 1.99045$ .
- e. In the error prevention variable there is no effect on the usability variable partially because the significance value is  $0.260 > 0.05$  and the t count is  $1.136 < t_{table} 1.99045$ .
- f. In the recognition rather than recall variable, there is no partial effect on the usability variable because the significance value is  $0.750 > 0.05$  and the tcount is  $-0.320 < t_{table} 1.99045$ .
- g. In the flexibility and efficiency of use variable, there is no effect on the usability variable partially because the significance value is  $0.925 > 0.05$  and the tcount is  $0.094 < t_{table} 1.99045$ .
- h. In the aesthetic and minimalist design variable there is no partial effect on the usability variable because the significance value is  $0.673 > 0.05$  and the tcount is  $-0.424 < t_{table} 1.99045$ .
- i. In the help user variable, recognize, diagnose and recover from errors there is no effect on the usability variable partially because the significance value is  $0.587 > 0.05$  and the tcount is  $0.546 < t_{table} 1.99045$ .
- j. In the help and documentation variable there is no effect on the usability variable partially because the significance value is  $0.978 > 0.05$  and the tcount is  $-0.028 > t_{table} 1.99045$ .

## Discussion

Based on the overall validity test analysis of the variables visibility of system status (X1), match between system and the real world (X2), user control and freedom (X3), consistency and standard (X4), error prevention (X5), recognition rather than recall (X6), flexibility and efficiency of use (X7), aesthetic and minimalist design (X8), help user, recognize, diagnose and recover from errors (X9), and help and documentation (X10) of 27 statement items and questions 26 of them are declared valid because all of their  $R_{count} > 0,4438 R_{table}$  and for the Usability variable (Y1) all statements are declared valid because all  $R_{count} > 0,4438 R_{table}$ .

The results of the reliability test using the Cronbach Alpha's method with 26 questionnaire items for the X variable and 5 for the Y variable with the Cronbach Alpha value  $0.928 > 0.60$  for the X variable and for the Y variable the Cronbach Alpha value  $0.617 > 0.60$  which means that the questionnaire is reliable or consistent for use in research.

Normality test aims to determine whether the data is normally distributed or not. Following are the results of the normality test using the One-Sample Kolmogorov Smirnov Test. With the basis of decision making as follows:

1. If the significance value is  $> 0.05$ , then the residual value is normally distributed
2. If the significance value is  $< 0.05$ , then the residual value is not normally distributed.

It is known that the results with a significance value of  $0.200 > 0.05$ , it can be concluded that the residual value is normally distributed.

Analysis based on Heuristic Evaluation obtained results with an average value of the category interval of all parameters as much as 173 which means the website is included in the repair category with low priority.

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observer to another observer [14]. The results of the heteroscedasticity test on the variable visibility of system status (X1), match between system and the real world (X2), user control and freedom (X3), consistency and standard (X4), error prevention (X5), recognition rather than recall (X6), flexibility and efficiency of use (X7), aesthetic and minimalist design (X8), help user, recognize, diagnose and recover from errors (X9), and help and documentation (X10). 0.05.

The multicollinearity test aims to test whether the regression model found a correlation between independent variables. The results of the multicollinearity test on the variable visibility of system status (X1), match between system and the real world (X2), user control and freedom (X3), consistency and standard (X4), error prevention (X5), recognition rather than recall (X6), flexibility and efficiency of use (X7), aesthetic and minimalist design (X8), help user, recognize, diagnose and recover from errors (X9), and help and documentation (X10) do not occur multicollinearity because all VIF values  $< 10.00$  and the tolerance value is  $> 0.10$ .

Furthermore, there is an F test which aims to determine whether the independent variable has a simultaneous influence on the dependent variable. Based on the results of the F test on the variable visibility of system status (X1), match between system and the real world (X2), user control and freedom (X3), consistency and standard (X4), error prevention (X5), recognition rather than recall (X6), flexibility and efficiency of use (X7), aesthetic and minimalist design (X8), help user, recognize, diagnose and recover from errors (X9), and help and documentation (X10), have an influence on usability variables (Y) simultaneously because the significance value is  $0.001 < 0.05$  and  $f_{count} 3.504 > f_{table} 1.97$ .

Finally, the T test which basically shows how far the influence of one independent variable (partial) individually in explaining the variation of the dependent variable [13]. In the visibility of system status variable (X1) there is an effect on the usability variable (Y) partially because the significance value is  $0.037 < 0.05$  and the  $t_{count}$  is  $2.127 > t_{table} 1.99045$  while for the match between system and the real world (X2) variable, user control and freedom (X3), consistency and standard (X4), error prevention (X5), recognition rather than recall (X6), flexibility and efficiency of use (X7), aesthetic and minimalist design (X8), help user, recognize, diagnose and recover from errors (X9), and help and documentation (X10) there is no effect on the usability variable (Y) partially because the entire significance value is  $> 0.05$  and the  $t_{count}$  is  $< t_{table} 1.99045$ .

## CONCLUSION

Based on the results of the research entitled "Usability Analysis of Inlislite Websites in Elementary School Libraries in Penajam District Using Heuristic Evaluation Methods", it can be concluded that:

1. In the parameters of visibility of system status, user control and freedom, consistency and standards, error prevention, flexibility and efficiency of use and help users recognize, diagnose,

and recover from errors, it is included in the category of no need for repair / cosmetic problem only.

2. In the match between system, and the real world parameters, recognition rather than recall and aesthetic, and minimalist design are included in the category of need for improvement with low priority.

3. The help and documentation and usability parameters are included in the category of need for improvement with high priority.

The visibility of system status variable has an effect on the usability variable partially because the significance value is  $0.037 < 0.05$  and the tcount is  $2.127 > t_{table} 1.99045$  while for other variables there is an effect on the usability variable partially.

## REFERENCES

- Ahammad, Nur. (2014). Implementing the Koha integrated library system at the Independent University, Bangladesh: A practical experience. *The Electronic Library*.
- Albuquerque, Ulysses Paulino, Ramos, Marcelo Alves, Lucena, Reinaldo Farias Paiva de, & Alencar, Nelson Leal. (2014). Methods and techniques used to collect ethnobiological data. In *Methods and techniques in ethnobiology and ethnoecology* (pp. 15-37). Springer.
- Assila, Ahlem, & Ezzedine, Houcine. (2016). Standardized usability questionnaires: Features and quality focus. *Electronic Journal of Computer Science and Information Technology*, 6(1).
- Bossert, James L. (2021). *Quality function deployment: a practitioner's approach*. CRC Press.
- Chen, Chih Ming, & Tsai, Yen Nung. (2012). Interactive augmented reality system for enhancing library instruction in elementary schools. *Computers & Education*, 59(2), 638-652.
- Gupta, Deepak, Ahlawat, Anil, & Sagar, Kalpna. (2014). A critical analysis of a hierarchy based Usability Model. *2014 International Conference on Contemporary Computing and Informatics (IC3I)*, 255-260. IEEE.
- Khan, Shakeel Ahmad, & Ayesha, Ghulam. (2021). Key features of information management systems (IMSs) for automation in university libraries: a view point of information professionals in Pakistan. *Library Hi Tech*.
- Máchová, Renata, & Lněnička, Martin. (2017). Evaluating the quality of open data portals on the national level. *Journal of Theoretical and Applied Electronic Commerce Research*, 12(1), 21-41.
- Nashrulloh, Faruq, Sulaiman, Muhammad, & Budiarto, Rachmawan. (2021). Analysis of Potential and Feasibility of Hydropower Energy from Sepaku Semoi Dam in Penajam Paser Utara Regency. *IOP Conference Series: Earth and Environmental Science*, 927(1), 12016. IOP Publishing.
- Ranggadara, Indra, & Prastiawan, Hendra. (2018). Strategy Implementing Continual Service Improvement With ITIL Framework At PT Anabatic Technologies TBK. *Int. Res. J. Comput. Sci*, 5(2), 70-76.

- Renzulli, Joseph S. (2021). The enrichment triad model: A guide for developing defensible programs for the gifted and talented. In *Reflections on gifted education* (pp. 193–210). Routledge.
- Rubin, Richard E. (2017). *Foundations of library and information science*. American Library Association.
- Sittig, Dean F., & Singh, Hardeep. (2015). A new socio-technical model for studying health information technology in complex adaptive healthcare systems. In *Cognitive informatics for biomedicine* (pp. 59–80). Springer.
- Tallon, Paul P., Queiroz, Magno, Coltman, Tim, & Sharma, Rajeev. (2019). Information technology and the search for organizational agility: A systematic review with future research possibilities. *The Journal of Strategic Information Systems*, 28(2), 218–237.
- Tri Estu Wulandari, Tri, Riswanti, Rini, Sowiyah, Sowiyah, & Elvira Putri Erlinda, Elvira. (2020). Effectiveness of SLiMS Automation System Services for Library Service Support (Case Study in MAN 1 Bandar Lampung). *International Journal of Research and Innovation in Social Science (IJRISS)*, 4.

**Copyright holders:**

**Andi Mentari Awalia, Elvin Leander Hadisaputro, Nuorma Wahyuni (2022)**

**First publication right:**

**Devotion - Journal of Research and Community Service**



This article is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International](https://creativecommons.org/licenses/by-sa/4.0/)